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## PWS ANCHOR RODS VOLUME II

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*(2011) – 274 Rods*

*Fabrication Process*

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### **ADDITIONAL DOCUMENTS**

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ASTM A123  
 ASTM A143  
 ASTM A153  
 ASTM A354  
 ASTM A490  
 ASTM A788  
 ASTM F1470  
 ASME B1.13M

Location and Item		Component Description	Rod (no head) or Bolt (with head)	Threads Cut or Rolled	Supplier	Diameter (in)	Overall Length (ft)	Overall Length (mm)	Quantity Installed (not including spares)		De-Humidified Zone?	Tighten Method	Final Tension (fraction of Fu or UTS)	Date Tension or Loading Complete	Date Re-Inspected (by 4/8/13)	Date Re-Inspected (by 4/23/13)	Date Re-Inspected (by 5/5/13)	Notes
E2 Bearings and Shear Keys	1	E2 Shear Key - Connect to Concrete - Above Column, Under OBG [S1, S2]	rod	Cut	Dyson	3	17.2	5235	60	96	No	Tension	0.7	3/5/2013	daily check	daily check	daily check	Tensioned to 0.75 Fy, with lockoff at ~ 0.7 Fu 32 of 96 rods broke after tensioning, then tension level lowered
						10.0	3035	36										
	2	E2 Shear Key - Connect to Concrete - Above Bent Cap, Under Crossbeam [S3, S4]	rod	Cut	Dyson	3	21.9	6676	96	192	No	Tension	0.7	4/1/2013	daily check	daily check	daily check	Tensioned to 0.75 Fy, with lockoff at ~ 0.7 Fu
		E2 Bearing - Connect to Concrete - Under OBG [B1, B2, B3, B4]	rod	Cut	Dyson	3	22.6	6902	64									
	3	E2 Shear Key - Connect to OBG [S1, S2]	rod	Cut	Dyson	3	4.4	1337	96	320	No	Tension	0.7	9/12/2012	4/6/2013 4/8/2013	4/17/13 to 4/23/13	5/3/2013	Tensioned to 0.75 Fy, with lockoff at ~ 0.7 Fu
						1.8	537	64										
		E2 Shear Key - Connect to Crossbeam [S3, S4]	rod	Cut	Dyson	3	4.3	1312	96									
						1.7	512	64										
	4	E2 Bearing - Connect to OBG [B1, B2, B3, B4]	rod	Cut	Dyson	2	3.6	1105	224		No	Tension	0.7	9/12/2012	4/6/2013	4/17/13 to 4/23/13	5/3/2013	Tensioned to 0.75 Fy, with lockoff at ~ 0.7 Fu
	5	E2 Bearing Assembly Bolts (Spherical Bushing Halves)	rod	Cut	Dyson for Lubrite for Hochang	1	2.4	733	96		No	Tension	0.61	July 2009	not accessible	not accessible	not accessible	Connect 2 halves of the spherical bushing assembly housing together at Lubrite; rods are internal to bearings and <b>all rods are not accessible</b> after bearing assembly at Hochang (December 2009 & January 2010); rods tensioned to 0.7 Fy.
6	E2 Bearing Assembly Bolts (Retaining Rings)	Socket Head Cap Screw	Cut	Dyson for Hochang	1	0.2	55	336		No	snug + 1/4 turn	~0.4	January 2010	4/6/2013 (for 32 accessible bolts)	4/23/2013 (for 32 accessible bolts)	5/3/2013 (for 32 accessible bolts)	Bolts thread into drill and tap holes to attach retaining rings that secure the Lubrite spherical bushing assembly in the bottom housing; bolts are mechanically galvanized, not hot dip galvanized; bolts are internal to bearings and not accessible after bearing assembly at Hochang, except for a small number of bolts in limited areas -> <b>32 of 336 bolts are accessible.</b>	
Cable Anchorage	7	PWS Anchor Rods - PWS Socket to Anchorage	rod	55 Cut (20%) 219 Rolled (80%)	Dyson	3-1/2	27.9 to 31.8	8500 to 9700	274	Yes	Load Transfer	0.26	9/26/2012	4/6/2013	4/20&22/2013	5/4/2013	With DL after load transfer (current condition)	
												0.29	N/A	N/A	N/A	N/A	With DL + Added DL	
												0.32	N/A	N/A	N/A	N/A	Service Load (Group 1)	
												0.35	N/A	N/A	N/A	N/A	SEE (Seismic)	
Top of Tower	8	Tower Saddle Tie Rods	rod	Rolled	Dyson	4	6.0 to 17.5	1840 to 5325	25	Yes	Tension	0.41	7/14/2012	N/A	N/A	N/A	Load During Construction - Tensioned to 0.5 Fy	
											0.68	N/A	4/6/2013	4/19/2013	5/3/2013	Additional tension in tie rods from cable with service load		
	9	Turned Rods at Tower Saddle Segment Splices	rod	Cut	Dyson	3 @ Threads [-3-1/16 @ Shank]	1.5	463	100	Yes	Tension	0.45	4/6/2011	4/6/2013	4/19/2013	5/3/2013	Located at the 2 field splices connecting the 3 tower saddle segments; 100 rods tensioned prior to saddle erection; 8 rods only snug tight after tie rod tensioning due to conflict with tie rods.	
					1.4		415	8	snug		~0.1	7/14/2012						
10	Tower Saddle to Grillage Anchor Bolts	Hex Bolt	Cut	Dyson	3	1.2	360	90		Head Yes, Nut No	snug	~0.1	3/25/2013	4/6/2013	4/19/2013	5/3/2013	Snug tightened before and after load transfer: <b>Initial Tension complete on 5/20/2011; final tension complete on 3/25/2013.</b>	
11	Tower Outrigger Boom (for Maintenance) at Top of Tower	Hex Bolt	Cut	Dyson	3	2.1	630	4		No	snug	~0.1	July 2012	4/6/2013	4/19/2013	5/4/2013	Act as pins for swinging out and then securing the maintenance outrigger boom at the top of 2 of 4 tower head chimneys. At each boom, one bolt is loaded and other bolt is unloaded in the current boom position. The currently unloaded bolt will be installed snug tight when the boom is swung out for use (future position).	
Bottom of Tower	12	Tower Anchor Rods - Tower at Footing (3" Dia)	rod	Cut	Vulcan Threaded Products for KOS for KFM (04-0120E4)	3	25.6	7789	388	Yes	Tension	0.48	4/17/2013	N/A	4/20/2013 4/22/2013	5/5/2013	Tensioned to 1800 kN = 404.7 kips; Tension before and after load transfer: <b>Initial Tension Late 2010 through Early 2011; Final Tension 2013</b>	
	13	Tower Anchor Rods - Tower at Footing (4" Dia)	rod	Cut		4	25.7	7839	36	Yes	Tension	0.37	4/17/2013	N/A	4/20/2013 4/22/2013	5/5/2013	Tensioned to 2530 kN = 568.8 kips; Tension before and after load transfer: <b>Initial Tension Late 2010 through Early 2011; Final Tension 2013</b>	
East Saddles	14	East Saddle Anchor Rods	rod	Cut	Dyson for JSW	2	2.6	800	32	Yes	snug	~0.1	May 2010	4/7/2013	4/21/2013	5/3/2013	specified gap under nut/washer at one end of rod and 2 nuts snug against each other at other end of rod -> snug tight for portion of rod	
	15	East Saddle Tie Rods	Hex Bolt	Cut	Dyson	3	4.7	1420	18	Yes	snug	~0.1	4/13/2012	N/A	N/A	N/A	Snug tightened before load transfer	
											0.2	N/A	4/7/2013	4/21/2013	5/3/2013	Additional tension in tie rods from cable with service load		
East Cable	16	B14 Cable Bands - Cable Brackets - at East End of Bridge - Strongback Anchor Rods	rod	Rolled	Dyson	3	10.3 to 11.1	3129 to 3372	24	No	Tension	0.16	2/8/2013	4/7/2013	4/21/2013	5/4/2013	pre-compress neoprene between strongback and cable band	
W2 Bent Cap	17	W2 Bikepath Anchor Rods	rod	Cut	Dyson	~1-3/16 [Metric M30]	1.5	460	43	No	Not Determined Yet		N/A	N/A	N/A	N/A	Details for bikepath connections are being redesigned and are not final. The 18 anchor rods at the bottom connections will be abandoned. The 25 anchor rods at the top connections will be used and supplemented with additional anchor rods. These rods will be tensioned on the separate YBITS-2 Contract.	

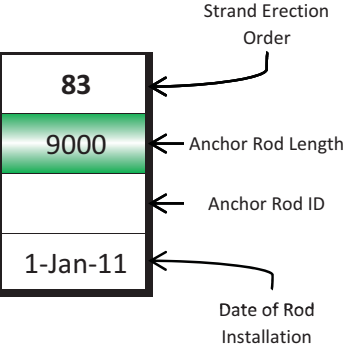
Total = 2306

New information after 5/6/2013 Update is highlighted Red

Load No.	Total Quantity	Release Tag Quantity		METS
		Orange	Blue	
1	44	2	42	released
2	48	19	29	released
3	51	51	0	released
4	sent back	39	16	rejected
5	26	14	12	released
6	26	0	26	released
7	26	0	26	released
8	27	0	27	released
9	24	22	2	released
10	2	2	0	released
<b>TOTAL</b>	<b>274</b>			

14W, North Anchorage (Looking East)

132	136	133	137	128	134	122	129	135	123	130	116	124	108	117	109	<div>83</div> <div>9000</div> <div></div> <div>1-Jan-11</div>	
9300	9200	9000	8900	8700	8700	8600	8500	8500	8500	8500	8600	8700	8700	8900	9000		
OYP-3	OYO-9	OYL-4	OYN-7	OQY-26	OQX4-30	OQY-17A	OQY-21C	OQY-32	OYP-2	OYL-3	OYH-6	OQY-28	OQY-25	OYN-4	OYK-5		
27-Oct-11	21-Nov-11	21-Nov-11	21-Nov-11	21-Nov-11	21-Nov-11	18-Oct-11	21-Nov-11	21-Nov-11	?	?	?	?	?	?	?		
125	131	126	120	127	113	121	114	106	115	107	99	91	100	92	83		
9300	9200	8900	8900	8700	8700	8600	8500	8500	8500	8500	8600	8700	8700	8900	9000		
OYM-10	OYH-1	OYN-6	OYG-1	OQY-31	OQY-29	OQY-9A	OQY-13C	OOH2-23	OOH2-2	OOH2-20	OQX3-13	OQX4-13	OQY-19	OYL-5	OPY2-26		
27-Oct-11	26-Oct-11	21-Nov-11	21-Nov-11	?	?	17-Oct-11	?	21-Nov-11	21-Nov-11	21-Nov-11	18-Oct-11	18-Oct-11	?	?	18-Oct-11		
118	111	119	112	104	96	105	97	89	98	90	81	72	82	73	64		
9300	9200	8900	8900	8700	8700	8600	8500	8500	8500	8500	8600	8700	8700	8900	9000		
OYJ-10	OYO-3	OYO-8	OPY4-24	OYN-1	OQX4-23	OQX3-5	OQY-19C	OYG-2	OQY-27	OQY-3C	OQY-1A	OQY-2	OQY-15	OYN-5	OPY2-23		
27-Oct-11	26-Oct-11	21-Nov-11	?	27-Oct-11	17-Oct-11	17-Oct-11	21-Nov-11	21-Nov-11	21-Nov-11	21-Nov-11	18-Oct-11	18-Oct-11	18-Oct-11	?	18-Oct-11		
101	110	102	94	103	95	87	78	88	79	70	80	71	62	53	63	54	
9300	9200	8900	8900	8700	8700	8600	8500	8500	8500	8500	8600	8700	8700	8900	9000	9300	
OYM-7	OYP-5	OYL-6	OYL-9	OYL-8	OQX4-5	OQY-6A	OQY-15C	OQY-18C	OOF2-4	OQY-22C	OQX3-8	OQX4-11	OQX4-24	OYN-3	OPY2-4	OYJ-7	
27-Oct-11	26-Oct-11	21-Nov-11	21-Nov-11	?	17-Oct-11	17-Oct-11	21-Nov-11	?	21-Nov-11	21-Nov-11	18-Oct-11	18-Oct-11	18-Oct-11	?	18-Oct-11	25-Oct-11	
84	93	85	76	86	77	68	59	69	60	51	61	43	52	44	36	45	37
9300	9200	8900	8900	8700	8700	8600	8500	8500	8500	8500	8600	8700	8700	8900	9000	9300	9400
OOH2-7	OYM-1	OYK-4	OYL-7	OQX4-20	OQX4-17	OQY-12A	OQY-23C	OQY-14C	OQY-20C	OPY3-8	OQX3-16	OQX4-12	OQX4-9	OYG-4	OPY2-38	OYN-10	OTD-2E
27-Oct-11	26-Oct-11	?	27-Oct-11	17-Oct-11	17-Oct-11	17-Oct-11	21-Nov-11	?	21-Nov-11	21-Nov-11	18-Oct-11	18-Oct-11	18-Oct-11	?	18-Oct-11	25-Oct-11	?
74	65	75	66	57	67	48	58	49	41	50	42	34	26	35	27	20	28
9300	9200	8900	8900	8700	8700	8600	8500	8500	8500	8500	8600	8700	8700	8900	9000	9300	9400
R1002-OTD	OYJ-5	OYM-6	OYH-2	OQX4-21	OQY-15A	OQY-10A	OPY2-6	OYM-2	OYG-3	OYI-2	OQY-14A	OQX4-7	OQX4-10	OYN-2	OPY2-10	OOH2-24	OYM-5
27-Oct-11	26-Oct-11	27-Oct-11	27-Oct-11	17-Oct-11	17-Oct-11	17-Oct-11	?	?	?	?	18-Oct-11	18-Oct-11	18-Oct-11	?	18-Oct-11	25-Oct-11	?
55	46	56	30	47	39	31	40	32	24	33	17	25	18	12	19	7	13
9300	9200	8900	8900	8700	8700	8600	8500	8500	8500	8500	8600	8700	8700	8900	9000	9400	9400
OOH2-17	OYH-3	R1008-OQX	OYM-3	OQY-14	OQY-3	OQX3-2	OOH2-16	OOH2-4	OPY2-2	OPY2-7	OQX3-11	OQY-4	OQX4-6	R1007-OOH	OPY2-29	OOF2-2	OOF2-1
25-Oct-11	26-Oct-11	25-Oct-11	27-Oct-11	17-Oct-11	17-Oct-11	17-Oct-11	?	?	?	25-Oct-11	18-Oct-11	18-Oct-11	18-Oct-11	25-Oct-11	18-Oct-11	25-Oct-11	?
29	21	38	14	22	8	15	23	1	9	16	5	10	2	6	11	3	4
9300	9200	8900	8900	8700	8700	8600	8500	8500	8500	8600	8600	8700	8700	8900	9000	9300	9300
OOH2-8	OTD-12	R1010-OTD	R1005-OQW	OQY-16	OQX4-18	OQY-3A	OOF4-4	OTD-13	OPY2-15	OQY-4A	OQX3-7	OQX4-22	OQY-1	R1001-OPY	OPY2-24	OOH2-10	OYO-6
25-Oct-11	25-Oct-11	25-Oct-11	25-Oct-11	17-Oct-11	17-Oct-11	17-Oct-11	?	?	?	18-Oct-11	18-Oct-11	18-Oct-11	18-Oct-11	25-Oct-11	18-Oct-11	25-Oct-11	?

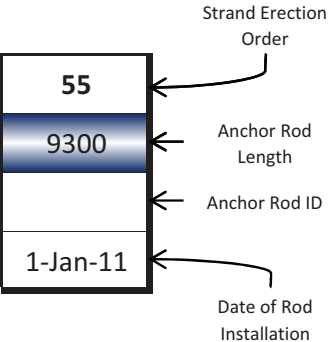




14E, South Anchorage (Looking East)

109	117	100	124	116	130	123	115	135	129	122	134	128	137	133	127	136	132
9500	9400	9200	9100	9000	8900	8800	8800	8800	8800	8900	8900	9000	9100	9200	9300	9600	9700
OTD-23D	OYG-5	OYJ-6	OPY3-22	OPY2-35	OYJ-4	OQX5-19	OQX5-24	OQX5-28	OQX5-12	OQY-23B	OPY4-21	OPY2-37	OPY3-18	OYO-5	OOH-1E	OYJ-11	OYM-8
?	?	?	6-Oct-11	6-Oct-11	?	7-Oct-11	8-Oct-11	8-Oct-11	8-Oct-11	4-Nov-11	4-Nov-11	10-Oct-11	11-Oct-11	4-Nov-11	?	?	?
83	92	82	108	91	99	107	98	106	114	105	121	113	120	126	119	131	125
9500	9400	9200	9100	9000	8900	8800	8800	8800	8800	8900	8900	9000	9100	9200	9300	9600	9700
OTD-1D	OYI-4	OYN-11	OPY3-16	OPY2-39	OPY4-17	OQX5-27	OQX5-13	OQX5-22	OQX5-3	OPY4-22	OPY4-19	?	OPY3-9	R1011-OTD	OYJ-9	OOF4-2	OOF5-4
?	?	?	6-Oct-11	6-Oct-11	7-Oct-11	7-Oct-11	8-Oct-11	8-Oct-11	8-Oct-11	4-Nov-11	4-Nov-11	10-Oct-11	11-Oct-11	4-Nov-11	?	?	11-Oct-11
64	73	63	72	81	71	90	80	89	97	88	96	104	112	103	111	118	110
9500	9400	9200	9100	9000	8900	8800	8800	8800	8800	8900	8900	9000	9100	9200	9300	9600	9700
OYH-7	OYM-4	OYO-4	OPY3-23	OPY2-22	OPY4-16	OQX5-23	OQX5-21	OQX5-15	OQX5-29	OPY4-20	OYI-3	OPY2-33	OPY3-25	OOH-4F	OYP-4	OYI-5	OOF5-1
?	?	?	6-Oct-11	6-Oct-11	7-Oct-11	7-Oct-11	8-Oct-11	8-Oct-11	8-Oct-11	4-Nov-11	4-Nov-11	10-Oct-11	11-Oct-11	4-Nov-11	4-Nov-11	?	11-Oct-11
54	45	53	62	52	61	70	79	69	78	87	77	95	86	94	102	93	101
9500	9500	9200	9100	9000	8900	8800	8800	8800	8800	8900	8900	9000	9100	9200	9300	9600	9700
OOF3-8	OYM-9	OTD-4	OPY3-20	OPY2-20	OPY4-1	OQX5-11	OQX5-30	OQX5-14	OQX5-4	OPY4-10	OPY4-9	OPY2-28	OPY3-6	OTD-1H	OYO-7	OOF4-9	OOF5-2
?	?	11-Oct-11	6-Oct-11	6-Oct-11	7-Oct-11	6-Oct-11	8-Oct-11	8-Oct-11	8-Oct-11	10-Oct-11	10-Oct-11	10-Oct-11	11-Oct-11	4-Nov-11	4-Nov-11	11-Oct-11	11-Oct-11
37	28	36	44	35	43	51	60	50	59	68	58	67	76	85	75	84	
9600	9500	9200	9100	9000	8900	8800	8800	8800	8800	8900	8900	9000	9100	9300	9300	9600	
OYH-8	OYJ-8	OTD-16	OPY3-26	OPY2-18	OPY4-13	OQX5-8	OQX5-18	OQX5-26	OQX5-6	OPY4-7	OPY4-8	OPY2-36	OPY3-27	OOH-2F	OYN-8	OOF4-3	
?	?	5-Oct-11	6-Oct-11	6-Oct-11	6-Oct-11	6-Oct-11	7-Oct-11	8-Oct-11	8-Oct-11	10-Oct-11	10-Oct-11	10-Oct-11	11-Oct-11	4-Nov-11	4-Nov-11	11-Oct-11	
20	27	19	26	34	42	33	41	49	40	48	57	66	56	65	74		
9600	9500	9200	9100	9000	8900	8800	8800	8800	8800	8900	8900	9000	9100	9300	9300		
OYH-9	OTD-2D	OTD-17	OPY3-24	OPY2-9	OQW-5	OQX5-10	OQX5-7	OQX5-25	OQX5-2	OPY4-15	OPY4-11	OPY2-32	OPY3-7	OOH2-19	OOH-3F		
?	?	5-Oct-11	5-Oct-11	5-Oct-11	6-Oct-11	6-Oct-11	7-Oct-11	7-Oct-11	7-Oct-11	10-Oct-11	10-Oct-11	10-Oct-11	11-Oct-11	4-Nov-11	4-Nov-11		
13	7	12	18	11	25	17	24	32	23	31	39	47	38	46	55		
9600	9600	9200	9100	9000	8900	8900	8800	8800	8800	8900	8900	9000	9100	9300	9300		
OOF4-5	OOF4-8	OTD-5	OPY3-2	OPY2-21	OPY4-4	OPY4-12	OQX5-20	OQX5-9	OQX5-1	OPY4-14	OPY4-18	OPY2-34	OPY3-19	OYN-10	OYN-9		
?	5-Oct-11	5-Oct-11	5-Oct-11	5-Oct-11	6-Oct-11	6-Oct-11	7-Oct-11	7-Oct-11	7-Oct-11	10-Oct-11	10-Oct-11	10-Oct-11	11-Oct-11	4-Nov-11	4-Nov-11		
4	3	6	2	10	5	16	9	1	15	8	22	14	30	21	29		
9500	9500	9200	9100	9000	9000	8900	8800	8800	8800	8900	8900	9000	9100	9300	9300		
R1006-OTD	OOF3-4	OTD-18	OPY3-1	OPY2-25	?	OQW-3	OQX5-17	OQX5-16	OQX5-5	OPY4-2	OPY4-6	OPY2-27	OPY3-21	OOH2-22	OOH2-6		
?	5-Oct-11	5-Oct-11	5-Oct-11	5-Oct-11	6-Oct-11	6-Oct-11	7-Oct-11	7-Oct-11	7-Oct-11	10-Oct-11	10-Oct-11	10-Oct-11	11-Oct-11	11-Oct-11	11-Oct-11		

The PWS Anchor Rods for Lift 14E, E-Line Anchorage, for Strands #5 and #113 are both 9000 mm rods. One rod is OPY2-30 and the other rod is OPY2-31. The galvanizing has filled in the rod ID punch marks enough on those two that the ID could not be conclusively determined.



Total No.	No. by Load	Rod ID No.	Rod length (mm)	Load No.	Tag Release Date - Orange	Tag Release Date - Blue	Jobsite Arrival Date
1	1	OOF2-1	9400	1	-	30-Aug-11	6-Sep-11
2	2	OOF3-4	9500	1	-	30-Aug-11	6-Sep-11
3	3	OOF4-3	9600	1	-	30-Aug-11	6-Sep-11
4	4	OOF4-8	9600	1	-	30-Aug-11	6-Sep-11
5	5	OOF4-9	9600	1	-	30-Aug-11	6-Sep-11
6	6	OOF5-1	9700	1	-	30-Aug-11	6-Sep-11
7	7	OOF5-2	9700	1	-	30-Aug-11	6-Sep-11
8	8	OOF5-4	9700	1	-	30-Aug-11	6-Sep-11
9	9	OOH2-22	9300	1	-	30-Aug-11	6-Sep-11
10	10	OOH2-6	9300	1	-	30-Aug-11	6-Sep-11
11	11	OPY2-10	9000	1	-	30-Aug-11	6-Sep-11
12	12	OPY2-18	9000	1	-	30-Aug-11	6-Sep-11
13	13	OPY2-20	9000	1	-	30-Aug-11	6-Sep-11
14	14	OPY2-21	9000	1	-	30-Aug-11	6-Sep-11
15	15	OPY2-22	9000	1	-	30-Aug-11	6-Sep-11
16	16	OPY2-23	9000	1	-	30-Aug-11	6-Sep-11
17	17	OPY2-24	9000	1	-	30-Aug-11	6-Sep-11
18	18	OPY2-25	9000	1	-	30-Aug-11	6-Sep-11
19	19	OPY2-26	9000	1	-	30-Aug-11	6-Sep-11
20	20	OPY2-4	9000	1	-	30-Aug-11	6-Sep-11
21	21	OPY2-9	9000	1	-	30-Aug-11	6-Sep-11
22	22	OPY3-1	9100	1	-	30-Aug-11	6-Sep-11
23	23	OPY3-2	9100	1	-	30-Aug-11	6-Sep-11
24	24	OPY3-6	9100	1	-	30-Aug-11	6-Sep-11
25	25	OPY3-7	9100	1	-	30-Aug-11	6-Sep-11
26	26	OPY3-9	9100	1	-	30-Aug-11	6-Sep-11
27	27	OPY4-1	8900	1	-	30-Aug-11	6-Sep-11
28	28	OPY4-10	8900	1	-	30-Aug-11	6-Sep-11
29	29	OPY4-11	8900	1	-	30-Aug-11	6-Sep-11
30	30	OPY4-12	8900	1	-	30-Aug-11	6-Sep-11
31	31	OPY4-13	8900	1	-	30-Aug-11	6-Sep-11
32	32	OPY4-2	8900	1	-	30-Aug-11	6-Sep-11
33	33	OPY4-4	8900	1	-	30-Aug-11	6-Sep-11
34	34	OPY4-6	8900	1	-	30-Aug-11	6-Sep-11
35	35	OPY4-7	8900	1	-	30-Aug-11	6-Sep-11
36	36	OPY4-8	8900	1	-	30-Aug-11	6-Sep-11
37	37	OPY4-9	8900	1	-	30-Aug-11	6-Sep-11
38	38	OQW-3	8900	1	30-Aug-11	-	6-Sep-11
39	39	OQW-5	8900	1	30-Aug-11	-	6-Sep-11
40	40	OTD-16	9200	1	-	30-Aug-11	6-Sep-11
41	41	OTD-17	9200	1	-	30-Aug-11	6-Sep-11
42	42	OTD-18	9200	1	-	30-Aug-11	6-Sep-11
43	43	OTD-4	9200	1	-	30-Aug-11	6-Sep-11
44	44	OTD-5	9200	1	-	30-Aug-11	6-Sep-11
45	1	OPY2-27	9000	2	-	30-Aug-11	2-Sep-11
46	2	OPY2-28	9000	2	-	30-Aug-11	2-Sep-11
47	3	OPY2-29	9000	2	-	30-Aug-11	2-Sep-11
48	4	OPY2-30	9000	2	-	30-Aug-11	2-Sep-11
49	5	OPY2-31	9000	2	-	30-Aug-11	2-Sep-11

Total No.	No. by Load	Rod ID No.	Rod length (mm)	Load No.	Tag Release Date - Orange	Tag Release Date - Blue	Jobsite Arrival Date
50	6	OPY2-32	9000	2	-	30-Aug-11	2-Sep-11
51	7	OPY2-33	9000	2	-	30-Aug-11	2-Sep-11
52	8	OPY2-34	9000	2	-	30-Aug-11	2-Sep-11
53	9	OPY2-35	9000	2	-	30-Aug-11	2-Sep-11
54	10	OPY2-36	9000	2	-	30-Aug-11	2-Sep-11
55	11	OPY2-37	9000	2	-	30-Aug-11	2-Sep-11
56	12	OPY2-38	9000	2	-	30-Aug-11	2-Sep-11
57	13	OPY2-39	9000	2	-	30-Aug-11	2-Sep-11
58	14	OPY3-16	9100	2	-	30-Aug-11	2-Sep-11
59	15	OPY3-18	9100	2	-	30-Aug-11	2-Sep-11
60	16	OPY3-19	9100	2	-	30-Aug-11	2-Sep-11
61	17	OPY3-20	9100	2	-	30-Aug-11	2-Sep-11
62	18	OPY3-21	9100	2	-	30-Aug-11	2-Sep-11
63	19	OPY3-22	9100	2	-	30-Aug-11	2-Sep-11
64	20	OPY3-23	9100	2	-	30-Aug-11	2-Sep-11
65	21	OPY3-24	9100	2	-	30-Aug-11	2-Sep-11
66	22	OPY3-25	9100	2	-	30-Aug-11	2-Sep-11
67	23	OPY3-26	9100	2	-	30-Aug-11	2-Sep-11
68	24	OPY3-27	9100	2	-	30-Aug-11	2-Sep-11
69	25	OPY4-14	8900	2	-	30-Aug-11	2-Sep-11
70	26	OPY4-15	8900	2	-	30-Aug-11	2-Sep-11
71	27	OPY4-16	8900	2	-	30-Aug-11	2-Sep-11
72	28	OPY4-17	8900	2	-	30-Aug-11	2-Sep-11
73	29	OPY4-18	8900	2	-	30-Aug-11	2-Sep-11
74	30	OQX4-10	8700	2	30-Aug-11	-	2-Sep-11
75	31	OQX4-11	8700	2	30-Aug-11	-	2-Sep-11
76	32	OQX4-12	8700	2	30-Aug-11	-	2-Sep-11
77	33	OQX4-13	8700	2	30-Aug-11	-	2-Sep-11
78	34	OQX4-5	8700	2	30-Aug-11	-	2-Sep-11
79	35	OQX4-6	8700	2	30-Aug-11	-	2-Sep-11
80	36	OQX4-7	8700	2	30-Aug-11	-	2-Sep-11
81	37	OQX4-9	8700	2	30-Aug-11	-	2-Sep-11
82	38	OQX5-1	8800	2	30-Aug-11	-	2-Sep-11
83	39	OQX5-10	8800	2	30-Aug-11	-	2-Sep-11
84	40	OQX5-11	8800	2	30-Aug-11	-	2-Sep-11
85	41	OQX5-2	8800	2	30-Aug-11	-	2-Sep-11
86	42	OQX5-3	8800	2	30-Aug-11	-	2-Sep-11
87	43	OQX5-4	8800	2	30-Aug-11	-	2-Sep-11
88	44	OQX5-5	8800	2	30-Aug-11	-	2-Sep-11
89	45	OQX5-6	8800	2	30-Aug-11	-	2-Sep-11
90	46	OQX5-7	8800	2	30-Aug-11	-	2-Sep-11
91	47	OQX5-8	8800	2	30-Aug-11	-	2-Sep-11
92	<b>48</b>	OQX5-9	8800	2	30-Aug-11	-	2-Sep-11
93	1	OQX3-11	8600	3	31-Aug-11	-	6-Sep-11
94	2	OQX3-13	8600	3	31-Aug-11	-	6-Sep-11
95	3	OQX3-16	8600	3	31-Aug-11	-	6-Sep-11
96	4	OQX3-2	8600	3	31-Aug-11	-	6-Sep-11
97	5	OQX3-5	8600	3	31-Aug-11	-	6-Sep-11
98	6	OQX3-7	8600	3	31-Aug-11	-	6-Sep-11

Total No.	No. by Load	Rod ID No.	Rod length (mm)	Load No.	Tag Release Date - Orange	Tag Release Date - Blue	Jobsite Arrival Date
99	7	OQX3-8	8600	3	31-Aug-11	-	6-Sep-11
100	8	OQX4-17	8700	3	31-Aug-11	-	6-Sep-11
101	9	OQX4-18	8700	3	31-Aug-11	-	6-Sep-11
102	10	OQX4-20	8700	3	31-Aug-11	-	6-Sep-11
103	11	OQX4-21	8700	3	31-Aug-11	-	6-Sep-11
104	12	OQX4-22	8700	3	31-Aug-11	-	6-Sep-11
105	13	OQX4-23	8700	3	31-Aug-11	-	6-Sep-11
106	14	OQX4-24	8700	3	31-Aug-11	-	6-Sep-11
107	15	OQX5-12	8800	3	31-Aug-11	-	6-Sep-11
108	16	OQX5-13	8800	3	31-Aug-11	-	6-Sep-11
109	17	OQX5-14	8800	3	31-Aug-11	-	6-Sep-11
110	18	OQX5-15	8800	3	31-Aug-11	-	6-Sep-11
111	19	OQX5-16	8800	3	31-Aug-11	-	6-Sep-11
112	20	OQX5-17	8800	3	31-Aug-11	-	6-Sep-11
113	21	OQX5-18	8800	3	31-Aug-11	-	6-Sep-11
114	22	OQX5-19	8800	3	31-Aug-11	-	6-Sep-11
115	23	OQX5-20	8800	3	31-Aug-11	-	6-Sep-11
116	24	OQX5-21	8800	3	31-Aug-11	-	6-Sep-11
117	25	OQX5-22	8800	3	31-Aug-11	-	6-Sep-11
118	26	OQX5-23	8800	3	31-Aug-11	-	6-Sep-11
119	27	OQX5-24	8800	3	31-Aug-11	-	6-Sep-11
120	28	OQX5-25	8800	3	31-Aug-11	-	6-Sep-11
121	29	OQX5-26	8800	3	31-Aug-11	-	6-Sep-11
122	30	OQX5-27	8800	3	31-Aug-11	-	6-Sep-11
123	31	OQX5-28	8800	3	31-Aug-11	-	6-Sep-11
124	32	OQX5-29	8800	3	31-Aug-11	-	6-Sep-11
125	33	OQX5-30	8800	3	31-Aug-11	-	6-Sep-11
126	34	OQY-1	8700	3	31-Aug-11	-	6-Sep-11
127	35	OQY-10A	8600	3	31-Aug-11	-	6-Sep-11
128	36	OQY-12A	8600	3	31-Aug-11	-	6-Sep-11
129	37	OQY-14	8700	3	31-Aug-11	-	6-Sep-11
130	38	OQY-14A	8600	3	31-Aug-11	-	6-Sep-11
131	39	OQY-15	8700	3	31-Aug-11	-	6-Sep-11
132	40	OQY-15A	8700	3	31-Aug-11	-	6-Sep-11
133	41	OQY-16	8700	3	31-Aug-11	-	6-Sep-11
134	42	OQY-17A	8600	3	31-Aug-11	-	6-Sep-11
135	43	OQY-19	8700	3	31-Aug-11	-	6-Sep-11
136	44	OQY-1A	8600	3	31-Aug-11	-	6-Sep-11
137	45	OQY-2	8700	3	31-Aug-11	-	6-Sep-11
138	46	OQY-3	8700	3	31-Aug-11	-	6-Sep-11
139	47	OQY-3A	8600	3	31-Aug-11	-	6-Sep-11
140	48	OQY-4	8700	3	31-Aug-11	-	6-Sep-11
141	49	OQY-4A	8600	3	31-Aug-11	-	6-Sep-11
142	50	OQY-6A	8600	3	31-Aug-11	-	6-Sep-11
143	51	OQY-9A	8600	3	31-Aug-11	-	6-Sep-11
144	1	OOF2-2	9400	5	-	20-Oct-11	24-Oct-11
145	2	OOF3-8	9500	5	20-Oct-11	-	24-Oct-11
146	3	OOF4-2	9600	5	-	20-Oct-11	24-Oct-11
147	4	OOF4-4	8500	5	-	20-Oct-11	24-Oct-11



Total No.	No. by Load	Rod ID No.	Rod length (mm)	Load No.	Tag Release Date - Orange	Tag Release Date - Blue	Jobsite Arrival Date
148	5	OOF4-5	9600	5	20-Oct-11	-	24-Oct-11
149	6	OOH2-10	9300	5	20-Oct-11	-	24-Oct-11
150	7	OOH2-16	8500	5	20-Oct-11	-	24-Oct-11
151	8	OOH2-17	9300	5	20-Oct-11	-	24-Oct-11
152	9	OOH2-19	9300	5	-	20-Oct-11	24-Oct-11
153	10	OOH2-24	9300	5	-	20-Oct-11	24-Oct-11
154	11	OOH2-4	8500	5	20-Oct-11	-	24-Oct-11
155	12	OOH2-7	9300	5	-	20-Oct-11	24-Oct-11
156	13	OOH2-8	9300	5	-	20-Oct-11	24-Oct-11
157	14	OPY2-15	8500	5	20-Oct-11	-	24-Oct-11
158	15	OPY2-2	8500	5	-	20-Oct-11	24-Oct-11
159	16	OPY2-6	8500	5	-	20-Oct-11	24-Oct-11
160	17	OPY2-7	8500	5	-	20-Oct-11	24-Oct-11
161	18	OTD-12	9200	5	-	20-Oct-11	24-Oct-11
162	19	OTD-13	8500	5	-	20-Oct-11	24-Oct-11
163	20	R1001-OPY	8900	5	20-Oct-11	-	24-Oct-11
164	21	R1002-OTD	9300	5	20-Oct-11	-	24-Oct-11
165	22	R1005-OQW	8900	5	20-Oct-11	-	24-Oct-11
166	23	R1006-OTD	9500	5	20-Oct-11	-	24-Oct-11
167	24	R1007-OOH	8900	5	20-Oct-11	-	24-Oct-11
168	25	R1008-OQX	8900	5	20-Oct-11	-	24-Oct-11
169	26	R1010-OTD	8900	5	20-Oct-11	-	24-Oct-11
170	1	OYG-3	8500	6	-	21-Oct-11	26-Oct-11
171	2	OYG-4	8900	6	-	21-Oct-11	26-Oct-11
172	3	OYG-5	9400	6	-	21-Oct-11	26-Oct-11
173	4	OYH-1	9200	6	-	21-Oct-11	26-Oct-11
174	5	OYH-2	8900	6	-	21-Oct-11	26-Oct-11
175	6	OYH-3	9200	6	-	21-Oct-11	26-Oct-11
176	7	OYH-6	8600	6	-	21-Oct-11	26-Oct-11
177	8	OYI-2	8500	6	-	21-Oct-11	26-Oct-11
178	9	OYJ-10	9300	6	-	21-Oct-11	26-Oct-11
179	10	OYJ-5	9200	6	-	21-Oct-11	26-Oct-11
180	11	OYJ-7	9300	6	-	21-Oct-11	26-Oct-11
181	12	OYL-7	8900	6	-	21-Oct-11	26-Oct-11
182	13	OYL-8	8700	6	-	21-Oct-11	26-Oct-11
183	14	OYM-1	9200	6	-	21-Oct-11	26-Oct-11
184	15	OYM-10	9300	6	-	21-Oct-11	26-Oct-11
185	16	OYM-2	8500	6	-	21-Oct-11	26-Oct-11
186	17	OYM-3	8900	6	-	21-Oct-11	26-Oct-11
187	18	OYM-4	9400	6	-	21-Oct-11	26-Oct-11
188	19	OYM-6	8900	6	-	21-Oct-11	26-Oct-11
189	20	OYM-7	9300	6	-	21-Oct-11	26-Oct-11
190	21	OYN-1	8700	6	-	21-Oct-11	26-Oct-11
191	22	OYN-10	9300	6	-	21-Oct-11	26-Oct-11
192	23	OYN-2	8900	6	-	21-Oct-11	26-Oct-11
193	24	OYO-3	9200	6	-	21-Oct-11	26-Oct-11
194	25	OYP-3	9300	6	-	21-Oct-11	26-Oct-11
195	26	OYP-5	9200	6	-	21-Oct-11	26-Oct-11
196	1	OOH-2F	9300	7	-	25-Oct-11	28-Oct-11

Total No.	No. by Load	Rod ID No.	Rod length (mm)	Load No.	Tag Release Date - Orange	Tag Release Date - Blue	Jobsite Arrival Date
197	2	OOH-3F	9300	7	-	25-Oct-11	28-Oct-11
198	3	OPY4-19	8900	7	-	25-Oct-11	28-Oct-11
199	4	OPY4-20	8900	7	-	25-Oct-11	28-Oct-11
200	5	OPY4-21	8900	7	-	25-Oct-11	28-Oct-11
201	6	OPY4-22	8900	7	-	25-Oct-11	28-Oct-11
202	7	OQX4-30	8700	7	-	25-Oct-11	28-Oct-11
203	8	OQY-19C	8500	7	-	25-Oct-11	28-Oct-11
204	9	OQY-20C	8500	7	-	25-Oct-11	28-Oct-11
205	10	OQY-21C	8500	7	-	25-Oct-11	28-Oct-11
206	11	OQY-22C	8500	7	-	25-Oct-11	28-Oct-11
207	12	OQY-23B	8900	7	-	25-Oct-11	28-Oct-11
208	13	OQY-25	8700	7	-	25-Oct-11	28-Oct-11
209	14	OQY-26	8700	7	-	25-Oct-11	28-Oct-11
210	15	OQY-3C	8500	7	-	25-Oct-11	28-Oct-11
211	16	OTD-1H	9200	7	-	25-Oct-11	28-Oct-11
212	17	OYH-7	9500	7	-	25-Oct-11	28-Oct-11
213	18	OYH-9	9600	7	-	25-Oct-11	28-Oct-11
214	19	OYI-3	8900	7	-	25-Oct-11	28-Oct-11
215	20	OYI-4	9400	7	-	25-Oct-11	28-Oct-11
216	21	OYJ-11	9600	7	-	25-Oct-11	28-Oct-11
217	22	OYJ-4	8900	7	-	25-Oct-11	28-Oct-11
218	23	OYJ-6	9200	7	-	25-Oct-11	28-Oct-11
219	24	OYJ-9	9300	7	-	25-Oct-11	28-Oct-11
220	25	OYM-8	9700	7	-	25-Oct-11	28-Oct-11
221	26	OYM-9	9500	7	-	25-Oct-11	28-Oct-11
222	1	OOH-1E	9300	8	-	27-Oct-11	31-Oct-11
223	2	OOH-4F	9200	8	-	27-Oct-11	31-Oct-11
224	3	OPY4-24	8900	8	-	27-Oct-11	31-Oct-11
225	4	OQY-13C	8500	8	-	27-Oct-11	31-Oct-11
226	5	OQY-14C	8500	8	-	27-Oct-11	31-Oct-11
227	6	OQY-15C	8500	8	-	27-Oct-11	31-Oct-11
228	7	OQY-18C	8500	8	-	27-Oct-11	31-Oct-11
229	8	OQY-23C	8500	8	-	27-Oct-11	31-Oct-11
230	9	OQY-27	8500	8	-	27-Oct-11	31-Oct-11
231	10	OQY-28	8700	8	-	27-Oct-11	31-Oct-11
232	11	OQY-29	8700	8	-	27-Oct-11	31-Oct-11
233	12	OQY-31	8700	8	-	27-Oct-11	31-Oct-11
234	13	OQY-32	8500	8	-	27-Oct-11	31-Oct-11
235	14	OTD-1D	9500	8	-	27-Oct-11	31-Oct-11
236	15	OTD-23D	9500	8	-	27-Oct-11	31-Oct-11
237	16	OTD-2D	9500	8	-	27-Oct-11	31-Oct-11
238	17	OTD-2E	9400	8	-	27-Oct-11	31-Oct-11
239	18	OYL-5	8900	8	-	27-Oct-11	31-Oct-11
240	19	OYL-6	8900	8	-	27-Oct-11	31-Oct-11
241	20	OYL-9	8900	8	-	27-Oct-11	31-Oct-11
242	21	OYN-10	9300	8	-	27-Oct-11	31-Oct-11
243	22	OYN-11	9200	8	-	27-Oct-11	31-Oct-11
244	23	OYN-3	8900	8	-	27-Oct-11	31-Oct-11
245	24	OYN-4	8900	8	-	27-Oct-11	31-Oct-11

Total No.	No. by Load	Rod ID No.	Rod length (mm)	Load No.	Tag Release Date - Orange	Tag Release Date - Blue	Jobsite Arrival Date
246	25	OYN-5	8900	8	-	27-Oct-11	31-Oct-11
247	26	OYO-4	9200	8	-	27-Oct-11	31-Oct-11
248	<b>27</b>	OYO-6	9300	8	-	27-Oct-11	31-Oct-11
249	1	OOF2-4	8500	9	28-Oct-11	-	1-Nov-11
250	2	OOH2-2	8500	9	-	28-Oct-11	1-Nov-11
251	3	OOH2-20	8500	9	-	28-Oct-11	1-Nov-11
252	4	OOH2-23	8500	9	28-Oct-11	-	1-Nov-11
253	5	OPY3-8	8500	9	28-Oct-11	-	1-Nov-11
254	6	OYG-1	8900	9	28-Oct-11	-	1-Nov-11
255	7	OYG-2	8500	9	28-Oct-11	-	1-Nov-11
256	8	OYH-8	9600	9	28-Oct-11	-	1-Nov-11
257	9	OYI-5	9600	9	28-Oct-11	-	1-Nov-11
258	10	OYJ-8	9500	9	28-Oct-11	-	1-Nov-11
259	11	OYK-4	8900	9	28-Oct-11	-	1-Nov-11
260	12	OYK-5	9000	9	28-Oct-11	-	1-Nov-11
261	13	OYL-4	9000	9	28-Oct-11	-	1-Nov-11
262	14	OYM-5	9400	9	28-Oct-11	-	1-Nov-11
263	15	OYN-6	8900	9	28-Oct-11	-	1-Nov-11
264	16	OYN-7	8900	9	28-Oct-11	-	1-Nov-11
265	17	OYN-8	9300	9	28-Oct-11	-	1-Nov-11
266	18	OYN-9	9300	9	28-Oct-11	-	1-Nov-11
267	19	OYO-5	9200	9	28-Oct-11	-	1-Nov-11
268	20	OYO-7	9300	9	28-Oct-11	-	1-Nov-11
269	21	OYO-8	8900	9	28-Oct-11	-	1-Nov-11
270	22	OYO-9	9200	9	28-Oct-11	-	1-Nov-11
271	23	OYP-4	9300	9	28-Oct-11	-	1-Nov-11
272	<b>24</b>	R1011-OTD	9200	9	28-Oct-11	-	1-Nov-11
273	1	OYL-3	8500	10	11-Nov-11	-	22-Nov-11
<b>274</b>	<b>2</b>	OYP-2	8500	10	11-Nov-11	-	22-Nov-11

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003468**Date Inspected:** 14-Jul-2011**Project Name:** SAS Superstructure**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Contractor:** Dyson Corp. & Subs**OSM Arrival Time:** 800**OSM Departure Time:** 1630**Location:** Painesville, OH**Quality Control Contact:** Linda Welsh**Material transfer:** ☐ Yes ☐ No ☒ N/A**Stock Transfer:** ☐ Yes ☐ No ☒ N/A**Rebar Test Witness:** ☐ Yes ☐ No ☒ N/A**Other:****Bridge No:** 34-0006**Bid Item:** 66**Quality Control Present:** ☒ Yes ☐ No**Sampled Items:** ☐ Yes ☐ No ☒ N/A**OK to Cut:** ☐ Yes ☐ No ☒ N/A**Delayed/Cancelled:** ☐ Yes ☐ No ☒ N/A**Component:** Main Cable Anchor Rods**Lot No:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Dustyn Broening was present at Dyson Corporation in Painesville, OH, as requested, to monitor the fabrication main cable PWS anchor rods for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson QC Linda Welsh who accompanied this QAI to the location where main cable anchor rod machining activities were in-process.

This QAI randomly observed QC personnel perform External and Internal Go Gauge and No-Go gauge inspection of the anchor rods for 3.5" diameter, A354 grade BD, Q&T main cable anchor rods heat #3M75738, lot #OPY. Rods that are being inspected have not been given individual ID numbers at this time. Rods that have been found to be deficient have been set aside for rework. Pitch Micrometer mapping of these rods still need to be performed.

Work is in progress on 3.5" diameter, A354 grade BD, Q&T main cable anchor rods heat #3M75738, lot #OPY within the roll threading shop at this time. Rods that have been previously deemed deficient by means of Pitch Micrometer, Go and No-Go gauging inspections are also being reworked at this time. (See attached photos)

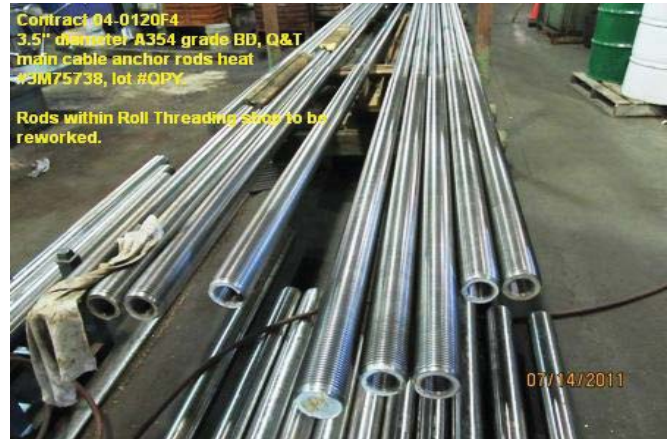


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# SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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## Summary of Conversations:

Other basic communication was performed between this QAI and the QCM during this visit.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Broening, Dustyn

Quality Assurance Inspector

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**Reviewed By:** Edmondson, Fred

QA Reviewer

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
 690 Walnut Ave. St. 150  
 Vallejo, CA 94592-1133  
 (707) 649-5453  
 (707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003481**Date Inspected:** 15-Jul-2011**Project Name:** SAS Superstructure**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Contractor:** Dyson Corp. & Subs**OSM Arrival Time:** 800**OSM Departure Time:** 1630**Location:** Painesville, OH**Quality Control Contact:** Linda Welsh**Material transfer:** ☐ Yes ☐ No ☒ N/A**Stock Transfer:** ☐ Yes ☐ No ☒ N/A**Rebar Test Witness:** ☐ Yes ☐ No ☒ N/A**Other:****Bridge No:** 34-0006**Bid Item:** 66**Quality Control Present:** ☒ Yes ☐ No**Sampled Items:** ☐ Yes ☐ No ☒ N/A**OK to Cut:** ☐ Yes ☐ No ☒ N/A**Delayed/Cancelled:** ☐ Yes ☐ No ☒ N/A**Component:** Main Cable Anchor Rods**Lot No:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Dustyn Broening was present at Dyson Corporation in Painesville, OH, as requested, to monitor the fabrication main cable PWS anchor rods for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson QC Linda Welsh who accompanied this QAI to the location where main cable anchor rod machining activities were in-process.

This QAI randomly observed QC personnel perform Pitch Micrometer, External and Internal Go Gauge and No-Go gauge inspection of the anchor rods for 3.5" diameter, A354 grade BD, Q&T main cable anchor rods heat #3M75738, lot #OPY. Rods identified as OPY3-26, OPY3-22, OPY3-16, OPY3-17, OPY3-18, OPY3-20, OPY3-21, OPY3-24 and OPY3-25 have been found to be acceptable by QC personnel. Rods identified as OPY3-19 and OPY3-23 have been found to be deficient have been set aside for rework.

Work is in progress on 3.5" diameter, A354 grade BD, Q&T main cable anchor rods heat #3M75738, lot #OPY and heat #4M76367, lot #OQX within the roll threading shop at this time. Rods that have been previously deemed deficient by means of Pitch Micrometer, Go and No-Go gauging inspections are also being reworked at this time. (See attached photos)



# SOURCE INSPECTION REPORT

( Continued Page 2 of 3 )



Contract 04-0120F4  
3.5" diameter A354 grade BD, Q&T main  
cable anchor rods heat #3M75738, lot #OPY.  
Field Inspection results.  
Note that OPY3-19 and OPY3-23 did not  
Gauge.

07/15/2011

BAR DESCRIPTION		COUPLER END		TAPPED END		UT	
12	Length	No. of Pitches	Pitch Diameter	No. of Pitches	Pitch Diameter	1	2
18	19.00	✓	3.332	3.331	3.334	3.331	3.333
19	✓	3.333	3.334	3.334	3.334	3.334	3.334
20	✓	3.334	3.334	3.334	3.334	3.334	3.334
21	✓	3.331	3.334	3.334	3.334	3.334	3.334
22	✓	3.333	3.332	3.332	3.333	3.333	3.332
23	✓	3.332	3.332	3.332	3.333	3.333	3.332
24	✓	3.332	3.332	3.334	3.333	3.333	3.334
25	✓	3.330	3.331	3.331	3.333	3.333	3.332
26	✓	3.331	3.332	3.334	3.333	3.333	3.333



## Summary of Conversations:

Other basic communication was performed between this QAI and the QCM during this visit.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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## SOURCE INSPECTION REPORT

( Continued Page 3 of 3 )

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<b>Inspected By:</b>	Broening,Dustyn	Quality Assurance Inspector
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<b>Reviewed By:</b>	Edmondson,Fred	QA Reviewer
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**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003483**Date Inspected:** 21-Jul-2011**Project Name:** SAS Superstructure**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Contractor:** Dyson Corp. & Subs**OSM Arrival Time:** 800**OSM Departure Time:** 1630**Location:** Painesville, OH**Quality Control Contact:** Russ Welsh**Material transfer:** ☐ Yes ☐ No ☒ N/A**Stock Transfer:** ☐ Yes ☐ No ☒ N/A**Rebar Test Witness:** ☐ Yes ☐ No ☒ N/A**Other:****Bridge No:** 34-0006**Bid Item:** 66**Quality Control Present:** ☒ Yes ☐ No**Sampled Items:** ☒ Yes ☐ No ☐ N/A**OK to Cut:** ☐ Yes ☐ No ☒ N/A**Delayed/Cancelled:** ☐ Yes ☐ No ☒ N/A**Component:** Main Cable Anchor Rods**Lot No:** B337-014-11**Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Dustyn Broening was present at Dyson Corporation in Painesville, OH, as requested, to monitor the fabrication main cable PWS anchor rods for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson QC Manager (QCM) Russell Welsh who accompanied this QAI to the location where main cable anchor rod machining activities were in-process.

This QAI received MTR's for A354 grade BD, Q&T main cable anchor rods, from heat #3M75738, to be MT tested per ASTM F1470, Table 3 requirements. These rods are from mixed heat treat lot numbers OPY and OQW, a total of (104ea) rods are within this heat number. A total of (9ea) rods have been selected per Table 3 requirements and email dated 7/20/11 accepting the quantity of the mixed heat treat lots to be combined as a total from the mill heat. These rods selected were identified by a green spray paint mark and are to be set aside after threading has been completed and accepted by QC. QCM relayed that MT testing is scheduled to be performed on Monday, July 25, 2011.

This QAI selected one anchor rod for sampling from each heat #3M75738-2, Dyson assigned heat treat lot #OPY and heat #3M75738-1 heat treat lot #OQW. The frequency of sampling was in conformance with contract documents and included one 1200mm threaded stock and two 300mm raw stock from both heat treat lot numbers OPY and OQW.

This QA inspector reviewed the supporting documentation and verified that the anchor rod material conformed to

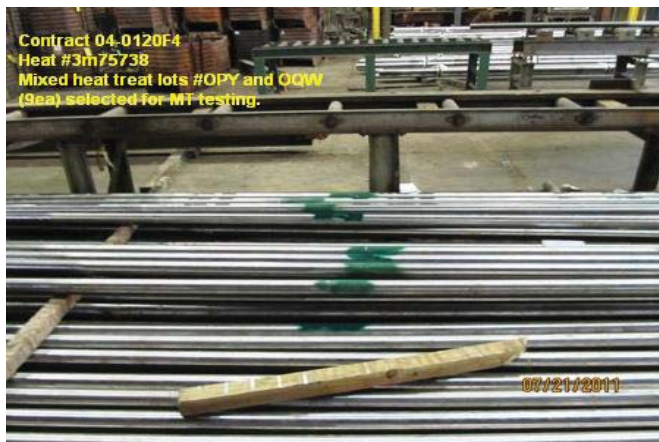
# SOURCE INSPECTION REPORT

( Continued Page 2 of 3 )

A354 Gr. BD quench & tempered round stock. Note that amended MTR's are to be faxed to the Trans Lab that distinguish heat #3M75738-1 as heat treat lot OQW and heat #3M75738-2 as heat treat lot OPY. This amended MTR was not available at time of sampling.

The sampled coupons were placed in a wooden box. The box was closed-up with steel bands for shipment to the Caltrans Trans Lab.

A TL 101 with supporting documentation was placed into a pouch and placed within the box. This QA inspector assigned Lot No. B337-014-11 to this sample shipment. (See attached photos).



## Summary of Conversations:

As noted in the body of the report above. Other basic communication was performed between this QAI and the QCM during this visit.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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## SOURCE INSPECTION REPORT

( Continued Page 3 of 3 )

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**Inspected By:** Broening,Dustyn

Quality Assurance Inspector

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**Reviewed By:** Edmondson,Fred

QA Reviewer

State of California  
Department of Transportation

**Structural Materials Testing Laboratory**  
**5900 Folsom Boulevard, Sacramento, CA 95819**



**TEST REPORT**



CERTIFICATE NO. 2364.01

Remarks

ref: ASTM A354 Grade BD, TM 03. Lot #OPY; Heat #3M75738 Main Anchor Rod & Raw Stock; Lot #OTD; Heat #4M76368 Raw Stock.

Sample No: SM-11-0643  
Date Sampled: 07/12/11 Date Rec'd: 07/18/11 Date Reported: 07/21/11  
Lot No: B33700811 / B33701211 TL-101 / SIC No: C539339 / C539340  
Contract/Permit No: 04-0120F4  
Material: A354 Grade BD Main Cable Anchor Rods.  
Manufacturer: Dyson  
Sampler: Dustyn Broening

Results: SAMPLES SUBMITTED ARE SATISFACTORY FOR USE

SOURCE	DISTRICT	E.A.	SUB JOB	SPECIAL DESIGNATION	OBJECT
59318	04	0120F3			1270

11-0643  
STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION  
SAMPLE IDENTIFICATION CARD  
TL-0101 (REV. 10/97)  
CARD NUMBER  
C539340

11-0643  
STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION  
SAMPLE IDENTIFICATION CARD  
TL-0101 (REV. 10/97)  
CARD NUMBER  
C539339

<input type="checkbox"/> PRELIMINARY TESTS <input type="checkbox"/> PROCESS TESTS <input type="checkbox"/> ACCEPTANCE TESTS <input type="checkbox"/> INDEPENDENT ASSURANCE TESTS		SAMPLE SENT TO: <input type="checkbox"/> HDQTRS. LAB <input type="checkbox"/> BRANCH LAB <input type="checkbox"/> DIST. LAB SHIPMENT NO. AUTHORIZATION NO.		FIELD NO. DIST. LAB NO. LOT NO. P.O. OR REQ. NO.
SAMPLE OF <u>Main Cable Anchor Rods</u> FOR USE IN <u>A354 Grade BD Q&amp;T</u> SAMPLE FROM <u>SAS Bridge PWS Anchorage</u> <u>Dyson</u> <u>Painesville, OH</u> DEPTH LOCATION OF SOURCE				
THIS SAMPLE IS SHIPPED IN (NO. CONTAINERS) 1	AND IS ONE OF A GROUP OF 1	SAMPLES REPRESENTING (TENS, GALS, BBLs, STA, ETC.) ea	DATE NEEDED	
TOTAL QUANTITY AVAILABLE 2-300mm 3.5" Ø raw stock from lot # OTD 2-300mm 3.5" Ø raw stock from lot # OPY		TEST RESULTS DESIRED <input type="checkbox"/> NORMAL <input type="checkbox"/> PRIORITY		
REMARKS COVER ADDITIONAL INFORMATION WITH LETTER DATE SAMPLED 6/29/11 BY Dustyn Broening TITLE QA Inspector DIST. CO. RTE/PM				
LIMITS 04-0120F4 Special provisions				
CONT. NO.				
FED. NO.				
RES. ENGR. OR SUPT. Pete Siegfthaler ADDRESS Bureau Rd., Oakland CA CONTRACTOR Dyson / ABF IV				

MAIL TO SAME DESTINATION AS SAMPLE

Print

# .505 SAMPLES



Department of Transportation  
Structural Materials Testing Laboratory  
UTM: BALDWIN 60 Kip

SM Number = 11-0643

Temperature 75 Deg F

Sample	Heat Number	Diameter (in)	Area (in <sup>2</sup> )	Stress at Offset (psi)	Tensile Strength (psi)	Elongation in 4 x d (%)	Tested By
A	OPY	0.504	0.1995	146279	164820	16.6	EMcCrory
B	OPY	0.505	0.2003	145361	164460	16	EMcCrory
A	OTD	0.506	0.2011	146689	163900	16.4	EMcCrory
B	OTD	0.506	0.2011	147661	165560	16.2	EMcCrory

S. M. NO.	DATE RECEIVED
11-0643	7/18/11
T 101 NO.	CONT. W.O.. OR P.O. NO.
539340	04-0120F4
LOT NO.	F.A.P. NO.
B33701211	

TEST NAME	DISTRICT	COUNTY	ROUTE	POST MILES
CONTRACTOR	SAMPLED BY		DATE SAMPLED	SUPPLY SOURCE
AGENCY	MANUFACTURER	MATERIAL TESTED FOR		

[illegible]

## SPECIFICATIONS

A 354 B D

REMARKS

DATE TESTED	TESTED BY	APPROVED BY
7/20/11	ERIC	



FASTENER ASSEMBLY WORKSHEET

SM Number	11-0643	Lot Number	B337012	Date Received	7/18
Contract Number	04-0120F4	TL-0101 Number	C539340	Date Tested	7/21
Lab Technician	FRED	Test Temperature	70°	Page 1 of 1	

**BOLTS:** A354 Grade BD main Cable Anchor Rod

Sample No.	1						
Heat / Mfg. Lot No.	3M75738						
Product Markings							
Size	3.5"						
Pitch Diameter	3.332	3.333	✓				
Bolt Length	48"						
Ring Gage Go/No-Go							
Zinc Coating Thick.							
Hardness: Rc / Rb							
Spacing							
.505 Wedge Tensile							

**NUTS:**

Sample No.	Side 1	Side 2				
Mfg. Lot No.	3.545	3.546				
Product Markings	-21249	-21249				
Size	3.33251	3.33351	✓	✓		
Plug Gage Go/No-Go						
Zinc Coating Thick.						
Hardness: Rc / Rb						
Spacing						
Nut Proof Load						

**WASHER:**

Sample No.						
Mfg. Lot No.						
Product Markings						
Zinc Coating Thick.						
Hardness: Rc / Rb						
Spacing						

TEST SPECIMEN PREPARATION  
AND RECORD

APPROVED FOR USE BY SMTL  
QUALITY MANAGER: *8/20/11*

SM No.

11-0643

Contract No.

04-01201-4

Requesting Lab Technician

FRED

Date Needed

TL-0101 No.

C 539340

E.A./Spec. Desg./Object

0400000018-3

Date Received

7/18/11

Date Tested/Provided

7/19/11

☒ Machine Shop

Work Requested

☒ standard round tension test specimen, circle one: 0.500"

☐ standard rectangular tension test specimen, circle one: 18" long, 8" gage

☐ Charpy, circle one: 10mm x 10mm  
10mm x 7.5mm

☐ hardness measurement sample (fasteners)

☐ weld nugget

☐ chemistry slug

☐ other: \_\_\_\_\_

☐ see instructions →

☐ Chemistry Lab

type of material:

Work Requested

☐ neoprene verification

☐ oil swell

☐ zinc coating weight

☐ steel chemistry analysis

☐ other: \_\_\_\_\_

← ☐ see instructions

☐ Other (explain)

Comments or further instructions

The received service is acceptable

*E2*

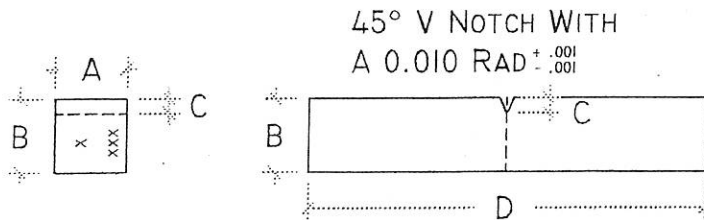
Receiving Lab Technician

7/20/11  
Date

# Specimen Preparation Information

SM # 11-0643  
EA # \_\_\_\_\_  
HEAT # OTD  
PREPARED BY ma  
DATE 7-20-11

## Charpy Impact Specimens



MATERIAL SURFACE  
SPEC # x  
HEAT # xxx  
NOTCH ORIENTATION  
OK

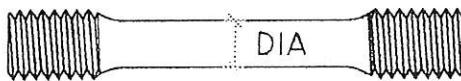
1	
2	
3	

SPC #	A	B	C	D
	NOTE #2	0.394 $\pm .001$ $- .001$	0.079 $\pm .001$ $- .001$	2.165 $\pm .000$ $- .100$
1				
2				
3				

NOTE:

- ALL MEASUREMENTS IN INCHES
- MEASUREMENT "A" 0.394, 0.295, 0.197, 0.098  
TOLERANCE  $\pm .001$
- SPECIMENS ARE TO BE SURFACE GROUND

## Reduced Tensile Round Specimens

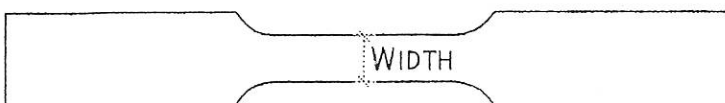


SPC #	DIA
A	.505
B	.505

NOTE: SPECIMEN DIA

- 0.500  $\pm .010$   
 $- .010$
- 0.350  $\pm .007$   
 $- .007$

## Reduced Tensile Flat Specimens



SPC #	WIDTH
A	
B	

NOTE: SPECIMEN WIDTH

- 0.500  $\pm .010$   
 $- .010$

APPROVED FOR USE BY SMTL

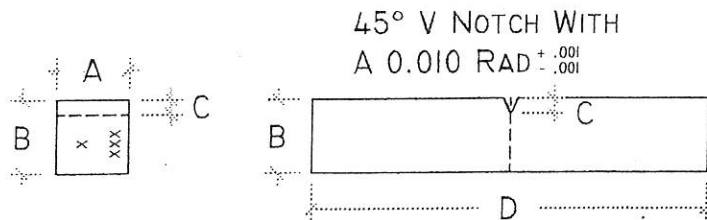
QUALITY MANAGER

*Agile B. Martz*

# Specimen Preparation Information

SM # 11-0643  
EA # \_\_\_\_\_  
HEAT # OPY  
PREPARED BY ms  
DATE 7-20-11

## Charpy Impact Specimens



MATERIAL SURFACE  
SPEC # x  
HEAT # xxx  
NOTCH ORIENTATION

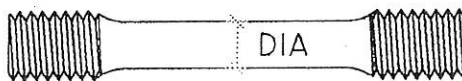
1	OK
2	
3	

SPC #	A	B	C	D
	NOTE #2	0.394 $\pm .001$	0.079 $\pm .001$	2.165 $\pm .000$ $- .100$
1				
2				
3				

### NOTE:

- ALL MEASUREMENTS IN INCHES
- MEASUREMENT "A" 0.394, 0.295, 0.197, 0.098  
TOLERANCE  $\pm .001$
- SPECIMENS ARE TO BE SURFACE GROUND

## Reduced Tensile Round Specimens



SPC #	DIA
A	.504
B	.504

### NOTE: SPECIMEN DIA

- 0.500  $\pm .010$
- 0.350  $\pm .007$

## Reduced Tensile Flat Specimens



SPC #	WIDTH
A	
B	

### NOTE: SPECIMEN WIDTH

- 0.500  $\pm .010$

APPROVED FOR USE BY SMTL

QUALITY MANAGER

*Agile H. Mantz*

# THE DYSON CORPORATION

53 Freedom Road  
Painesville, Ohio 44077  
440.946.3500 / fax 440.352.2700

## PACKING SLIP

PO Number 660110-SA-017 CO 022

Date 7/13/2011

Salesperson Pat Sheffield

S American Bridge / Fluor JV

O  
L 375 Burma Road

D Oakland

CA 94607 USA

T  
O Buyer:

S Caltrans Office of Testing & Technology Services

H Attn: Glen Weldon (916) - 227-7251

I 5900 Folsom Blvd.

P Sacramento

CA 95819 USA

T  
O

Shipment No.  
30210

Ship Via  
Conway

Freight  
PPD & Allow

Dyson Rep

Bill of Lading  
31802

Terms  
Net 30

Item	Description	Job No	Est. Delivery	Quantity	Shipped	Weight (lbs)
38	CALTRANS SAMPLE MATERIALS CONSISTING OF: L 112087 (1) 3.50" - 4UNC 2B x 1200mm (47.25") Lg. Double End Stud w/ 300mm (11.81") of Thread, Both Ends,		7/15/11	2 sets	1	120
	Test Reports / T-NC-OMC					

(To be selected from each Heat Treat Lot for 8900mm  
-9100mm Rods)



(104) Aars (1) threaded 1200mm Length  
sample to Translab

CA lot # B337-012-11  
7/12/11 DB



CODE COPY

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		3M75738	142992 102	3/23/11

REPORT TO

TURRET STEEL IND. INC.  
105 PINE STREET

SHIP TO

TURRET STEEL  
PICK UP AT MILL

IMPERIAL, PA 15126-1142

ORDERED

GRADE	SIZE	LENGTH
4140	3.52"	30'

CUSTOMER SPECIFICATIONS  
ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

CHEMICAL ANALYSIS

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.41	0.95	0.014	0.030	0.20	0.09	1.04	0.17	0.18	0.010	0.025
V	Cb	Ca	N2							
0.003	0.002	0.0013	0.0076							

GRAIN SIZE SPECIFICATION ASTM E112 (5-8)

% OF GRAIN 5-8 AVG

M 100 7.0

HARDNESS SPECIFICATION Q&T (AIM 35-37RC)

CENTER	MID RADIUS	SURFACE	AVERAGE
32.3	37.0	38.0	35.8 HRC



PAGE 1

We certify that these data are correct and in compliance with specified requirements.

Gerdau MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

Geary W. Ridenour  
Quality Assurance Representative

CONTINUED ON PAGE 2



**GERDAU MACSTEEL**

CODE COPY

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		3M75738	142992 102	3/23/11

REPORT TO

SHIP TO

TURRET STEEL IND. INC.  
105 PINE STREET

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

**ORDERED**

GRADE 4140	SIZE 3.52"	LENGTH 30'
CUSTOMER SPECIFICATIONS ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07		
HARDENABILITY SPECIFICATION ASTM A304		
ACTUAL		
J1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 28 30 32 34		
55 54 53 52 52 52 51 51 50 50 49 47 46 45 44 42 40 38 37 36 35 34 33 33		
MACROCLEANLINESS SPECIFICATION ASTM E381 (S3-R2-C2)		
PLATE I PLATE II		
S R C		
AVERAGE 1 1 1 NONE		
PHYSICALS SPECIFICATION ASTM A434		
02.0 IN		
TENSILE (KSI)	YIELD (KSI)	% ELONGATION
162.0	144.0	15.0
		REDUCTION OF AREA
		49.0
DI CALCULATION SPECIFICATION REPORT		
5.561		
AUTO ULTRASONIC SPECIFICATION 100%		
PAGE 2		

4/25/11

We certify that these data are correct and in compliance with specified requirements.

Gerda MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

*Geary W. Ridenour*

Geary W. Ridenour

Quality Assurance Representative

CONTINUED ON PAGE 3



GERDAU MACSTEEL

CODE COPY

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		3M75738	142992 102	3/23/11

REPORT TO

SHIP TO

TURRET STEEL IND. INC.  
105 PINE STREET

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

ORDERED

GRADE	SIZE	LENGTH
4140	3.52"	30'

CUSTOMER SPECIFICATIONS  
ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

MATERIAL ULTRASONIC TESTED FOR INTERNAL SOUNDNESS.

QUENCH TIME, TEMP, ME SPECIFICATION REPORT

TREATMENT	TEMP F	TIME (MIN.)	MEDIA
AUSTENIZE	1650	8.30	
QUENCH	0		WATER
TEMPER	1110	8.30	

REDUCTION RATIO

RATIO= 7.1 TO 1.0

CIRCOGRAPH..... SPECIFICATION 100%

CIRCOGRAPH TESTED FOR SURFACE IMPERFECTIONS

\*\* MATERIAL 100% MELTED AND MANUFACTURED IN THE U.S.A. BY THE ELECTRIC ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT BEEN REPAIRED BY WELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION. GERDAU MACSTEEL MONITORS ALL INCOMING SCRAP AND ALL HEATS OF STEEL TO ENSURE THAT PRODUCTS SHIPPED ARE FREE OF RADIOACTIVE MATERIAL.

QA  
4/25/11

PAGE 3 OF 3

We certify that these data are correct and in compliance with specified requirements.

Gerda MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

Geary W. Ridenour

Quality Assurance Representative



6/29/11

CODE COPY

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

## CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		3M75738	142992 102	3/23/11

## REPORT TO

TURRET STEEL IND. INC.  
105 PINE STREET

## SHIP TO

TURRET STEEL  
PICK UP AT MILL

IMPERIAL, PA 15126-1142

## ORDERED

GRADE	SIZE	LENGTH
4140	3.52"	30'

CUSTOMER SPECIFICATIONS  
ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

## CHEMICAL ANALYSIS

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.41	0.95	0.014	0.030	0.20	0.09	1.04	0.17	0.18	0.010	0.025
V	Cb	Ca	N2							
0.003	0.002	0.0013	0.0076							

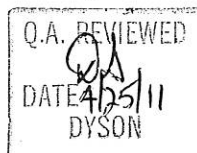
GRAIN SIZE SPECIFICATION ASTM E112 (5-8)

% OF GRAIN 5-8 AVG

M 100 7.0

HARDNESS SPECIFICATION Q&amp;T (AIM 35-37RC)

CENTER	MID RADIUS	SURFACE	AVERAGE
32.3	37.0	38.0	35.8 HRC



PAGE 1

We certify that these data are correct and in compliance with specified requirements.

Gerda MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

  
Geary W. Ridenour  
Quality Assurance Representative

CONTINUED ON PAGE 2





GERDAU MACSTEEL

CODE COPY

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		3M75738	142992 102	3/23/11

REPORT TO

TURRET STEEL IND. INC.  
105 PINE STREET

SHIP TO

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

ORDERED

GRADE	SIZE	LENGTH
4140	3.52"	30'

CUSTOMER SPECIFICATIONS  
ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

HARDENABILITY SPECIFICATION ASTM A304

ACTUAL

J1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32	34
55	54	53	52	52	52	51	51	50	50	49	47	46	45	44	42	40	38	37	36	35	34	33	33	33

MACROCLEANLINESS SPECIFICATION ASTM E381 (S3-R2-C2)

PLATE I

PLATE II

	S	R	C	
AVERAGE	1	1	1	NONE

PHYSICALS SPECIFICATION ASTM A434

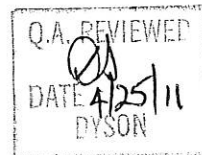
02.0 IN

TENSILE (KSI)	YIELD (KSI)	% ELONGATION	REDUCTION OF AREA
162.0	144.0	15.0	49.0

DI CALCULATION SPECIFICATION REPORT

5.561

AUTO ULTRASONIC SPECIFICATION 100%



PAGE 2

We certify that these data are correct and in compliance with specified requirements.

Gerdau MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

Geary W. Ridenour  
Quality Assurance Representative

CONTINUED ON PAGE 3



GERDAU MACSTEEL

CODE 0PY

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		3M75738	142992 102	3/23/11

REPORT TO

TURRET STEEL IND. INC.  
105 PINE STREET

SHIP TO

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

ORDERED

GRADE	SIZE	LENGTH
4140	3.52"	30'

CUSTOMER SPECIFICATIONS  
ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

MATERIAL ULTRASONIC TESTED FOR INTERNAL SOUNDNESS.

QUENCH TIME, TEMP, ME SPECIFICATION REPORT

TREATMENT	TEMP F	TIME (MIN.)	MEDIA
AUSTENIZE	1650	8.30	
QUENCH	0		WATER
TEMPER	1110	8.30	

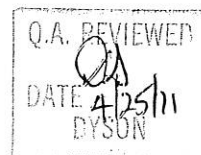
REDUCTION RATIO

RATIO= 7.1 TO 1.0

CIRCOGRAPH..... SPECIFICATION 100%

CIRCOGRAPH TESTED FOR SURFACE IMPERFECTIONS

\*\* MATERIAL 100% MELTED AND MANUFACTURED IN THE U.S.A. BY THE ELECTRIC ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT BEEN REPAIRED BY WELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION. GERDAU MACSTEEL MONITORS ALL INCOMING SCRAP AND ALL HEATS OF STEEL TO ENSURE THAT PRODUCTS SHIPPED ARE FREE OF RADIOACTIVE MATERIAL.



PAGE 3 OF 3

We certify that these data are correct and in compliance with specified requirements.

Gerda MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

Geary W. Ridenour  
Quality Assurance Representative

CA lot # B337-008-11

6/29/11

CODE OTD

**GERDAU MACSTEEL**5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		4M76368	142993 104	3/29/11

## REPORT TO

TURRET STEEL IND. INC.  
105 PINE STREET

## SHIP TO

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

**ORDERED**

GRADE	SIZE	LENGTH
4140	3.52"	32'

CUSTOMER SPECIFICATIONS  
ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07**CHEMICAL ANALYSIS**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.42	0.97	0.014	0.030	0.20	0.09	1.04	0.17	0.18	0.010	0.023
V	Cb	Ca	N2							
0.003	0.002	0.0013	0.0060							

## GRAIN SIZE

SPECIFICATION ASTM E112 (5-8)

% OF GRAIN 5-8 AVG

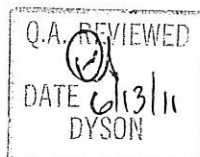
M 100

7.0

## HARDNESS

SPECIFICATION Q&amp;T (AIM 35-37RC)

CENTER	MID RADIUS	SURFACE	AVERAGE
31.9	35.6	38.8	35.4 HRC



PAGE 1

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Gerdau MacSteel Arkansas

5225 Planter Road

Fort Smith, AR 72902

Geary W. Ridenour

Quality Assurance Representative

CONTINUED ON PAGE 2

**GERDAU MACSTEEL**

CODE 0TD

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		4M76368	142993 104	3/29/11

REPORT TO

TURRET STEEL IND. INC.  
105 PINE STREET

SHIP TO

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

**ORDERED**

GRADE	SIZE	LENGTH
4140	3.52"	32'

CUSTOMER SPECIFICATIONS  
ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

HARDENABILITY SPECIFICATION ASTM A304

ACTUAL

J1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32	34
57	56	56	56	55	54	54	54	53	52	51	51	49	49	47	46	45	43	41	40	39	38	38	37	

MACROCLEANLINESS SPECIFICATION ASTM E381 (S3-R2-C2)

PLATE I

PLATE II

	S	R	C
AVERAGE	1	1	1

NONE

PHYSICALS SPECIFICATION ASTM A434

02.0 IN

TENSILE (KSI)	YIELD (KSI)	% ELONGATION	REDUCTION OF AREA
150.0	130.0	16.5	48.0

DI CALCULATION SPECIFICATION REPORT

5.706

AUTO ULTRASONIC SPECIFICATION 100%



PAGE 2

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Gerdau MacSteel Arkansas

5225 Planter Road  
Fort Smith, AR 72902

Gary W. Ridenour

Quality Assurance Representative

CONTINUED ON PAGE 3



**GERDAU MACSTEEL**

CODE OTD

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		4M76368	142993 104	3/29/11

REPORT TO

TURRET STEEL IND. INC.  
105 PINE STREET

SHIP TO

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

**ORDERED**

GRADE	SIZE	LENGTH
4140	3.52"	32'

**CUSTOMER SPECIFICATIONS**

ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

MATERIAL ULTRASONIC TESTED FOR INTERNAL SOUNDNESS.

**QUENCH TIME,TEMP,ME SPECIFICATION REPORT**

TREATMENT	TEMP F	TIME(MIN.)	MEDIA
AUSTENIZE	1650	8.30	
QUENCH	0		WATER
TEMPER	1090	8.30	

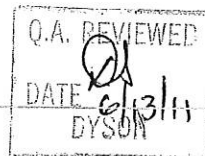
**REDUCTION RATIO**

RATIO= 7.1 TO 1.0

CIRCOGRAPH..... SPECIFICATION 100%

CIRCOGRAPH TESTED FOR SURFACE IMPERFECTIONS

\*\* MATERIAL 100% MELTED AND MANUFACTURED IN THE U.S.A. BY THE ELECTRIC ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT BEEN REPAIRED BY WELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION. GERDAU MACSTEEL MONITORS ALL INCOMING SCRAP AND ALL HEATS OF STEEL TO ENSURE THAT PRODUCTS SHIPPED ARE FREE OF RADIOACTIVE MATERIAL.



PAGE 3 OF 3

We certify that these data are correct and in compliance with specified requirements.

Gerdau MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

Geary W. Ridenour

Quality Assurance Representative



**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003491**Date Inspected:** 27-Jul-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH**Quality Control Contact:** Russ Welsh**Quality Control Present:** Yes No**Material transfer:** Yes No N/A**Sampled Items:** Yes No N/A**Stock Transfer:** Yes No N/A**OK to Cut:** Yes No N/A**Rebar Test Witness:** Yes No N/A**Delayed/Cancelled:** Yes No N/A**Other:****Bridge No:** 34-0006**Component:** Main Cable Anchor Rods**Bid Item:** 66**Lot No:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Dustyn Broening was present at Dyson Corporation in Painesville, OH, as requested, to monitor the fabrication main cable PWS anchor rods for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson QC Manager (QCM) Russell Welsh who accompanied this QAI to the location where main cable anchor rod machining activities were in-process.

This QAI received MTR's for A354 grade BD, Q&T main cable anchor rods, heat #4M76367-1, Dyson heat treat lot #OQY (quantity of 48ea). This QAI randomly selected (4ea) from this lot to be MT tested per ASTM F1470, Table 3 requirements. Also selected were (5ea) from heat #4M76367-2, Dyson lot #OQX (quantity of 58ea) to be MT tested per ASTM F1470, Table 3 requirements. These rods selected were identified by a blue paint marker at the ends and are to be set aside after gauging is accepted by QC.

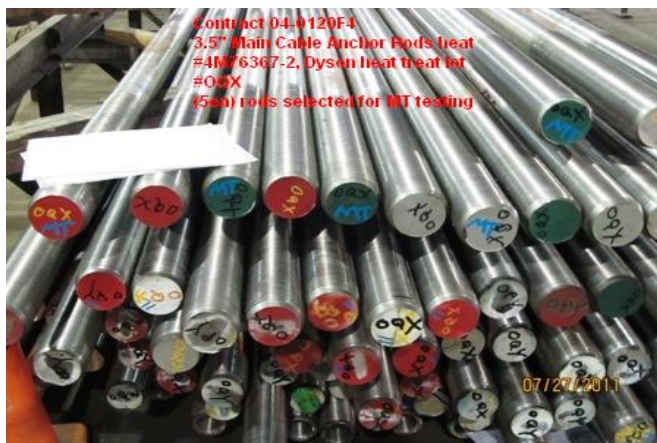
Work is in progress on 3.5" diameter, A354 grade BD, Q&T main cable anchor rods heat #4M76367-1, Dyson heat treat lot #OQY within the roll threading shop at this time.

---

# SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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## Summary of Conversations:

As noted in the body of the report above. Other basic communication was performed between this QAI and the QCM during this visit.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

---

**Inspected By:** Broening,Dustyn

Quality Assurance Inspector

---

**Reviewed By:** Edmondson,Fred

QA Reviewer

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003515**Date Inspected:** 03-Aug-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH**Quality Control Contact:** Russ Welsh**Quality Control Present:** Yes No**Material transfer:** Yes No N/A**Sampled Items:** Yes No N/A**Stock Transfer:** Yes No N/A**OK to Cut:** Yes No N/A**Rebar Test Witness:** Yes No N/A**Delayed/Cancelled:** Yes No N/A**Other:****Bridge No:** 34-0006**Component:** Main Cable Anchor Rods**Bid Item:** 66**Lot No:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Dustyn Broening was present at Dyson Corporation in Painesville, OH, as requested, to monitor the fabrication main cable PWS anchor rods for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson QC Manager (QCM) Russell Welsh who accompanied this QAI to the location where main cable anchor rod activities were in-process.

Dyson has prepared (30ea) Main Cable Anchor Rods to be shipped to Monnig Ind. galvanizing facility. Dyson is selecting rods from heat #4M76367-2, Dyson lot #OQX that have been deemed acceptable and per specification. These rods are to be shipped at Dysons' own risk per Sales Manager Pat Sheffield due to no results from the Caltrans Translab for lot #OQX. The main cable anchor rods that are to be shipped at Dysons' own risk are as follows:

- First bundle consists of OQX5-6, OQX5-1, OQX5-5, OQX5-2, OQX5-3 and OQX5-4.
- Second bundle consists of OQX5-25, OQX5-27, OQX5-26, OQX5-28, OQX5-29 and OQX5-16.
- Third bundle consists of OQX5-20, OQX5-22, OQX5-19, OQX5-24, OQX5-23 and OQX5-21.
- Fourth bundle consists of OQX5-13, OQX5-15, OQX5-14, OQX5-30, OQX5-17 and OQX5-18.
- Fifth bundle consists of OQX5-9, OQX5-10, OQX5-7, OQX5-11, OQX5-12 and OQX5-8.
- Sixth bundle consists of OQX4-8, OQX4-9, OQX4-10, OQX4-11 and OQX4-12.

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## SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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### Summary of Conversations:

As noted in the body of the report above. Other basic communication was performed between this QAI and the QCM during this visit.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

---

<b>Inspected By:</b>	Broening,Dustyn	Quality Assurance Inspector
<b>Reviewed By:</b>	Edmondson,Fred	QA Reviewer

---

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

690 Walnut Ave. St. 150

Vallejo, CA 94592-1133

(707) 649-5453

(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003519**Date Inspected:** 05-Aug-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH**Quality Control Contact:** Russ Welsh**Quality Control Present:** Yes No**Material transfer:** Yes No N/A**Sampled Items:** Yes No N/A**Stock Transfer:** Yes No N/A**OK to Cut:** Yes No N/A**Rebar Test Witness:** Yes No N/A**Delayed/Cancelled:** Yes No N/A**Other:****Bridge No:** 34-0006**Component:** Main Cable Anchor Rods**Bid Item:** 66**Lot No:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Dustyn Broening was present at Dyson Corporation in Painesville, OH, as requested, to monitor the fabrication main cable PWS anchor rods for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson QC Manager (QCM) Russell Welsh who accompanied this QAI to the location where main cable anchor rod activities were in-process.

Dyson has prepared (40ea) Main Cable Anchor Rods to be shipped to Monnig Ind. galvanizing facility. Dyson is selecting rods from heat #4M76367-2, Dyson lot #OQX and heat #4M76367-1, Dyson lot #OQY that have been deemed acceptable and per specification. These rods are to be shipped at Dysons' own risk per Sales Manager Pat Sheffield due to no results from the Caltrans Translab for lot #OQX and OQY. The main cable anchor rods that are to be shipped at Dysons' own risk are as follows:

- First bundle consists of OQY-25, OQY-26, OQX-4-24, OQX-4-23, OQX-4-22, OQX-4-21 and OQX-4-20.
- Second bundle consists of OQY-30, OQY-28, OQY-27, OQY-31, OQY-29 and OQY-32.
- Third bundle consists of OQX-3-2, OQY-3A, OQY-4A, OQY-6A, OQY-1A, OQX-3-8, OQX-3-7 and OQX-3-5.
- Fourth bundle consists of OQY-9A, OQY-15, OQY-10A, OQY-14, OQY-19, OQX-4-17, OQX-4-18, and OQY-16.
- Fifth bundle consists of OQY-1, OQY-2, OQY-4 and OQY-3.
- Sixth bundle consists of OQX-3-11, OQX-3-13, OQX-3-16, OQY-12A, OQY-14A, OQY-15A, OQY-17



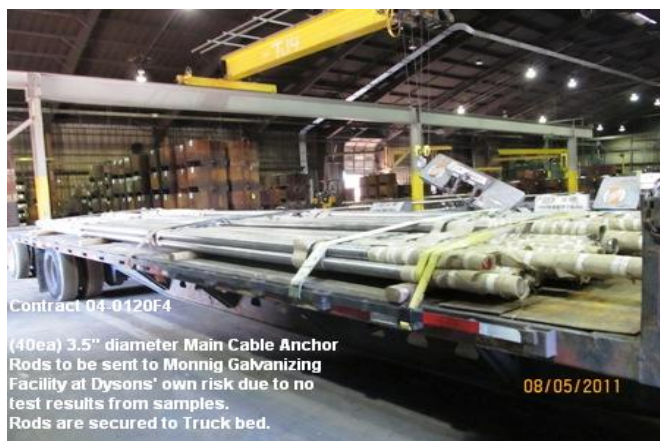
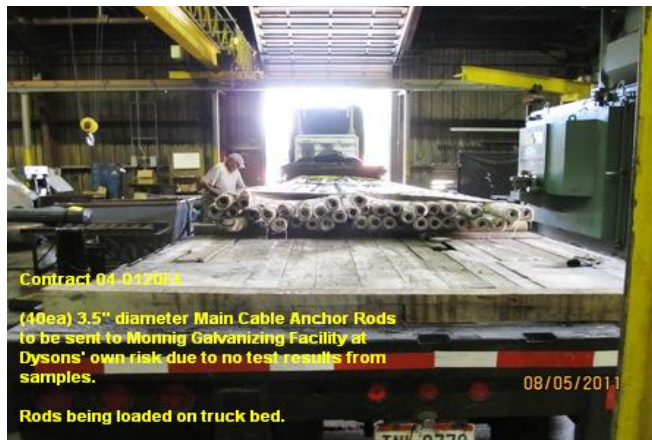
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## SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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This QAI randomly observed QC personnel perform Pitch Micrometer inspection of the anchor rods for 3.5" diameter, A354 grade BD, Q&T main cable anchor rods and have been found to be acceptable by QC personnel. See attached photos.



### Summary of Conversations:

As noted in the body of the report above. Other basic communication was performed between this QAI and the QCM during this visit.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

---

**Inspected By:** Broening,Dustyn

Quality Assurance Inspector

**Reviewed By:** Edmondson,Fred

QA Reviewer



State of California

Department of Transportation

## Structural Materials Testing Laboratory

5900 Folsom Boulevard, Sacramento, CA 95819



## TEST REPORT



CERTIFICATE NO. 2364.01

## Remarks

ref: ASTM A354 BD, TM03. Heat #3M75738-1, Code #OQW; Heat #3M75738-2, Code #OPY; Heat #4M76367-1, Code #OQY; Heat #4M76367-2, Code #OQX

Sample No: SM-11-0720

Date Sampled: 07/21/11

Date Rec'd: 07/25/11

Date Reported: 08/08/11

Lot No: B33701411

TL-101 / SIC No: C539341

Contract/Permit No: 04-0120F4

Material: 3.5" A354 BD Main Cable Anchor Rods

Manufacturer: Dyson

Sampler: Dustyn Broening

8-8

Results: SAMPLES SUBMITTED ARE SATISFACTORY FOR USE

SOURCE	DISTRICT	E.A.	SUB JOB	SPECIAL DESIGNATION	OBJECT
59318	04	0120F3			1270

7-25 11-0720

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

**SAMPLE IDENTIFICATION CARD** CARD NUMBER **C539341**

TL-0101 (REV. 10/97)

☒ PRELIMINARY TESTS  
☐ PROCESS TESTS  
☐ ACCEPTANCE TESTS

☐ INDEPENDENT ASSURANCE TESTS  
☐ DIST. LAB  
☐ TRANS. LAB

☐ SPECIAL TESTS

SAMPLE OF Main Cable Anchor Rods

FOR USE IN A354 Grade BD, & T

SAMPLE FROM SAS Bridge PWS Anchorage  
Dyson  
Painesville

DEPTH \_\_\_\_\_

LOCATION OF SOURCE \_\_\_\_\_

THIS SAMPLE IS SHIPPED IN \_\_\_\_\_ AND IS ONE OF \_\_\_\_\_ A GROUP OF \_\_\_\_\_

(NO. CONTAINERS) \_\_\_\_\_

OWNER OR MANUFACTURER \_\_\_\_\_

TOTAL QUANTITY AVAILABLE \_\_\_\_\_

REMARKS \* (2) 300mm 3.5" Ø rawstock from each Ht treat lot #OPY, #OQW, #OQX, OQY  
\* (1) 1200mm 3.5" Ø threaded stock from each Ht treat lot #OPY, #OQW, OQX & #OQY

DATE SAMPLED 7/21/11

BY Dustyn Broening TITLE QA Inspector

DIST. CO. RTE. PM \_\_\_\_\_

LIMITS 04-0120F4  
Special Provisions

CONT. NO. \_\_\_\_\_

FED. NO. \_\_\_\_\_

RES. ENGR. OR SUPT. Pete Sigenthaler

ADDRESS 333 Burma Rd, Oakland CA

CONTRACTOR Dyson / ARF JV

MAIL TO SAME DESTINATION AS SAMPLE

Lab Manager

Print

Quality Manager

# .505 SAMPLES



Department of Transportation  
Structural Materials Testing Laboratory  
UTM: BALDWIN 60 Kip

SM Number = 11-0720  
Temperature 75 Deg F

Sample	Heat Number	Diameter (in)	Area (in <sup>2</sup> )	Stress at Offset (psi)	Tensile Strength (psi)	Elongation in 4 x d (%)	Tested By
A	OQW	0.505	0.2003	142434	163970	16.7	EMcCrory
B	OQW	0.505	0.2003	146783	165620	16.5	EMcCrory
A	OPY	0.505	0.2003	144868	164320	15.9	EMcCrory
B	OPY	0.506	0.2011	144192	164570	16.4	EMcCrory
A	OQY	0.506	0.2011	147099	166220	15.2	EMcCrory
B	OQY	0.505	0.2003	148527	166900	16.3	EMcCrory
A	OQX	0.506	0.2011	147282	166070	16.3	EMcCrory
B	OQX	0.509	0.2035	147254	164550	15.3	EMcCrory

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION  
**TRANSPORTATION LABORATORY**  
**REPORT OF TESTS**  
 TL - 619 (REV. 5/95)

S. M. NO.	11-0720	DATE RECEIVED	7/25/11
T 101 NO.	C5 39341	CONT. W.D. OR P.O. NO.	04-0204
LOT NO.		F.A.P. NO.	

TEST NAME	DISTRICT	COUNTY	ROUTE	POST MILES
CONTRACTOR	SAMPLED BY		DATE SAMPLED	SUPPLY SOURCE
AGENCY	MANUFACTURER		MATERIAL TESTED FOR	

SAMPLE NO.	TYPE	HEAT NO.	SIZE	AREA		YIELD-MPa		ACTUAL	PSI	ULTIMATE PSI		ELONG. %	RED. AREA %	COLD BEND	CHEMICAL ANALYSIS					A OR E
				BEFORE	AFTER	ACTUAL	MPa								C	MN	P	S	SI	
A		0QW	505	2.008	2.344				142434		163970	16.7								
B		11	505	2.008	2.390				146832		165620	16.5								
									146783											
A		0PY	505	2.008	2.328				144868		164320	15.9								
B		11	506	2.006	2.334				144192		164570	16.4								
A		0QY	506	2.006	2.310				147079		166220	15.2								
B		11	505	2.006	2.332				148527		166900	16.3								
A		0QX	506	2.006	2.332				147282		166070	16.3								
B		11	509	2.006	2.312				147254		164550	15.3								

SPECIFICATIONS

354 BD

REMARKS

DATE TESTED	8/5/11	TESTED BY	Ena	APPROVED BY	
-------------	--------	-----------	-----	-------------	--

FASTENER ASSEMBLY WORKSHEET

SM Number	11-0720	Lot Number		Date Received	7/25/11
Contract Number	04-0120F4	TL-0101 Number	C539341	Date Tested	8/4/11
Lab Technician	FRBD	Test Temperature		Page 1 of 1	

**BOLTS:** *Grade B D. Main Cable Anchor Rods*

Sample No.	1A	1B	1C	1D
Heat / Mfg. Lot No.	00W	0PV	0QY	0QX
Product Markings				
Size	3.5"			
Pitch Diameter	3.336 ✓	3.336 ✓	3.334 ✓	3.332 ✓
Bolt Length	3.332	3.332	3.331	3.331
Ring Gage Go/No-Go				
Zinc Coating Thick.				
Hardness: Rc / Rb				
Spacing				
.505 Wedge Tensile				

**NUTS:**

Sample No.						
Mfg. Lot No.						
Product Markings						
Size						
Plug Gage Go/No-Go						
Zinc Coating Thick.						
Hardness: Rc / Rb						
Spacing						
Nut Proof Load						

**WASHER:**

Sample No.						
Mfg. Lot No.						
Product Markings						
Zinc Coating Thick.						
Hardness: Rc / Rb						
Spacing						

TEST SPECIMEN PREPARATION  
AND RECORD

APPROVED FOR USE BY SMTL  
QUALITY MANAGER: *[Signature]*

SM No.

11-0720

Contract No.

04-0120F3

Requesting Lab Technician

Glen

Date Needed

ASAP

TL-0101 No.

C539341

E.A./Spec. Desg./Object

0400000018 3

Date Received

7-25-11

Date Tested/Provided

☒ Machine Shop

Work Requested

☒ Standard round tension test specimen, circle one: 0.500"

☐ Standard rectangular tension test specimen, circle one: 18" long, 8" gage

☐ 8" long, 2" gage length  
☐ Charpy, circle one: 10mm x 10mm  
10mm x 7.5mm

☐ Hardness measurement sample (fasteners)

☐ Weld nugget

☐ Chemistry slug

☐ Other: \_\_\_\_\_

☐ See instructions →

☐ Chemistry Lab

type of material:

Work Requested

☐ neoprene verification

☐ oil swell

☐ zinc coating weight

☐ steel chemistry analysis

☐ other: \_\_\_\_\_

← ☐ see instructions

☐ Other (explain)

Comments or further instructions

The received service is acceptable

*[Signature]*

Receiving Lab Technician

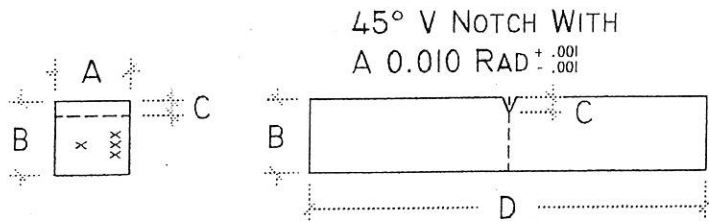
8/5/11

Date

# Specimen Preparation Information

SM # 11-0720  
EA # \_\_\_\_\_  
HEAT # 00X  
PREPARED BY md  
DATE 8-4-11

## Charpy Impact Specimens



MATERIAL SURFACE  
SPEC # x  
HEAT # xxx  
NOTCH ORIENTATION

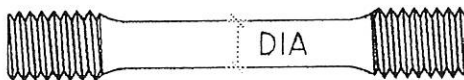
1	OK
2	
3	

SPC #	A	B	C	D
	NOTE #2	0.394 $\pm .001$ $- .001$	0.079 $\pm .001$ $- .001$	2.165 $\pm .000$ $- .100$
1				
2				
3				

### NOTE:

- ALL MEASUREMENTS IN INCHES
- MEASUREMENT "A" 0.394, 0.295, 0.197, 0.098  
TOLERANCE  $\pm .001$
- SPECIMENS ARE TO BE SURFACE GROUND

## Reduced Tensile Round Specimens



SPC #	DIA
A	.505
B	.510

### NOTE: SPECIMEN DIA

- 0.500  $\pm .010$
- 0.350  $\pm .007$

## Reduced Tensile Flat Specimens



SPC #	WIDTH
A	
B	

### NOTE: SPECIMEN WIDTH

- 0.500  $\pm .010$

APPROVED FOR USE BY SMTL

QUALITY MANAGER

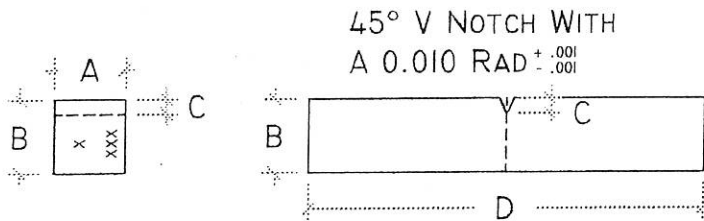
*Agile H. Mantz*



# Specimen Preparation Information

SM # 11-0720  
EA # \_\_\_\_\_  
HEAT # 007  
PREPARED BY ms  
DATE 8-4-11

## Charpy Impact Specimens



MATERIAL SURFACE  
SPEC # x  
HEAT # xxx  
NOTCH ORIENTATION

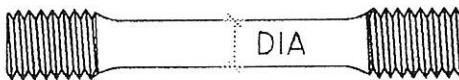
1	OK
2	
3	

SPC #	A	B	C	D
	NOTE #2	0.394 $\pm \begin{smallmatrix} .001 \\ -.001 \end{smallmatrix}$	0.079 $\pm \begin{smallmatrix} .001 \\ -.001 \end{smallmatrix}$	2.165 $\pm \begin{smallmatrix} .000 \\ -.100 \end{smallmatrix}$
1				
2				
3				

### NOTE:

- ALL MEASUREMENTS IN INCHES
- MEASUREMENT "A" 0.394, 0.295, 0.197, 0.098  
TOLERANCE  $\pm \begin{smallmatrix} .001 \\ -.001 \end{smallmatrix}$
- SPECIMENS ARE TO BE SURFACE GROUND

## Reduced Tensile Round Specimens

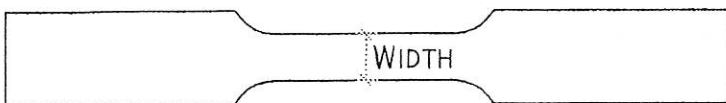


SPC #	DIA
A	.506
B	.505

### NOTE: SPECIMEN DIA

- 0.500  $\pm \begin{smallmatrix} .010 \\ -.010 \end{smallmatrix}$
- 0.350  $\pm \begin{smallmatrix} .007 \\ -.007 \end{smallmatrix}$

## Reduced Tensile Flat Specimens



SPC #	WIDTH
A	
B	

### NOTE: SPECIMEN WIDTH

- 0.500  $\pm \begin{smallmatrix} .010 \\ -.010 \end{smallmatrix}$

APPROVED FOR USE BY SMTL

QUALITY MANAGER

*Agile H. Mantz*

# Specimen Preparation Information

SM # 11-0720

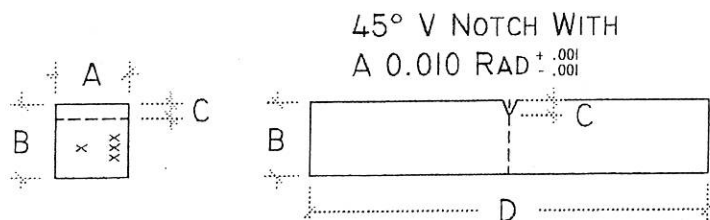
EA # \_\_\_\_\_

HEAT # 00W

PREPARED BY MA

DATE 8-4-11

## Charpy Impact Specimens



MATERIAL  
SURFACE

SPEC # x  
HEAT # xxx

NOTCH  
ORIENTATION

OK

1	
2	
3	

SPC #	A	B	C	D
	NOTE #2	0.394 $\pm .001$ $- .001$	0.079 $\pm .001$ $- .001$	2.165 $\pm .000$ $- .100$
1				
2				
3				

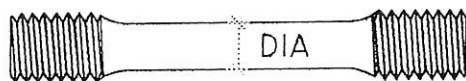
NOTE:

- ALL MEASUREMENTS IN INCHES
- MEASUREMENT "A" 0.394, 0.295, 0.197, 0.098

TOLERANCE  $\pm .001$

- SPECIMENS ARE TO BE SURFACE GROUND

## Reduced Tensile Round Specimens

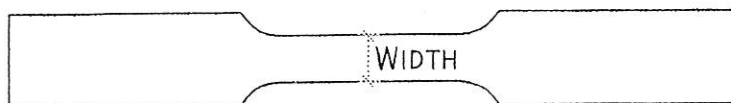


SPC #	DIA
A	.505
B	.505

NOTE: SPECIMEN DIA

- 0.500  $\pm .010$   
 $- .010$
- 0.350  $\pm .007$   
 $- .007$

## Reduced Tensile Flat Specimens



SPC #	WIDTH
A	
B	

NOTE: SPECIMEN WIDTH

- 0.500  $\pm .010$   
 $- .010$

APPROVED FOR USE BY SMTL

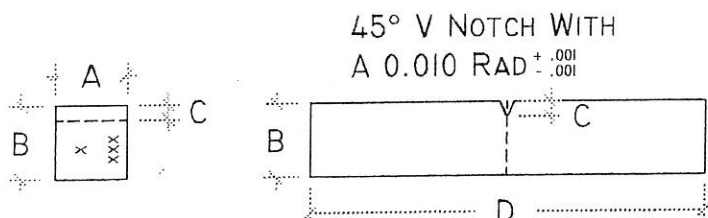
QUALITY MANAGER

*Agile H. Mantz*

# Specimen Preparation Information

SM # 11-0720  
EA # \_\_\_\_\_  
HEAT # OPY  
PREPARED BY MA  
DATE 8-4-11

## Charpy Impact Specimens



MATERIAL SURFACE  
SPEC # x  
HEAT # xxx  
NOTCH ORIENTATION

OK	
1	
2	
3	

SPC #	A	B	C	D
	NOTE #2	0.394 $\pm .001$ $- .001$	0.079 $\pm .001$ $- .001$	2.165 $\pm .000$ $- .100$
1				
2				
3				

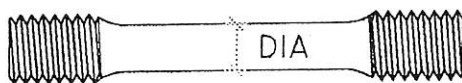
NOTE:

- ALL MEASUREMENTS IN INCHES
- MEASUREMENT "A" 0.394, 0.295, 0.197, 0.098

TOLERANCE  $\pm .001$

- SPECIMENS ARE TO BE SURFACE GROUND

## Reduced Tensile Round Specimens

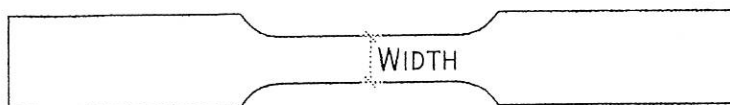


SPC #	DIA
A	.505
B	.506

NOTE: SPECIMEN DIA

- 0.500  $\pm .010$   
 $- .010$
- 0.350  $\pm .007$   
 $- .007$

## Reduced Tensile Flat Specimens



SPC #	WIDTH
A	
B	

NOTE: SPECIMEN WIDTH

- 0.500  $\pm .010$   
 $- .010$

APPROVED FOR USE BY SMTL

QUALITY MANAGER

*Angelo A. Mantz*

7-25

CH lot # B537-014-11

7/21/11 DB 11-0720

**GERDAU MACSTEEL**

CODE CQW

Note that ammended  
cert is pending.  
To be faxed to 5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201  
Trans Lab.

## CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		3M75738-1	142992 102	5/12/11

REPORT TO

SHIP TO

TURRET STEEL IND. INC.  
105 PINE STREET

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

## ORDERED

GRADE	SIZE	LENGTH
4140	3.52"	30'

## CUSTOMER SPECIFICATIONS

ASTM A354-07 GRADE BD; Q&amp;T; AIM RC 35 / 37; TSI-130 4/13/07

## CHEMICAL ANALYSIS

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.41	0.95	0.014	0.030	0.20	0.09	1.04	0.17	0.18	0.010	0.025
V	Cb	Ca	N2							
0.003	0.002	0.0013	0.0076							

GRAIN SIZE SPECIFICATION ASTM E112 (5-8)

% OF GRAIN 5-8 AVG

M 100 7.0

HARDNESS SPECIFICATION Q&amp;T (AIM 35-37RC)

CENTER	MID RADIUS	SURFACE	AVERAGE
32.3	37.0	38.0	35.8 HRC

PAGE 1

We certify that these data are correct and in compliance with specified requirements.

Gerdau MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

Geary W. Ridenour

Quality Assurance Representative

CONTINUED ON PAGE 2



# GERDAU MACSTEEL

CODE 00W

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

## CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		3M75738	142992 102	5/12/11

REPORT TO

TURRET STEEL IND. INC.  
105 PINE STREET

SHIP TO

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

## ORDERED

GRADE	SIZE	LENGTH
4140	3.52"	30'

CUSTOMER SPECIFICATIONS  
ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

HARDENABILITY SPECIFICATION ASTM A304

ACTUAL

J1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32	34
55	54	53	52	52	52	51	51	50	50	49	47	46	45	44	42	40	38	37	36	35	34	33	33	33

MACROCLEANLINESS SPECIFICATION ASTM E381 (S3-R2-C2)

PLATE I

PLATE II

	S	R	C	
AVERAGE	1	1	1	NONE

PHYSICALS SPECIFICATION ASTM A434

02.0 IN

TENSILE (KSI)	YIELD (KSI)	% ELONGATION	REDUCTION OF AREA
147.0	126.0	18.6	52.0

DI CALCULATION SPECIFICATION REPORT

5.561

AUTO ULTRASONIC SPECIFICATION 100%

PAGE 2

We certify that these data are correct and in compliance with specified requirements.

Gerdau MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

Geary W. Ridenour

Quality Assurance Representative

CONTINUED ON PAGE 3



**GERDAU MACSTEEL**

CODE 00W

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		3M75738	142992 102	5/12/11

**REPORT TO**

TURRET STEEL IND. INC.  
105 PINE STREET

IMPERIAL , PA 15126-1142

**SHIP TO**

TURRET STEEL  
PICK UP AT MILL

**ORDERED**

GRADE	SIZE	LENGTH
4140	3.52"	30'

**CUSTOMER SPECIFICATIONS**

ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

MATERIAL ULTRASONIC TESTED FOR INTERNAL SOUNDNESS.

QUENCH TIME,TEMP,ME SPECIFICATION REPORT

TREATMENT	TEMP F	TIME (MIN.)	MEDIA
AUSTENIZE	1650	8.30	
QUENCH	0		WATER
TEMPER	1110	8.30	

REDUCTION RATIO

RATIO= 7.1 TO 1.0

CIRCOGRAPH..... SPECIFICATION 100%

CIRCOGRAPH TESTED FOR SURFACE IMPERFECTIONS

\*\* MATERIAL 100% MELTED AND MANUFACTURED IN THE U.S.A. BY THE ELECTRIC ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT BEEN REPAIRED BY WELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION. GERDAU MACSTEEL MONITORS ALL INCOMING SCRAP AND ALL HEATS OF STEEL TO ENSURE THAT PRODUCTS SHIPPED ARE FREE OF RADIOACTIVE MATERIAL.

PAGE 3 OF 3

We certify that these data are correct and in compliance with specified requirements.

Gerda MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

Geary W. Ridenour  
Quality Assurance Representative



LA 1st # D557-014-11  
7/21/11 DB



GERDAU MACSTEEL

CODE COPY

Note that ammended  
cert is pending. To be faxed to  
Trans Lab  
DB

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

CERTIFIED MATERIAL TEST REPORT



CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		3M75738-2	142992 102	3/23/11

REPORT TO

TURRET STEEL IND. INC.  
105 PINE STREET

SHIP TO

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

ORDERED

GRADE	SIZE	LENGTH
4140	3.52"	30'

CUSTOMER SPECIFICATIONS  
ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

CHEMICAL ANALYSIS

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.41	0.95	0.014	0.030	0.20	0.09	1.04	0.17	0.18	0.010	0.025
V	Cb	Ca	N2							
0.003	0.002	0.0013	0.0076							

GRAIN SIZE SPECIFICATION ASTM E112 (5-8)

% OF GRAIN 5-8 AVG

M 100 7.0

HARDNESS SPECIFICATION Q&T (AIM 35-37RC)

CENTER	MID RADIUS	SURFACE	AVERAGE
32.3	37.0	38.0	35.8 HRC



PAGE 1

We certify that these data are correct and in compliance with specified requirements.

Gerdau MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

Geary W. Ridenour

Quality Assurance Representative

CONTINUED ON PAGE 2



**GERDAU MACSTEEL**

CODE COPY

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		3M75738	142992 102	3/23/11

REPORT TO

TURRET STEEL IND. INC.  
105 PINE STREET

SHIP TO

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

**ORDERED**

4140	GRADE	3.52"	SIZE	30'	LENGTH																			
CUSTOMER SPECIFICATIONS ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07																								
HARDENABILITY		SPECIFICATION ASTM A304																						
ACTUAL																								
J1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32	34
55	54	53	52	52	52	51	51	50	50	49	47	46	45	44	42	40	38	37	36	35	34	33	33	33
MACROCLEANLINESS		SPECIFICATION ASTM E381 (S3-R2-C2)																						
PLATE I			PLATE II																					
AVERAGE	S	R	C	NONE																				
	1	1	1																					
PHYSICALS		SPECIFICATION ASTM A434																						
02.0 IN																								
TENSILE (KSI)	YIELD (KSI)	% ELONGATION	REDUCTION OF AREA																					
162.0	144.0	15.0	49.0																					
DI CALCULATION		SPECIFICATION REPORT																						
5.561																								
AUTO ULTRASONIC		SPECIFICATION 100%																						
PAGE 2																								



We certify that these data are correct and in compliance with specified requirements.

Gerdau MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

Geary W. Ridenour  
Quality Assurance Representative

CONTINUED ON PAGE 3



GERDAU MACSTEEL

CODE 0PY

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		3M75738	142992 102	3/23/11

REPORT TO

TURRET STEEL IND. INC.  
105 PINE STREET

IMPERIAL , PA 15126-1142

SHIP TO

TURRET STEEL  
PICK UP AT MILL

ORDERED

GRADE	SIZE	LENGTH
4140	3.52"	30'

CUSTOMER SPECIFICATIONS  
ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

MATERIAL ULTRASONIC TESTED FOR INTERNAL SOUNDNESS.

QUENCH TIME, TEMP, ME SPECIFICATION REPORT

TREATMENT	TEMP F	TIME (MIN.)	MEDIA
AUSTENIZE	1650	8.30	
QUENCH	0		WATER
TEMPER	1110	8.30	

REDUCTION RATIO

RATIO= 7.1 TO 1.0

CIRCOGRAPH..... SPECIFICATION 100%

CIRCOGRAPH TESTED FOR SURFACE IMPERFECTIONS

\*\* MATERIAL 100% MELTED AND MANUFACTURED IN THE U.S.A. BY THE ELECTRIC ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT BEEN REPAIRED BY WELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION. GERDAU MACSTEEL MONITORS ALL INCOMING SCRAP AND ALL HEATS OF STEEL TO ENSURE THAT PRODUCTS SHIPPED ARE FREE OF RADIOACTIVE MATERIAL.



PAGE 3 OF 3

We certify that these data are correct and in compliance with specified requirements.

Gerdau MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

Geary W. Ridenour  
Quality Assurance Representative



CODE 004/

**GERDAU MACSTEEL**

7/21/11 DB

Note that ammended  
cert is pending.  
To be faxed to  
Trans Lab. DB

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		4M76367-1	142985 102	5/12/11

**REPORT TO**

TURRET STEEL IND. INC.  
105 PINE STREET

**SHIP TO**

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

**ORDERED**

GRADE	SIZE	LENGTH
4140	3.52"	29'

**CUSTOMER SPECIFICATIONS**  
ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

**CHEMICAL ANALYSIS**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.41	0.96	0.014	0.028	0.18	0.08	1.03	0.17	0.16	0.010	0.023
V	Cb	Ca	N2							
0.004	0.002	0.0010	0.0082							

**GRAIN SIZE** SPECIFICATION ASTM E112 (5-8)

% OF GRAIN 5-8 AVG

M 100 7.0

**HARDNESS** SPECIFICATION Q&T (AIM 35-37RC)

CENTER	MID RADIUS	SURFACE	AVERAGE
31.9	35.1	37.8	34.9 HRC

PAGE 1

We certify that these data are correct and in compliance with specified requirements.

**Gerdau MacSteel Arkansas**  
5225 Planter Road  
Fort Smith, AR 72902

*Geary W. Ridenour*

Geary W. Ridenour

Quality Assurance Representative

CONTINUED ON PAGE 2



CODE 0024  
**GERDAU MACSTEEL**

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

### CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		4M76367	142985 102	5/12/11

REPORT TO

SHIP TO

TURRET STEEL IND. INC.  
105 PINE STREET

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

### ORDERED

GRADE	SIZE	LENGTH
4140	3.52"	29'

CUSTOMER SPECIFICATIONS  
ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

HARDENABILITY SPECIFICATION ASTM A304

ACTUAL

J1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32	34
57	56	55	55	54	54	54	53	52	52	51	50	49	47	46	45	43	41	41	40	38	37	36	35	

MACROCLEANLINESS SPECIFICATION ASTM E381 (S3-R2-C2)

PLATE I

PLATE II

	S	R	C	
AVERAGE	1	1	1	NONE

PHYSICALS SPECIFICATION ASTM A434

02.0 IN

TENSILE (KSI)	YIELD (KSI)	% ELONGATION	REDUCTION OF AREA
150.0	128.0	18.8	56.0

DI CALCULATION SPECIFICATION REPORT

5.454

AUTO ULTRASONIC SPECIFICATION 100%

PAGE 2

We certify that these data are correct and in compliance with specified requirements.

Gerdau MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

Geary W. Ridenour

Quality Assurance Representative

CONTINUED ON PAGE 3



**GERDAU MACSTEEL**

CODE 004

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		4M76367	142985 102	5/12/11

**REPORT TO**

TURRET STEEL IND. INC.  
105 PINE STREET

**SHIP TO**

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

**ORDERED**

GRADE	SIZE	LENGTH
4140	3.52"	29'

**CUSTOMER SPECIFICATIONS**

ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

MATERIAL ULTRASONIC TESTED FOR INTERNAL SOUNDNESS

QUENCH TIME, TEMP, ME SPECIFICATION REPORT

TREATMENT	TEMP F	TIME (MIN.)	MEDIA
AUSTENIZE	1645	8.30	
QUENCH	0		WATER
TEMPER	1080	8.30	

REDUCTION RATIO

RATIO= 7.1 TO 1.0

CIRCOGRAPH..... SPECIFICATION 100%

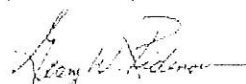
CIRCOGRAPH TESTED FOR SURFACE IMPERFECTIONS

\*\* MATERIAL 100% MELTED AND MANUFACTURED IN THE U.S.A. BY THE ELECTRIC ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT BEEN REPAIRED BY WELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION. GERDAU MACSTEEL MONITORS ALL INCOMING SCRAP AND ALL HEATS OF STEEL TO ENSURE THAT PRODUCTS SHIPPED ARE FREE OF RADIOACTIVE MATERIAL.

PAGE 3 OF 3

We certify that these data are correct and in compliance with specified requirements.

**Gerdau MacSteel Arkansas**  
5225 Planter Road  
Fort Smith, AR 72902

  
Geary W. Ridenour  
Quality Assurance Representative





CODE 00X

CA lot # B337-014-11  
7/21/11 DB  
Note that amended  
cert is pending. To  
be faxed to  
Trans Lab DB

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

## CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		4M76367-Z	142985 102	3/23/11

## REPORT TO

TURRET STEEL IND. INC.  
105 PINE STREET

## SHIP TO

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

## ORDERED

GRADE	SIZE	LENGTH
4140	3.52"	29'

CUSTOMER SPECIFICATIONS  
ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

## CHEMICAL ANALYSIS

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.41	0.96	0.014	0.028	0.18	0.08	1.03	0.17	0.16	0.010	0.023
V	Cb	Ca	N2							
0.004	0.002	0.0010	0.0082							

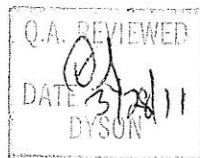
GRAIN SIZE SPECIFICATION ASTM E112 (5-8)

% OF GRAIN 5-8 AVG

M 100 7.0

HARDNESS SPECIFICATION Q&T (AIM 35-37RC)

CENTER	MID RADIUS	SURFACE	AVERAGE
31.9	35.1	37.8	34.9 HRC



PAGE 1

We certify that these data are correct and in compliance with specified requirements.

Gerdau MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

Geary W. Ridenour

Quality Assurance Representative

CONTINUED ON PAGE 2



5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

CODE QQX

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		4M76367	142985 102	3/23/11

REPORT TO

TURRET STEEL IND. INC.  
105 PINE STREET

SHIP TO

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

ORDERED

GRADE	SIZE	LENGTH
4140	3.52"	29'

CUSTOMER SPECIFICATIONS  
ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

HARDENABILITY SPECIFICATION ASTM A304

ACTUAL

J1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 22 24 26 28 30 32 34  
57 56 55 55 54 54 54 53 52 52 51 50 49 47 46 45 43 41 41 40 38 37 36 35

MACROCLEANLINESS SPECIFICATION ASTM E381 (S3-R2-C2)

PLATE I

PLATE II

	S	R	C	
AVERAGE	1	1	1	NONE

PHYSICALS SPECIFICATION ASTM A434

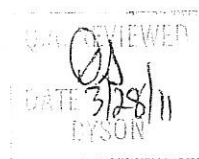
02.0 IN

TENSILE (KSI)	YIELD (KSI)	% ELONGATION	REDUCTION OF AREA
151.0	134.0	19.6	57.0

DI CALCULATION SPECIFICATION REPORT

5.454

AUTO ULTRASONIC SPECIFICATION 100%



PAGE 2

We certify that these data are correct and in compliance with specified requirements.

Gerdau MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

Geary W. Ridenour  
Quality Assurance Representative

CONTINUED ON PAGE 3



5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

CODE 00X

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
31637		4M76367	142985 102	3/23/11

REPORT TO

TURRET STEEL IND. INC.  
105 PINE STREET

SHIP TO

TURRET STEEL  
PICK UP AT MILL

IMPERIAL , PA 15126-1142

ORDERED

GRADE	SIZE	LENGTH
4140	3.52"	29'

CUSTOMER SPECIFICATIONS  
ASTM A354-07 GRADE BD; Q&T; AIM RC 35 / 37; TSI-130 4/13/07

MATERIAL ULTRASONIC TESTED FOR INTERNAL SOUNDNESS

QUENCH TIME, TEMP, ME SPECIFICATION REPORT

TREATMENT	TEMP F	TIME (MIN.)	MEDIA
AUSTENIZE	1645	8.30	
QUENCH	0		WATER
TEMPER	1080	8.30	

REDUCTION RATIO

RATIO= 7.1 TO 1.0

CIRCOGRAPH..... SPECIFICATION 100%

CIRCOGRAPH TESTED FOR SURFACE IMPERFECTIONS

\*\* MATERIAL 100% MELTED AND MANUFACTURED IN THE U.S.A. BY THE ELECTRIC ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT BEEN REPAIRED BY WELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION. GERDAU MACSTEEL MONITORS ALL INCOMING SCRAP AND ALL HEATS OF STEEL TO ENSURE THAT PRODUCTS SHIPPED ARE FREE OF RADIOACTIVE MATERIAL.



PAGE 3 OF 3

We certify that these data are correct and in compliance with specified requirements.

Gerdau MacSteel Arkansas  
5225 Planter Road  
Fort Smith, AR 72902

Geary W. Ridenour  
Quality Assurance Representative

UNIFORM STRAIGHT BILL OF LADING - ORIGINAL - NOT NEGOTIABLE  
RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

Shipper's No. 31860

At Painesville, Ohio (SCAC) Company Agent's No. THE DYSON CORPORATION & DOMESTIC NUT DIVISION

Date From the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown) marked, consigned, and destined as shown below, which said carrier agrees to carry to destination, if on its route, or otherwise to deliver to another carrier on the route to destination. Every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions on the back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

Consigned to Caltrans Office of Testing + Tech 5900 Folsom Blvd (Mail or Street Address of Consignee - for purposes of notification only)

Destination Sacramento State CA County 95819

Route Delivery Address<sup>†</sup> (To be filled in only when shipper desires and governing tariffs provide for delivery thereat.)

Delivering Carrier Conway Car or Vehicle Initials No.

Additional Shipment Information

No. Packages	★ HM	Kind of Package, Description of Articles, Special Marks, and Exceptions	Weight (Sub. to Cor.)	Class or Rate	Check Column	Freight charges are PREPAID unless marked collect. CHECK BOX IF COLLECT <input type="checkbox"/>
		STEEL BOLTS & NUTS I/S 104520				FOR FREIGHT COLLECT SHIPMENTS: If this shipment is to be delivered to the consignee, without recourse on the consignor, the consignor shall sign the following statement: The carrier may decline to make delivery of this shipment without payment of freight and all other lawful charges.
		ROUGH STEEL FORGINGS 104780				
		STEEL BARS I/S 104340				
		4 pcs 1200mm				THE DYSON CORPORATION (Signature of Consignor)
		8 pcs 300 mm				
						Collect On Delivery \$
						and remit to
		Attn Glen Weldon				
		916 227 7251				C. O. D. Charge to be paid by { Shipper <input type="checkbox"/> Consignee <input type="checkbox"/>

NOTE (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property as follows:

"The agreed or declared value of the property is specifically stated by the shipper to be not exceeding \_\_\_\_\_ per \_\_\_\_\_."

NOTE (2) Liability Limitation for loss or damage on this shipment may be applicable. See 49 U.S.C. § 14706(c)(1)(A) and (B).

NOTE (3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation with ordinary care. See Sec. 2(e) or NMFC Item 360.

Notify if problem enroute or at delivery \_\_\_\_\_ (for informational purposes only)

Name Fax No. Tel. No.

Send freight bill to: Company Name City Street State Zip

Shipper Carrier

Per Per Date

Shipper Certification

This is to certify that the above named materials are properly classified, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the DOT.

Per Date 7-21-11

Carrier Certification

Carrier acknowledges receipt of packages and required placards. Carrier certifies emergency response information was made available and/or carrier has the DOT emergency response guidebook or equivalent document in the vehicle.

Per Package Nos.

Date

THE DYSON CORPORATION  
53 Freedom Rd., Painesville, OH 44077

Permanent post-office address of shipper.

\* MARK WITH "X" TO DESIGNATE HAZARDOUS MATERIAL AS DEFINED IN TITLE 49 OF FEDERAL REGULATION

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003582**Date Inspected:** 11-Aug-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH**Quality Control Contact:** Russ Welsh**Quality Control Present:** Yes No**Material transfer:** Yes No N/A**Sampled Items:** Yes No N/A**Stock Transfer:** Yes No N/A**OK to Cut:** Yes No N/A**Rebar Test Witness:** Yes No N/A**Delayed/Cancelled:** Yes No N/A**Other:****Bridge No:** 34-0006**Component:** Main Cable Anchor Rods**Bid Item:** 66**Lot No:** B337-024-11 and B337-025-11**Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Dustyn Broening was present at Dyson Corporation in Painesville, OH, as requested, to monitor the fabrication main cable PWS anchor rods for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson QC Manager (QCM) Russell Welsh who accompanied this QAI to the location where main cable anchor rod activities were in-process.

Dyson has prepared (41ea) 3.5" diameter A354 grade BD, Q&T Main Cable Anchor Rods and (6ea) 1300mm length extension rods to be shipped to Monnig Ind. galvanizing facility. Dyson is selecting rods from heat #4M76367-2, Dyson lot #OQX and heat #4M76367-1, Dyson lot #OQY, heat #3M75738-2, Dyson lot #OPY, heat #4M76368-1, Dyson lot #OTD, heat #4M76368-3, Dyson lot #OOH and extension rods from heat # 3M75738-1, Dyson lot #OQW that have been deemed acceptable and per specification. The main cable anchor rods that are to be shipped are as follows:

- First bundle consists of OTD-2E, OTD-1D, OTD-2D, OTD-3D, OTD-1H and OOH-2-F.
- Second bundle consists of OOH-1F, OOH-1E, OOH-4F, OOH-5F, OOH-3F and OPY2-8 (Note that OPY2-8 was assigned a separate green tag with CA lot #B337-025-11. This Rod was cut threaded previously).
- Third bundle consists of OPY-4-22, OQY-4-23B, OPY-4-19, OPY-4-20 and OPY-4-21.
- Fourth bundle consists of OQY-7C, OQY-6C, OQY-10C, OQY-9C and OQX-2-8.
- Fifth bundle consists of OQY-19C, OQY-18C, OQY-17C, OQY-16C and OQY-15C.
- Sixth bundle consists of OPY-4-24, OQY-11C, OQY-12C, OQY-13C and OQY-14C.
- Seventh bundle consists of OQY-23C, OQY-24C, OQY-21C and OQY-20C.



# SOURCE INSPECTION REPORT

( Continued Page 2 of 3 )

- Eighth bundle consists of OQY-4C, OQY-3C, OQY-2C, OQY-1C and OQX-2-5.
- Pallet consists of extension rods OQX6-1, OQX-2, OQX-3, OQW2-4, OQW2-5 and OQW2-6.

This QAI attached a Green Tag with Lot No. B337-024-11 to the material to be shipped. Supporting documentation which includes MTR's, Certificates of Conformance and NDT test results are enclosed within an envelope and have been attached to the pallet with the extension rods.

Dyson has prepared (1ea) 3.5" diameter A354 grade BD, Q&T Main Cable Anchor Rod to be shipped to Monnig Ind. galvanizing facility. Dyson is selecting rod from heat #3M75738-2, Dyson lot #OPY that have been deemed acceptable and per specification. This main cable anchor rod was previously cut threaded and not roll threaded. This rod has been bundled within the second bundle listed above and is designated as OPY2-8.

This QAI attached a Green Tag with Lot No. B337-025-11 and supporting documentation which includes MTR's, Certificates of Conformance and NDT test results are enclosed within an envelope and have been attached to the material to be shipped.





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## SOURCE INSPECTION REPORT

( Continued Page 3 of 3 )

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### Summary of Conversations:

As noted in the body of the report above. Other basic communication was performed between this QAI and the QCM during this visit.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

---

<b>Inspected By:</b>	Broening,Dustyn	Quality Assurance Inspector
<b>Reviewed By:</b>	Edmondson,Fred	QA Reviewer

---

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

690 Walnut Ave.St. 150

Vallejo, CA 94592-1133

(707) 649-5453

(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.8**COMPONENT MATERIAL INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** CMI-000374**Date Inspected:** 11-Aug-2011**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH**Bridge No.:** 34-0006**OSM Arrival Time:** 800**OSM Departure Time:** 1630**Component:#** Main Cable Anchor Rod

The following material has been inspected in accordance with Section 6 of the Standard Specifications at the above location. At this point in the fabrication process it appears to comply with contract plans and specifications.

To be shipped to the following vendor or locations: Monnig Industries 400 Industrial Drive, Glasgow, MO 65254

Lot #	Bid Item #	Quantity		Material Description
B337-024-11	66	41	ea	3.5" diameter A354 grade BD, Q&T Main Cable Anchor Rods
B337-024-11	66	6	ea	3.5" diameter A354 grade BD, Q&T Main Cable Anchor Rod Extensions

**Identification:** 3.5" diameter A354 grade BD, Q&T Main Cable Anchor Rods and Extension Rods**Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Dustyn Broening was present at Dyson Corporation in Painesville, OH, as requested, to monitor the fabrication main cable PWS anchor rods for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson QC Manager (QCM) Russell Welsh who accompanied this QAI to the location where main cable anchor rod activities were in-process.

Dyson has prepared (41ea) 3.5" diameter A354 grade BD, Q&T Main Cable Anchor Rods and (6ea) 1300mm length extension rods to be shipped to Monnig Ind. galvanizing facility. Dyson is selecting rods from heat #4M76367-2, Dyson lot #OQX and heat #4M76367-1, Dyson lot #OQY, heat #3M75738-2, Dyson lot #OPY, heat #4M76368-1, Dyson lot #OTD, heat #4M76368-3, Dyson lot #OOH and extension rods from heat #3M75738-1, Dyson lot #OQW that have been deemed acceptable and per specification. The main cable anchor rods that are to be shipped are as follows:

- First bundle consists of OTD-2E, OTD-1D, OTD-2D, OTD-3D, OTD-1H and OOH-2-F.
- Second bundle consists of OOH-1F, OOH-1E, OOH-4F, OOH-5F, OOH-3F and OPY2-8 (Note that OPY2-8 was assigned a separate green tag with CA lot #B337-025-11. This Rod was cut threaded previously).
- Third bundle consists of OPY-4-22, OQY-4-23B, OPY-4-19, OPY-4-20 and OPY-4-21.
- Fourth bundle consists of OQY-7C, OQY-6C, OQY-10C, OQY-9C and OQX-2-8.
- Fifth bundle consists of OQY-19C, OQY-18C, OQY-17C, OQY-16C and OQY-15C.
- Sixth bundle consists of OPY-4-24, OQY-11C, OQY-12C, OQY-13C and OQY-14C.
- Seventh bundle consists of OQY-23C, OQY-24C, OQY-21C and OQY-20C.

# COMPONENT MATERIAL INSPECTION REPORT

( Continued Page 2 of 3 )

- Eighth bundle consists of OQY-4C, OQY-3C, OQY-2C, OQY-1C and OQX-2-5.
- Pallet consists of extension rods OQX6-1, OQX-2, OQX-3, OQW2-4, OQW2-5 and OQW2-6.

This QAI attached a Green Tag with Lot No. B337-024-11 to the material to be shipped. Supporting documentation which includes MTR's, Certificates of Conformance and NDT test results are enclosed within an envelope and have been attached to the pallet with the extension rods. Reference this QAI 6034 report dated 8/11/11.

As noted in the body of the report above. Other basic communication was performed between this QAI and the QCM during this visit.

Nina Choy 510-385-5910



## Summary of Conversations:

As noted in the body of the report above. Other basic communication was performed between this QAI and the QCM during this visit.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for

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COMPONENT MATERIAL INSPECTION REPORT

( Continued Page 3 of 3 )

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your project.

Inspected By:	Broening, Dustyn	Quality Assurance Inspector
Reviewed By:	Edmondson, Fred	QA Reviewer

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
 690 Walnut Ave.St. 150  
 Vallejo, CA 94592-1133  
 (707) 649-5453  
 (707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.8**COMPONENT MATERIAL INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** CMI-000373**Date Inspected:** 11-Aug-2011**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH**Bridge No.:** 34-0006**OSM Arrival Time:** 800**OSM Departure Time:** 1630**Component:#** Main Cable Anchor Rods

The following material has been inspected in accordance with Section 6 of the Standard Specifications at the above location. At this point in the fabrication process it appears to comply with contract plans and specifications.

To be shipped to the following vendor or locations: Monnig Industries 400 Industrial Drive, Glasgow, MO 65254

Lot #	Bid Item #	Quantity	Material Description
B337-025-11 66		1 ea	3.5" diameter A354 grade BD, Q&T Main Cable Anchor Rod

**Identification:** 3.5" diameter A354 grade BD, Q&T Main Cable Anchor Rod**Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Dustyn Broening was present at Dyson Corporation in Painesville, OH, as requested, to monitor the fabrication main cable PWS anchor rods for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson QC Manager (QCM) Russell Welsh who accompanied this QAI to the location where main cable anchor rod activities were in-process.

Dyson has prepared (1ea) 3.5" diameter A354 grade BD, Q&T Main Cable Anchor Rod to be shipped to Monnig Ind. galvanizing facility. Dyson is selecting rod from heat #3M75738-2, Dyson lot #OPY that have been deemed acceptable and per specification. This main cable anchor rod was previously cut threaded and not roll threaded. This rod has been bundled within the second bundle and is designated as OPY2-8. Reference this QAI 6034 report dated 8/11/11.

This QAI attached a Green Tag with Lot No. B337-025-11 and supporting documentation which includes MTR's, Certificates of Conformance and NDT test results are enclosed within an envelope and have been attached to the material to be shipped.



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## COMPONENT MATERIAL INSPECTION REPORT

( Continued Page 2 of 2 )

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### Summary of Conversations:

As noted in the body of the report above. Other basic communication was performed between this QAI and the QCM during this visit.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Broening, Dustyn
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Edmondson, Fred
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QA Reviewer
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Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
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(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.15**SOURCE INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003589**Date Inspected:** 25-Aug-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Monning Industries**Location:** Glasgow, MO**Quality Control Contact:** Andrew Monning**Quality Control Present:** Yes No**Material transfer:** Yes No N/A**Sampled Items:** Yes No N/A**Stock Transfer:** Yes No N/A**OK to Cut:** Yes No N/A**Rebar Test Witness:** Yes No N/A**Delayed/Cancelled:** Yes No N/A**Other:** N/A**Bridge No:** 34-0006**Component:** PWS Anchor Rods**Bid Item:** 66**Lot No:** N/A**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager, was present at Monning Industries Inc. in Glasgow, MO as requested to monitor the galvanizing of Parallel Wire Strand (PWS) High Strength Rods from Dyson Corporation for use on the San Francisco / Oakland / Bay Bridge (SFOBB), Self Anchored Suspension (SAS) project.

This QA Inspector met with Monning Industries General Manager Ryan Monning and Andrew Monning and was informed of the status of galvanizing the material and preparation of the various documents for inspection and release of the material for shipping. This QA Inspector was informed of the following:

There were 201 high strength rods at Monning, all rods had been blasted and galvanized. Monning was in the process of performing Quality Control (QC) inspections and packaging for shipment.

This QA Inspector was informed the material had arrived without a "Green Tag" from Dyson Corporation and that Monning had received a package this morning (1100 hours) containing various documents such as the Certificates Of Conformance (COC) from Dyson Corporation.

Dyson Corporation has previously arranged shipping of material from Monning Industries. Monning Industries has grouped the PWS Anchor Rods into proposed shipping bundles, but is not aware of a date for shipment.

This QA Inspector was provided access to the shop area and observed there appeared to be 201 high strength rods at the facility in the following stages:

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## SOURCE INSPECTION REPORT

( Continued Page 2 of 3 )

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152 - rods were galvanized, had a spherical nut and jam nut threaded onto the applicable end, the threads were wrapped in cloth and tapped, then multiple rods (5-6) were then banded together. See photo below

42 – rods were galvanized and in various stages of being completed which ranged from waiting for QC inspection, nuts to be threaded and being wrapped for shipment. See photo below.

6 – rods approximately 1310 mm in length were banded onto a pallet.

1- rod identified as OPY-2-11 had been rejected and red tagged by Monning QC Inspector Robert Cole. This QA Inspector was informed a spherical nut could not be threaded by hand onto the tapered end as required by contract documents.

This QA Inspector was informed by Andrew Monning that documents had arrived at 1100 hours this date from Dyson Corporation. This QA Inspector performed a review of the documents and observed the following documents had been provided and/or were not correct as noted below.

The COC from Dyson had the incorrect bid item number and part name – bid item 68 and Suspender System was used.

The inspection reports in accordance with ABF-RFI-002502R00 (measurements of the tapered and coupler ends) was not provided.

The document identifying the heat treatment code for each heat of steel was not provided. Typically each heat of steel has had two heat treatment identification codes/numbers.

A shipper identifying and listing the applicable pieces sent to Monning.

This QA Inspector was provided some of the required documentation from Monning Industries and during a review of these documents this QA Inspector observed the following.

The COC did not reference the applicable ASTM standard for the galvanizing (ASTM A123)

A QC Inspection report for the blasting was not provided.

This QA Inspector spoke with Andrew Monning regarding the QC Inspection reports for galvanizing and was informed that a report could be generated for each high strength rod, for all rods and/or for each truck load of rods to be shipped which had been done for previous shipments. This QA Inspector was informed that shipping documents for the shipment of the high strength rods to the jobsite had not been provided by Dyson therefore QC reports for the galvanizing thickness had not been generated. Andrew Monning assured this QA Inspector all required QC inspections had been performed and had been entered into the computer.

This QA Inspector randomly observed the following QC functions this date. This QA Inspector observed QC Inspector Robert Cole using a mechanical thickness gauge to verify the galvanizing/zinc thickness at multiple random locations on approximately 10 of the 42 rods in various process stages. This QA Inspector confirmed with

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## SOURCE INSPECTION REPORT

( Continued Page 3 of 3 )

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QC Inspector Robert Cole the instrument had been calibrated just prior to performing the inspections.

During observations around the shop this date this QA Inspector observed the identification numbers of each high strength rod had been written in black marker approximately in the middle of each rod. This QA Inspector performed a random verification on approximately 10% of the rods at Monning Industries that the identification number had been transferred correctly.

In general the status of the high strength rods regarding galvanizing and a partial review of the QC documents required for tagging the rods has been performed as noted above.

### Summary of Conversations:



### Comments

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**Inspected By:** Hager,Craig

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.15**SOURCE INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003594**Date Inspected:** 26-Aug-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Monnig Industries**Location:** Glasgow, MO

**Quality Control Contact:** Ryan Monnig  
**Material transfer:** Yes No N/A  
**Stock Transfer:** Yes No N/A  
**Rebar Test Witness:** Yes No N/A

**Quality Control Present:** Yes No  
**Sampled Items:** Yes No N/A  
**OK to Cut:** Yes No N/A  
**Delayed/Cancelled:** Yes No N/A

**Other:** N/A**Bridge No:** 34-0006**Component:** PWS Anchor Rods**Bid Item:** 66**Lot No:** N/A**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager, was present at Monnig Industries Inc. in Glasgow, MO as requested to monitor the galvanizing of Parallel Wire Strand (PWS) High Strength Rods from Dyson Corporation for use on the San Francisco / Oakland / Bay Bridge (SFOBB), Self Anchored Suspension (SAS) project.

This QA Inspector met with Monnig Industries General Manager Ryan Monnig and Andrew Monnig and was informed of the following status regarding the galvanizing of the PWS Anchor Rods:

Monnig QC Inspector Robert Cole had rejected two more rods for not being able to hand thread a spherical nut to the end of the threads. This QA Inspector was informed by QC Inspector Robert Cole the following rods had been rejected; OQX4-5 and OPY2-8. QC Inspector Robert Cole informed this QA the nut on rod OPY2-8 could only be threaded for approximately 450 mm of the thread length and the nut for OQX4-5 stopped approximately 200 mm from the full length. This QA Inspector verified the nut could not hand threaded on to each of the rods above. This brings the total count of rods rejected at Monnig to 3. This QA Inspector observed that all 3 rods had been separated and that a QC – Reject tag had been attached, see photo below.

QC Inspector Robert Cole informed this QA Inspector he had rejected the following 3 rods due to galvanizing issues; OQY-12A, OQX3-13 and OQX5-26. This QA Inspector observed the rods had been re-blasted to remove the galvanizing and were re-galvanized within 4 hours of blasting.

This QA Inspector finished the review of the certification documents that had arrived from Dyson Corporation the previous day. The certifications were in 14 separate packages containing a range of rods from 3 to 32. This QA

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## SOURCE INSPECTION REPORT

( Continued Page 2 of 3 )

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Inspector observed that in addition to what was reported yesterday a Magnetic Particle Testing (MT) report was not present for steel heat number 4M76367-1. As of this date Monnig has not received a shipper for the PWS Anchor Rods from Dyson Corporation. This QA Inspector created a list of the 201 rods separated by the 14 certification packages in an effort to organize them for tractability and shipping. This QA Inspector was contacted by Dyson Corporation project coordinator Pat Sheffield regarding the status of the certification packages. This QA Inspector informed him of the following items observed from the review:

The COC from Dyson did not have the correct bid item number and part description. This QA Inspector stated the material appeared to be bid item 66 and PWS Anchor Rods.

The inspection report in accordance with ABF-RFI-002502R00 (measurements of the threads at each end) was not provided.

The document identifying the heat treatment of each heat of steel was not provided. Typically each heat of steel has had two heat treatment identification codes/numbers.

A shipper identifying and listing the applicable pieces sent to Monnig and a shipper for the material to the jobsite.

A MT report did not appear to be present for steel heat number 4M76367-1.

Mr. Sheffield stated he would look into these comments and make corrections as needed. The number of COC was discussed and this QA Inspector stated that whatever was requested by American Bridge/Fluor should be submitted.

This QA Inspector had a conversation with Structural Material Representative (SMR) Kittric Guest regarding the status of the PWS Anchor Rods and was informed of the following:

The following heat treat codes were Blue Tag items (OOH, OOF, OTD and OPY) and the Material Suitability Documentation Report (TL-6013) would be electronically forwarded to this QA Inspector.

The check samples for all the material have been completed and accepted.

This QA Inspector observed Monnig personnel were in the process of threading the spherical nuts on to the remaining rods and packaging them for shipment. This QA Inspector observed the threaded sections of the rods were wrapped with a cloth material and tapped. Then several rods (usually 5-6) were bundled together using wood to separate the rods and nuts.

### **Summary of Conversations:**

This QA Inspector had general conversations with Monnig General Manager Ryan Monnig and other Monnig personnel. Except as described above there were no other notable conversations.

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## SOURCE INSPECTION REPORT

( Continued Page 3 of 3 )

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### Comments

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<b>Inspected By:</b>	Hager,Craig
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Levell,Bill
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QA Reviewer
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**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.15**SOURCE INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003595**Date Inspected:** 29-Aug-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Monnig Industries**Location:** Glasgow, MO

**Quality Control Contact:** Ryan Monnig  
**Material transfer:** Yes No N/A  
**Stock Transfer:** Yes No N/A  
**Rebar Test Witness:** Yes No N/A

**Quality Control Present:** Yes No  
**Sampled Items:** Yes No N/A  
**OK to Cut:** Yes No N/A  
**Delayed/Cancelled:** Yes No N/A

**Other:** N/A**Bridge No:** 34-0006**Component:** PWS Anchor Rods**Bid Item:** 66**Lot No:** N/A**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager, was present at Monnig Industries Inc. in Glasgow, MO as requested to monitor the galvanizing of Parallel Wire Strand (PWS) High Strength Rods from Dyson Corporation for use on the San Francisco / Oakland / Bay Bridge (SFOBB), Self Anchored Suspension (SAS) project.

This QA Inspector met with Monnig Industries General Manager Ryan Monnig and Andrew Monnig and was informed of the following status regarding the galvanizing of the PWS Anchor Rods:

Monnig QC Inspector Robert Cole had rejected two rods for not meeting the galvanizing requirements of ASTM A123, the galvanizing was not bonded to the base material. This QA Inspector was informed by QC Inspector Robert Cole the following rods would be re-blasted and re-galvanized; OQX5-9 and OQX5-10. This QA Inspector performed a visual verification of the rods prior to blasting, see photo below. This QA Inspector periodically observed the processing of these rods, see photo below after blasting and in line to start the galvanizing process. This QA Inspector observed the galvanizing process was performed within 4 hours of the blasting and appeared to comply with the contract requirements.

During random observations this QA Inspector observed the first load of rods from Dyson for galvanizing had not been identified with the rod specific alpha-numerical identification. This QA Inspector notified Andrew Monnig of this observation and was informed the ID's would be marked with a black marker in the middle of each rod, like all other rods. This QA Inspector randomly observed this process during the shift.

This QA Inspector was informed by Andrew Monnig that Dyson Corporation had emailed 14 new certification

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## SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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packages for the PWS Anchor Rods this afternoon. This QA Inspector performed a review of the documents and observed all issues appeared to have been corrected except a Magnetic Particle Testing (MT) report for steel heat 4M76367-1 and a shipper for the material were not present. Later this afternoon project coordinator Pat Sheffield from Dyson Corporation called this QA to confirm receipt of the new documents and was informed of the findings.

Mr. Sheffield informed this QA Inspector Dyson was coordinating shipping with Monnig and that 2 trucks would arrive tomorrow (Tuesday / 8/30/11) and 2 trucks the following day (Wednesday / 8/31/11) to transport the material to the job site and that a shipper was in the process of being created. Andrew Monnig informed this QA Inspector the material had arrived from Dyson in 5 truck loads and that the shippers were needed to transfer material into 4 truck loads.

This QA Inspector observed that as of this date all material had been galvanized and only approximately 12 rods remained in the process of having the nuts threaded on and packaged for shipping. This QA Inspector observed that of the 201 PWS Anchor Rods present at Monnig 3 had been rejected by QC personnel for not being able to be thread a nut by hand and of the remaining 198 rods: 111 were be Orange Tagged and 87 Blue Tagged.

### Summary of Conversations:

This QA Inspector had general conversations with Monnig General Manager Ryan Monnig and other Monnig personnel. Except as described above there were no other notable conversations.



### Comments

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<b>Inspected By:</b>	Hager,Craig	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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**DEPARTMENT OF TRANSPORTATION**

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Office of Structural Materials

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.25A**MATERIAL SUITABILITY REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** MSR-000052**Report Date:** 30-Aug-2011**SMR Authorization #:****Project Name:** SAS Superstructure**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Contractor:** Dyson Corp. & Subs**Date of NCR:****Location:** Monnig Ind. Glasgow, MO

The following material has been inspected and found not to comply with contract plans and specifications; however, METS has determined this material may be suitable for its intended purpose.

Lot #	Bid Item #	Quantity	Material Description
B219-007-11	66	42 ea	PWS High Strength Anchor Rods - Load - 1
B219-009-11	66	29 ea	PWS High Strength Anchor Rods - Load - 2

**Identification:**

one Blue Tag attached to each load (2-tags total) see photos below

**Description of Non-Conformance (NCRs):****Summary of Items Observed:**

This QA Inspector observed the following PWS Rods were part of load-1: OPY4-1, OPY4-2, OPY4-4, OPY4-6, OPY4-7, OPY4-8, OPY4-9, OPY4-10, OPY4-11, OPY4-12, OPY4-13, OPY2-4, OPY2-9, OPY2-10, OPY2-18, OPY2-20, OPY2-21, OPY2-22, OPY2-23, OPY2-24, OPY2-25, OPY2-26, OPY3-1, OPY3-2, OPY3-6, OPY3-7, OPY3-9, OTD-4, OTD-5, OTD-16, OTD-17, OTD-18, OOH2-6, OOH2-22, OOF2-1, OOF3-4, OOF4-3, OOF4-8, OOF4-9, OOF5-1, OOF5-2 and OOF5-4.

This QA Inspector observed the following PWS Rods were part of load -2: OPY4-14, OPY4-15, OPY4-16, OPY4-17, OPY4-18, OPY2-27, OPY2-28, OPY2-29, OPY2-30, OPY2-31, OPY2-32, OPY2-33, OPY2-34, OPY2-35, OPY2-36, OPY2-37, OPY2-38, OPY2-39, OPY3-16, OPY3-18, OPY3-19, OPY3-20, OPY3-21, OPY3-22, OPY3-23, OPY3-24, OPY3-25, OPY3-26 and OPY3-27.

BTL item: Heat treatment lots OOF, OOH, OTD and OPY contained some rods with thread sizes outside the specified range. Per RFI 2502 it was determined that oversized threads would be fit for purposes provided the nut is able to thread freely down the bar/rod and an acceptable dimensional report is submitted.

This QA Inspector observed a spherical nut and regular nut were threaded full length and shipped as such. This QA Inspector observed a dimensional report from Dyson Corporation accepting the rods was submitted for the heat treatment lots.



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## MATERIAL SUITABILITY REPORT

( Continued Page 2 of 2 )

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This QA Inspector observed a Certificate Of Compliance (COC), Material Test Report (MTR), Magnetic Particle Testing reports per material heat and shipper were submitted from Dyson Corporation. This QA Inspector observed a COC and QC reports for blasting and galvanizing were submitted from Monnig Industries. The documents submitted appeared to comply with the contract requirements. This QA Inspector previously confirmed with Structural Material Representative (SMR) Kittric Guest the material check samples had been accepted.

### Summary of Conversations:

This QA Inspector had general conversations with Monnig Industries personnel and the SMR. Except as described above there were no other notable conversations.



### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Hager,Craig

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

**MATERIAL SUITABILITY TAG**

TL-0625 (REV. 04/04)

 07 103684

42-Rods  
load #1

SMR REF. NO.

554-021-11

STATE LOT NO.

B219-007-11

CONTRACT NO.

04-0120F4


DATE

8/30/11

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

**MATERIAL SUITABILITY TAG**

TL-0625 (REV. 04/04)

 07 103684

Load #2  
29-Rods

SMR REF. NO.

554-021-11

STATE LOT NO.

B219-009-11

CONTRACT NO.

04-0120F4

DATE

8/30/11

# Monnig Industries, Inc.

HOT DIP & MECHANICAL GALVANIZING

P.O. BOX 98

GLASGOW, MO 65254

PH. 660-338-2242 FAX: 660-338-5199

AUGUST 30, 2011

DYSON CORPORATION  
50 FREEDOM ROAD  
PAINESVILLE, OH 44077

RE: GALVANIZING CERTIFICATE-CALTRAN

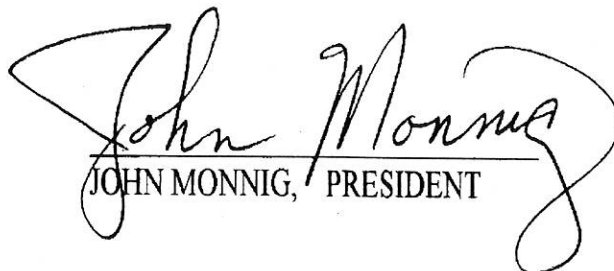
THIS WILL CERTIFY THAT THE RODS GALVANIZED ON THE ATTACHED  
SPREADSHEET MEETS OR EXCEEDS THE MINIMUM REQUIREMENTS OF ASTM A-  
123 & F2329 SPECIFICATIONS.


44 PWS ANCHOR RODS

ROD ID/MIL THICKNESS MEASUREMENTS

OPY2-18 / 5.5	OPY2-20 / 6.0	OPY2-21 / 5.0	OPY2-22 / 6.0	OPY2-23 / 6.5
OPY2-24 / 6.5	OPY2-25 / 6.0	OPY2-26 / 6.5	OPY2-10 / 6.5	OPY2-4 / 7.0
OPY2-9 / 6.0	OPY3-1 / 6.5	OPY3-2 / 6.5	OPY3-6 / 6.0	OPY3-7 / 6.5
OPY3-9 / 6.5	OTD-16 / 6.5	OTD-17 / 6.5	OTD-18 / 7.0	OTD-5 / 6.5
OTD-4 / 7.0	OOH2-6 / 7.0	OOH2-22 / 6.5	OOF2-1 / 6.5	OOF3-4 / 6.0
OOF4-3 / 4.5	OOF4-8 / 5.5	OOF4-9 / 7.0	OOF5-1 / 6.5	OOF5-2 / 6.5
OOF5-4 / 6.0	OPY4-1 / 6.5	OPY4-2 / 6.5	OQW-3 / 6.5	OPY4-4 / 7.0
OQW-5 / 6.5	OPY4-6 / 6.5	OPY4-7 / 5.5	OPY 4-8 / 7.0	OPY4-9 / 6.5
OPY4-10 / 6.5	OPY4-11 / 6.5	OPY4-12 / 5.0	OPY4-13 / 6.0	

PATRICIA S. WESTHUES  
NOTARY-PUBLIC STATE OF MISSOURI  
HOWARD COUNTY  
MY COMMISSION EXP. APR. 18, 2012

  
JOHN MONNIG, PRESIDENT

  
PATRICIA S. WESTHUES,  
NOTARY PUBLIC





Phoenix Manufacturing, Inc.  
P.O. BOX 330  
26666 Von Holten Rd.  
Cole Camp, MO. 65325  
660-668-2611  
660-668-3160 (fax)

#### SSPC-SP10 Near White Metal Blast

**Near-White Blast Cleaning** - Removal of nearly all mill scale, rust, rust scale, paint, or foreign matter by the use of abrasives propelled through nozzles or by centrifugal wheels, to the degree hereafter specified. A Near-White Blast Cleaned Surface Finish is defined as one from which all oil, grease, dirt, mill scale, rust, corrosion products, oxides, paint or other foreign matter have been completely removed from the surface except for very light shadows, very slight streaks or slight discolorations caused by rust stain, mill scale oxides, or light, tight residues of paint or coating that may remain. At least 95 percent of each square inch of surface area shall be free of all visible residues, and the remainder shall be limited to the light discoloration mentioned above.

#### 44 PWS ANCHOR RODS

##### ROD IDS

OPY2-18	OPY2-20	OPY2-21	OPY2-22	OPY2-23
OPY2-24	OPY2-25	OPY2-26	OPY2-10	OPY2-4
OPY2-9	OPY3-1	OPY3-2	OPY3-6	OPY3-7
OPY3-9	OTD-16	OTD-17	OTD-18	OTD-5
OTD-4	OOH2-6	OOH2-22	OOF2-1	OOF3-4
OOF4-3	OOF4-8	OOF4-9	OOF5-1	OOF5-2
OOF5-4	OPY4-1	OPY4-2	OQW-3	OPY4-4
OQW-5	OPY4-6	OPY4-7	OPY 4-8	OPY4-9
OPY4-10	OPY4-11	OPY4-12	OPY4-13	

*Gene Cobb*

## CERTIFICATE OF COMPLIANCE

 DYSON CORP.

 DOMESTIC NUT

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112051	660110-SA-017 CO 022	8900 MM	24 pcs	8/31/11

### CUSTOMER

American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

### PRODUCT DESCRIPTION

3.50"-UNC 2A x 8900mm OAL PWS anchor rod w/1850mm of useable thread one end and 280mm (13.78") on opposite end. Drill & tap 2"-4.5UNC-2A x 50mm deep on 1850mm threaded end, HDG per ASTM-A123 w/white metal blast prior to galvanize. BID ITEM 66 - FURNISH PWS CABLE SYSTEM

### SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

### DRAWING

The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.  
Bar I.D.'s: OPY4-1, OPY4-2, OQW-3, OPY4-4, OQW-5, OPY4-6, OPY4-7, OPY4-8, OPY4-9, OPY4-10, OPY4-11, OPY4-12, OPY4-13, OPY4-14, OPY4-15, OPY4-16, OPY4-17, OPY4-18, OPY4-19, OPY4-20, OPY4-21, OPY4-22, OQY-23B, OPY4-24

Heat treatment lot OQW is from heat of steel ID 3M75738-1

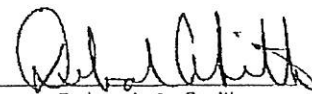
Heat treatment lot OPY is from heat of steel ID 3M75738-2

Heat treatment lot OQY is from heat of steel ID 4M76367-1

O-report  
8/30

### Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

  
Deborah A. Smith

Q.A. Admin. Assistant

8/29/11

Date Measured	BAR I.D	LENGTH MM	LENGTH FT./IN	DYSON S.O. #	COUPLER END			TAPPED END								
					No-Go Pass/Fail	Pitch Diameter [In.] 0.75"	12.75"	No-Go Pass/Fail	0.75"	2.25"	12.75"	24.75"	36.75"	48.75"	60.75"	
8/1/11	OPY4-1	8900	29'-2.39"	112051	Pass	3.332	3.332	3.332	Pass	3.334	3.331	3.332	3.332	3.332	3.332	3.332
8/1/11	OPY4-2	8900	29'-2.39"	112051	Pass	3.330	3.332	3.332	Pass	3.330	3.330	3.331	3.332	3.332	3.332	3.331
8/1/11	OQW-3	8900	29'-2.39"	112051	Pass	3.334	3.334	3.334	Pass	3.334	3.333	3.334	3.334	3.334	3.333	3.334
8/1/11	OPY4-4	8900	29'-2.39"	112051	Pass	3.330	3.331	3.331	Pass	3.331	3.330	3.330	3.331	3.331	3.331	3.331
8/1/11	OQW-5	8900	29'-2.39"	112051	Pass	3.323	3.331	3.331	Pass	3.332	3.329	3.329	3.330	3.331	3.331	3.331
8/1/11	OPY4-6	8900	29'-2.39"	112051	Pass	3.331	3.331	3.331	Pass	3.332	3.329	3.329	3.330	3.329	3.329	3.329
8/1/11	OPY4-7	8900	29'-2.39"	112051	Pass	3.327	3.333	3.333	Pass	3.334	3.333	3.331	3.331	3.331	3.331	3.331
8/1/11	OPY4-8	8900	29'-2.39"	112051	Pass	3.327	3.333	3.333	Pass	3.333	3.333	3.333	3.334	3.334	3.334	3.334
8/1/11	OPY4-9	8900	29'-2.39"	112051	Pass	3.329	3.332	3.332	Pass	3.333	3.333	3.333	3.333	3.330	3.330	3.333
8/1/11	OPY4-10	8900	29'-2.39"	112051	Pass	3.330	3.333	3.333	Pass	3.332	3.332	3.331	3.332	3.332	3.332	3.331
8/1/11	OPY4-11	8900	29'-2.39"	112051	Pass	3.323	3.331	3.331	Pass	3.333	3.332	3.332	3.332	3.332	3.332	3.332
8/1/11	OPY4-12	8900	29'-2.39"	112051	Pass	3.323	3.331	3.331	Pass	3.333	3.332	3.332	3.332	3.332	3.332	3.332
8/1/11	OPY4-13	8900	29'-2.39"	112051	Pass	3.326	3.333	3.333	Pass	3.334	3.333	3.333	3.333	3.333	3.333	3.333
8/1/11	OPY4-14	8900	29'-2.39"	112051	Pass	3.324	3.332	3.332	Pass	3.332	3.332	3.332	3.332	3.332	3.332	3.332
8/1/11	OPY4-15	8900	29'-2.39"	112051	Pass	3.323	3.330	3.330	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334
8/1/11	OPY4-16	8900	29'-2.39"	112051	Pass	3.323	3.329	3.329	Pass	3.333	3.332	3.332	3.331	3.331	3.330	3.330
8/1/11	OPY4-17	8900	29'-2.39"	112051	Pass	3.324	3.332	3.332	Pass	3.334	3.333	3.333	3.333	3.333	3.333	3.333
8/1/11	OPY4-18	8900	29'-2.39"	112051	Pass	3.331	3.331	3.331	Pass	3.332	3.331	3.331	3.331	3.331	3.331	3.331
8/6/11	OPY4-19	8900	29'-2.39"	112051	Pass	3.333	3.334	3.334	Pass	3.333	3.333	3.331	3.332	3.331	3.331	3.331
8/6/11	OPY4-20	8900	29'-2.39"	112051	Pass	3.331	3.333	3.333	Pass	3.323	3.333	3.333	3.333	3.333	3.333	3.333
8/6/11	OPY4-21	8900	29'-2.39"	112051	Pass	3.328	3.332	3.332	Pass	3.328	3.333	3.332	3.333	3.333	3.331	3.331
8/6/11	OPY4-22	8900	29'-2.39"	112051	Pass	3.330	3.333	3.333	Pass	3.325	3.333	3.333	3.333	3.333	3.333	3.333
8/6/11	OQY-23B	8900	29'-2.39"	112051	Pass	3.330	3.331	3.331	Pass	3.333	3.333	3.332	3.332	3.332	3.332	3.332
8/6/11	OPY4-24	8900	29'-2.39"	112051	Pass	3.323	3.332	3.332	Pass	3.329	3.333	3.333	3.333	3.333	3.333	3.334

# CERTIFICATE OF COMPLIANCE

 DYSON CORP.

 DOMESTIC NUT

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112052	660110-SA-017 CO 022	9000 MM	24 pcs	8/31/11

## CUSTOMER

American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

## PRODUCT DESCRIPTION

3.50"-4UNC-2A x 9000mm (29'-6.33") OAL FWS Anchor Rod w/1850mm (72.83") of useable thread one end and 200mm (13.78") on opposite end. Drill & Tap 2"-4-1/2 UNC-2A x 60mm (2.36") Deep on 1850mm threaded end. HDG per ASTM-A123 w/white metal blast prior to galvanize BID ITEM 66 -

## SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

## DRAWING

The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.

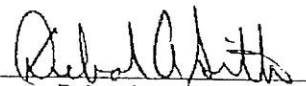
Bar I.D.'s: OPY2-18, OPY2-20, OPY2-21, OPY2-22, OPY2-23, OPY2-24, OPY2-25, OPY2-26, OPY2-10, OPY2-4, OPY2-9, OPY2-27, OPY2-28, OPY2-29, OPY2-30, OPY2-31, OPY2-32, OPY2-33, OPY2-34, OPY2-35, OPY2-36, OPY2-37, OPY2-38, OPY2-39

Heat treatment lot OPY is from heat of steel ID 3M75738-2

O - repeat

## Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

  
Deborah A. Smith

Q.A. Admin. Assistant

8/29/11

PWS ANCHOR RODS and EXTENSION ROD THREAD MAPPING

AUGUST 31, 2011

Date Measured	BAR I.D. CODE / BAR	LENGTH MM	LENGTH FT./IN	DYSON S.O. #	COUPLER END			TAPPED END									
					No-Go	Pass/Fail	Pitch Diameter [in.]	No-Go	Pass/Fail	0.75"	2.25"	12.75"	24.75"	36.75"	48.75"	60.75"	
6/30/11	OPV2-18	9000	29'-6.50"	112052	Pass	3.330	3.333	3.329	3.333	3.332	3.334	3.335	3.336	3.338	3.340		
6/30/11	OPV2-20	9000	29'-6.50"	112052	Pass	3.329	3.329	3.329	3.333	3.333	3.335	3.333	3.337	3.342	3.339		
6/30/11	OPV2-21	9000	29'-6.50"	112052	Pass	3.327	3.330	3.330	3.334	3.329	3.331	3.334	3.336	3.334	3.339		
6/30/11	OPV2-22	9000	29'-6.50"	112052	Pass	3.329	3.340	3.336	3.332	3.335	3.337	3.339	3.340	3.341	3.342		
6/30/11	OPV2-23	9000	29'-6.50"	112052	Pass	3.331	3.336	3.332	3.325	3.330	3.334	3.332	3.335	3.337	3.328		
6/30/11	OPV2-24	9000	29'-6.50"	112052	Pass	3.329	3.332	3.333	3.326	3.326	3.328	3.334	3.336	3.338	3.341		
6/30/11	OPV2-25	9000	29'-6.50"	112052	Pass	3.327	3.333	3.338	3.328	3.334	3.335	3.343	3.341	3.344	3.344		
6/28/11	OPV2-10	9000	29'-6.50"	112052	Pass	3.328	3.330	3.332	3.326	3.331	3.332	3.335	3.337	3.339	3.339		
6/26/11	OPV2-4	9000	29'-6.50"	112052	Pass	3.324	3.328	3.329	3.329	3.334	3.334	3.335	3.330	3.334	3.334		
6/26/11	OPV2-9	9000	29'-6.50"	112052	Pass	3.328	3.333	3.331	3.331	3.335	3.336	3.337	3.340	3.335	3.334		
7/15/11	OPV2-27	9000	29'-6.33"	112052	Pass	3.331	3.332	3.332	3.334	3.332	3.330	3.330	3.331	3.330	3.331		
7/15/11	OPV2-28	9000	29'-6.33"	112052	Pass	3.333	3.333	3.326	3.326	3.334	3.331	3.331	3.330	3.331	3.331		
7/15/11	OPV2-29	9000	29'-6.33"	112052	Pass	3.332	3.332	3.327	3.327	3.333	3.332	3.332	3.332	3.332	3.332		
7/15/11	OPV2-30	9000	29'-6.33"	112052	Pass	3.331	3.331	3.333	3.333	3.333	3.332	3.331	3.332	3.332	3.332		
7/15/11	OPV2-31	9000	29'-6.33"	112052	Pass	3.332	3.334	3.323	3.323	3.332	3.332	3.332	3.332	3.332	3.332		
7/15/11	OPV2-32	9000	29'-6.33"	112052	Pass	3.332	3.332	3.330	3.330	3.333	3.332	3.332	3.331	3.331	3.331		
7/15/11	OPV2-33	9000	29'-6.33"	112052	Pass	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.332	3.333	3.333		
7/15/11	OPV2-34	9000	29'-6.33"	112052	Pass	3.332	3.333	3.327	3.327	3.332	3.334	3.334	3.334	3.334	3.334		
7/15/11	OPV2-35	9000	29'-6.33"	112052	Pass	3.332	3.333	3.328	3.328	3.331	3.332	3.333	3.333	3.332	3.332		
7/15/11	OPV2-36	9000	29'-6.33"	112052	Pass	3.332	3.333	3.332	3.332	3.333	3.332	3.333	3.333	3.332	3.332		
7/15/11	OPV2-37	9000	29'-6.33"	112052	Pass	3.332	3.334	3.332	3.332	3.333	3.332	3.333	3.333	3.333	3.333		
7/15/11	OPV2-38	9000	29'-6.33"	112052	Pass	3.330	3.331	3.325	3.325	3.331	3.331	3.331	3.331	3.331	3.331		
7/15/11	OPV2-39	9000	29'-6.33"	112052	Pass	3.332	3.332	3.332	3.332	3.332	3.331	3.332	3.331	3.331	3.331		
													</				



# CERTIFICATE OF COMPLIANCE

 DYSON CORP.

 DOMESTIC NUT

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112053	660110-SA-017 CO 022	9100 MM	16 pcs	8/31/11

## CUSTOMER

American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

## PRODUCT DESCRIPTION

3.50"-4UNC-2A x 9100mm (29"-10.27") OAL PWS Anchor Rod w/1850mm (72.83") of useable thread one end and 280mm (11.02") on opposite end. Drill & Tap 2"-4-1/2 UNC-2A x 60mm (2.36") Deep on 1850mm threaded end 1100 per ASTM-A123 w/white metal blast prior to galvanize 1100 ITF-A1 66 -

## SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

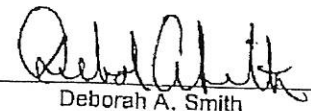
## DRAWING

The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.  
Bar I.D.'s: OPY3-1, OPY3-2, OPY3-6, OPY3-7, OPY3-9, OPY3-16, OPY3-18, OPY3-19, OPY3-20, OPY3-21, OPY3-22, OPY3-23, OPY3-24, OPY3-25, OPY3-26, OPY3-27  
Heat treatment lot OPY is from heat of steel ID 3M75738-2

## Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

  
Deborah A. Smith

Q.A. Admin. Assistant

8/29/11



[illegible]

# CERTIFICATE OF COMPLIANCE



**DIN DOMESTIC NUT**

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112054	660110-SA-017 CO 022	9200 MM	6 pc	8/31/11

**CUSTOMER**  
American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

## PRODUCT DESCRIPTION

3.50"-4UNC-2A x 9200mm OAL PWS anchor rod w/1850mm of useable thread one end & 280mm on opposite end. Drill & tap 2"-1.5UNC-2A x 60mm deep on 1850mm threaded end. HDG per ASTM-A123 w/white metal blast prior to galvanize. BID ITEM 66 - FURNISH PWS CARLISLE SYSTEM

## SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

## DRAWING

The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.  
Bar I.D.'s: OTD-16, OTD-17, OTD-18, OTD-5, OTD-4, OTD-1H  
Heat treatment lot OTD is from heat of steel ID 4M76368-1

## Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

Deborah A. Smith

Q.A. Admin. Assistant

8/29/11



# CERTIFICATE OF COMPLIANCE

 DYSON CORP.

 DOMESTIC NUT

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112055	660110-SA-017 CO 022	9300 MM	7 pcs	8/31/11

## CUSTOMER

American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

## PRODUCT DESCRIPTION

3.50"-4UNC 2A x 9300mm DAL PWS Anchor Rod w/1850mm of useable thread one end and 280mm on opposite end. Drill & tap 2"-1.5UNC-2A x 60mm deep on 1850mm threaded end. HDG per ASTM-A123 w/white metal blast prior to galvanize. DID ITEM 66 - FURNISH PWS CABLE SYSTEM

## SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

## DRAWING

The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.  
Bar I.D.'s: OOH2-6, OOH2-22, OOH-1F, OOH-2F, OOH-3F, OOH-4F, OOH-5F  
Heat treatment lot OOH is from heat of steel ID

*attached*

## Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record



Deborah A. Smith

Q.A. Admin. Assistant

8/29/11

[illegible]



# CERTIFICATE OF COMPLIANCE

 DYSON CORP.

 DOMESTIC NUT

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112056	660110-SA-017 CO 022	9400 MM	3 pcs	8/31/11

## CUSTOMER

American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

## PRODUCT DESCRIPTION

3.50"-1UNC-2A x 9400mm (30'-10.08") OAL PWS Anchor Rod w/1850mm of useable thread one end & 280mm on opposite end. Drill & tap 2"-4.5UNC-2A x 60mm deep on 1850mm threaded end. HDG per ASTM-A123 white metal blast prior to galvanize BID ITEM 66 - FURNISH PWS CABLE SYSTEM

## SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

## DRAWING

The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.  
Bar I.D.: OOF-1, OOH-1E, OTD-2E

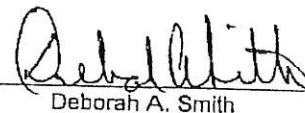
Heat treatment lot OOF is from heat of steel ID 4M76368-2

Heat treatment lot OOH is from heat of steel ID 4M76368-3

Heat treatment lot OTD is from heat of steel ID 4M76368-1

## Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

  
Deborah A. Smith

Q.A. Admin. Assistant

8/29/11





# CERTIFICATE OF COMPLIANCE

 **DYSON CORP.**

 **DOMESTIC NUT**

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112057	660110-SA-017 CO 022	9500 MM	4 pcs	8/31/11

## CUSTOMER

American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

## PRODUCT DESCRIPTION

3.50"-4UNC-2A x 9500mm OAL PWS Anchor Rod w/1850mm (72.83") of useable thread one end & 280mm on opposite end. Drill & tap 3"-1.5UNC-2A x 60mm deep on 1850mm threaded end. HDG per ASTM-A123 w/white metal blast prior to galvanize. BID ITEM 66 - FURNISH PWS CABLE SYSTEM

## SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

## DRAWING

The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

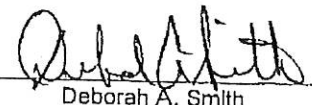
1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.  
Bar I.D.'s: OOF-3-4, OTD-1D, OTD-2D, OTD-3D

Heat treatment lot OOF is from heat of steel ID 4M76368-2

Heat treatment lot OTD is from heat of steel ID 4M76368-1

## Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

  
Deborah A. Smith

Q.A. Admin. Assistant

8/29/11

[illegible]

# CERTIFICATE OF COMPLIANCE

 DYSON CORP.

 DOMESTIC NUT

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112058	660110-SA-017 CO 022	9600 MM	3 pcs	8/31/11

CUSTOMER  
American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

## PRODUCT DESCRIPTION

3.50"-UNC-2A x 9600mm OAL PWS Anchor Rod w/1850mm of useable thread one end & 280mm on opposite end. Drill & tap 2"x4.5UNC-2A x 61mm deep on 1850mm threaded end. HDG per ASTM-A123 w/white metal blast prior to galvanize. RID ITEM 66 - FURNISH PWS CABLE SYSTEM

## SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

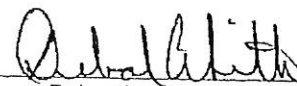
## DRAWING

The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.  
Bar I.D.'s: OOF4-3, OOF4-8, OOF4-9  
Heat treatment lot OOF is from heat of steel ID 4M76368-2

## Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

  
Deborah A. Smith

Q.A. Admin. Assistant

8/29/11





# CERTIFICATE OF COMPLIANCE

 DYSON CORP.

 DOMESTIC NUT

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112059	660110-SA-017 CO 022	9700 MM	3 pc	8/31/11

## CUSTOMER

American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

## PRODUCT DESCRIPTION

3.50"-4UNC-2A x 9700mm OAL PWS Anchor Rod w/1850mm of useable thread one end and 280mm on opposite end. Drill & tap 2"-4.5UNC-2A x 60mm deep on 1850mm threaded end. HDG per ASTM-A123 w/white metal blast prior to galvanize. IID ITEM 66 - FURNISH PWS CABLE SYSTEM

## SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

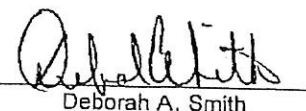
## DRAWING

The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.  
Bar I.D.'s: OOF5-1, OOF5-2, OOF5-4  
Heat treatment lot OOF is from heat of steel ID 4M76368-2

## Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

  
Deborah A. Smith

Q.A. Adm'n. Assistant

8/29/11



PWS ANCHOR RODS and EXTENSION ROD THREAD MAPPING

AUGUST 31, 2011

Date	BAR	LENGTH	LENGTH	DYSON	COUPLER END				TAPPED END						
Measured	I.D	MM	FT./IN	S.O. #	No-Go	Pitch Diameter [In.]	No-Go	Pitch Diameter Readings (+/- 1 Pitch) [Inches]							
	CODE / BAR				Pass/Fail	0.75"	12.75"	No-Go	0.75"	2.25"	12.75"	24.75"	36.75"	48.75"	60.75"
6/25/11	OOF5-1	9700	31'-10"	112059	Pass	3.327	3.329	Pass/Fail	3.328	3.332	3.332	3.332	3.334	3.331	3.332
6/25/11	OOF5-2	9700	31'-10"	112059	Pass	3.327	3.328	Pass	3.324	3.323	3.326	3.327	3.327	3.326	3.329
6/25/11	OOF5-4	9700	31'-10"	112059	Pass	3.327	3.327	Pass	3.323	3.328	3.327	3.328	3.323	3.326	3.326

6/13/2011

Steve Marsh  
Dyson Corp.  
53 Freedom Road  
PAINESVILLE, OH 44077-1232

Material Testing and Non-Destructive  
Testing

5405 E. Schaaf Road  
Cleveland, OH 44131  
USA

Date Received: 6/3/2011

Test Report No.: DYS006-11-06-26885-1 \*REVISED

Telephone : (216) 524-1450  
Fax : (216) 524-1459  
Website : www.storkherron.com

P.O. No.: 78333 / 78375

**TEST REPORT**

ITAR-CONTROLLED DATA

Sample Description: MT On-Site Wet Fluorescent Cal Trans Witness of Anchor Rods  
Representing 3.50"-4UNC 2A x Random Lengths\*, 6/6/2011,  
Heat#/Heat Codes: 4M76368/OOF and 4M76368/OOH \*

**MAGNETIC PARTICLE INSPECTION REPORT**

<b>Standard:</b>	ASTM F788-06 (Acceptance Criteria)		
<b>Procedure:</b>	SOP 42.03 /ASTM E1444 (Method) per ASTM A 490/ Caltran Special Provisions 10-1.59, 10-1.60, 10-1.61 and Caltrans Standard Specifications 75-1.05		
<b>METHOD</b>			
<input type="checkbox"/> Dry		<input checked="" type="checkbox"/> Wet	
<b>PARTICLES</b>			
<b>Magnaflux Particles:</b> <input type="checkbox"/> 8A Red <input type="checkbox"/> 14A <input type="checkbox"/> 3A Black <input checked="" type="checkbox"/> 14AM <input type="checkbox"/> 1 Gray <input type="checkbox"/> Other Batch No. 09D02K		<b>*Part Preparation:</b> <input type="checkbox"/> None Required <input type="checkbox"/> Solvent Clean <input type="checkbox"/> Grinding <input checked="" type="checkbox"/> Other: Precleaned by Customer	
		<b>Wet Particle Carrier:</b> <input type="checkbox"/> Magnaflux Carrier II <input checked="" type="checkbox"/> Pre Mixed <input type="checkbox"/> Concentration    MI Batch No.	
<b>CURRENT</b>			
<input type="checkbox"/> AC		<input type="checkbox"/> FWDC	
<input type="checkbox"/> Central Conductor (AMPS)		<input type="checkbox"/> Head Shot (AMPS)	
<input type="checkbox"/> Coil (AMPS)		<input type="checkbox"/> Prods (AMPS/Spacing)	
Field Verified by: <input checked="" type="checkbox"/> Pie Gage <input type="checkbox"/> QQI <input type="checkbox"/> Hall Effect Probe			
<b>EQUIPMENT</b>			
<input type="checkbox"/> Magnaflux H-720		S/N:    Cal Due Date:	
<input checked="" type="checkbox"/> Yoke <input type="checkbox"/> AC <input checked="" type="checkbox"/> DC    S/N: 3005    Spacing: 4" - 6"    Cal Due Date: 12/1/11			

The above testing was performed in accordance with the latest revision of the applicable commercial, military and/or international test method unless otherwise noted. The above services were performed in accordance with Herron Testing Laboratories' Quality Assurance Program Edition 1, Revision 3 dated 6/30/09. Information and statements in this report are derived from material, information and/or specifications furnished by the client and exclude any expressed or implied warranties as to the fitness of the material tested or analyzed for any particular purpose or use. This report is the confidential property of our client and may not be used for advertising purposes. This report shall not be reproduced except in full, without written approval of this laboratory. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal Statutes. Sample remnants are held for a minimum of 6 months following issuance of test results, at which point they will be discarded unless notified in writing by the client. This material was not contaminated by mercury or chlorinated solvents during the handling and processing at Stork-Herron Testing Laboratories facilities.

*Karen Baummiller*

Karen Baummiller  
Customer Services Manager

6/13/2011

Steve Marsh  
Dyson Corp.  
53 Freedom Road  
PAINESVILLE, OH 44077-1232

Date Received: 6/3/2011

Test Report No.: DYS006-11-06-26885-1 \*REVISED

Material Testing and Non-Destructive  
Testing

5405 E. Schaaf Road  
Cleveland, OH 44131  
USA

Telephone : (216) 524-1450  
Fax : (216) 524-1459  
Website : www.storkherron.com

P.O. No.: 78333 / 78375

**TEST REPORT**  
ITAR-CONTROLLED DATA

INSPECTION RESULTS	
Quantity*	Results*
4 PCS OOH Heat# 4M76368 3.50"-4UNC-2A X Random Length Rods*	O.D. only was inspected and found to be acceptable
4 PCS OOF Heat# 4M76368 3.50"-4UNC-2A X Random Length Rods*	O.D. only was inspected and found to be acceptable
Comments: "ID of tube only"- Magnetic Flux Field cannot be verified for sensitivity; thus only a cursory examination was performed for informational purposes only.*	
Marking Requirements:	
Demag and post cleaning requirements:	
Inspected by: Matthew Novak	Certification: ASNT-SNT-TC-1A Level <input type="checkbox"/> II <input checked="" type="checkbox"/> III

The reported results represent the actual attributes of the material tested and indicate full compliance with all applicable specification and contract requirements.

**Export Controlled (ITAR)**

This document contains technical data whose export and re-export/re-transfer is subject to control by the U.S. Department of State under the Arms Export Control Act and the International Traffic in Arms Regulations. The Department of State's prior written approval is required for the export or re-export/re-transfer of such technical data to any foreign person, foreign entity or foreign organization whether in the United States or abroad.

\*REVISED: Corrected quantity/sample descriptions (6/13/11).

Corrected part preparation and standard/ procedure (6/14/11).

Added Heat Number, Code, Lengths, Comments and expanded Results (8/01/11).

The above testing was performed in accordance with the latest revision of the applicable commercial, military and/or International test method unless otherwise noted. The above services were performed in accordance with Herron Testing Laboratories' Quality Assurance Program Edition 1, Revision 3 dated 6/30/08. Information and statements in this report are derived from material, information and/or specifications furnished by the client and exclude any expressed or implied warranties as to the fitness of the material tested or analyzed for any particular purpose or use. This report is the confidential property of our client and may not be used for advertising purposes. This report shall not be reproduced except in full, without written approval of this laboratory. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal Statutes. Sample remnants are held for a minimum of 6 months following issuance of test results, at which point they will be discarded unless notified in writing by the client. This material was not contaminated by mercury or chlorinated solvents during the handling and processing at Stork-Herron Testing Laboratories facilities.



Karen Baumiller  
Customer Services Manager

6/17/2011

Steve Marsh  
Dyson Corp.  
53 Freedom Road  
PAINESVILLE, OH 44077-1232

Material Testing and Non-Destructive  
Testing

5405 E. Schaaf Road  
Cleveland, OH 44131  
USA

Date Received: 6/15/2011

Test Report No.: DYS006-11-06-27669-1  
REVISED

Telephone : (216) 524-1450  
Fax : (216) 524-1459  
Website : www.storkherron.com

P.O. No.: 78540

**TEST REPORT**  
ITAR-CONTROLLED DATA

Sample Description: MT On-site Wet Fluorescent Exam of Anchor Rods Representing 3.50"-4UNC  
2A x Random Lengths\*, 6/16/11, ASTM E 1444 SOP 42.03, ASTM F788,  
Heat#/Heat Code: 4M76368/OTD\*

**MAGNETIC PARTICLE INSPECTION REPORT**

<b>Standard:</b>	ASTM F788-06 (Acceptance Criteria)	
<b>Procedure:</b>	SOP 42.03 /ASTM E1444 (Method) per ASTM A490 Caltran Special Provisions 10-1.59, 10-1.60, 10-1.61 and Caltrans Standard Specifications 75-1.05	
<b>METHOD</b>		
<input type="checkbox"/> Dry <input checked="" type="checkbox"/> Wet		
<b>PARTICLES</b>		
<b>Magnaflux Particles:</b> <input type="checkbox"/> 8A Red <input type="checkbox"/> 14A <input type="checkbox"/> 3A Black <input checked="" type="checkbox"/> 14AM <input type="checkbox"/> 1 Gray <input type="checkbox"/> Other Batch No. 09D02K	<b>Part Preparation:</b> <input type="checkbox"/> None Required <input type="checkbox"/> Solvent Clean <input type="checkbox"/> Grinding <input checked="" type="checkbox"/> Other Precleaned by Customer	<b>Wet Particle Carrier:</b> <input type="checkbox"/> Magnaflux Carrier II <input checked="" type="checkbox"/> Pre Mixed <input type="checkbox"/> Concentration MI Batch No.
<b>CURRENT</b>		
<input type="checkbox"/> AC <input type="checkbox"/> FWDC		
<input type="checkbox"/> Central Conductor (AMPS) <input type="checkbox"/> Head Shot (AMPS)		
<input type="checkbox"/> Coil (AMPS) <input type="checkbox"/> Prods (AMPS/Spacing)		
Field Verified by: <input checked="" type="checkbox"/> Pie Gage <input type="checkbox"/> QQI <input type="checkbox"/> Hall Effect Probe		
<b>EQUIPMENT</b>		
<input type="checkbox"/> Magnaflux H-720 S/N: Cal Due Date:		
<input checked="" type="checkbox"/> Yoke <input type="checkbox"/> AC <input checked="" type="checkbox"/> DC S/N: 3005 Spacing: 4" - 6" Cal Due Date: 12/1/11		

The above testing was performed in accordance with the latest revision of the applicable commercial, military and/or international test method unless otherwise noted. The above services were performed in accordance with Herron Testing Laboratories' Quality Assurance Program Edition 1, Revision 3 dated 6/30/09. Information and statements in this report are derived from material, information and/or specifications furnished by the client and exclude any expressed or implied warranties as to the fitness of the material tested or analyzed for any particular purpose or use. This report is the confidential property of our client and may not be used for advertising purposes. This report shall not be reproduced except in full, without written approval of this laboratory. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal Statutes. Sample remnants are held for a minimum of 6 months following issuance of test results, at which point they will be discarded unless notified in writing by the client. This material was not contaminated by mercury or chlorinated solvents during the handling and processing at Stork-Herron Testing Laboratories facilities.

*Michael R. Gaydos*

Michael R. Gaydos  
General Manager, COO

6/17/2011

Steve Marsh  
Dyson Corp.  
53 Freedom Road  
PAINESVILLE, OH 44077-1232

Material Testing and Non-Destructive  
Testing

5405 E. Schaaf Road  
Cleveland, OH 44131  
USA

Date Received: 6/15/2011

Test Report No.: DYS006-11-06-27669-1  
REVISED

Telephone : (216) 524-1450  
Fax : (216) 524-1459  
Website : www.storkherron.com

P.O. No.: 78540

**TEST REPORT**

ITAR-CONTROLLED DATA

INSPECTION RESULTS	
Quantity	Results
3 PCS OTD, Heat# 4M76368* 3.50"-4UNC-2A X Random Lengths* PWS Anchor Rod	O.D. only was inspected and found to be acceptable*
Comments: "ID of tube only"- Magnetic Flu Field cannot be verified for sensitivity; thus only a cursory examination was performed for informational purposes only.*  Marking Requirements:  Demag and post cleaning requirements:	
Inspected by: Matthew Novak	Certification: ASNT-SNT-TC-1A Level <input type="checkbox"/> II <input checked="" type="checkbox"/> III

The reported results represent the actual attributes of the material tested and indicate full compliance with all applicable specification and contract requirements.

Export Controlled (ITAR)

This document contains technical data whose export and re-export/re-transfer is subject to control by the U.S. Department of State under the Arms Export Control Act and the International Traffic in Arms Regulations. The Department of State's prior written approval is required for the export or re-export/re-transfer of such technical data to any foreign person, foreign entity or foreign organization whether in the United States or abroad.

\*REVISED (08/01/11): Added Heat Number, Length, Comments and expanded Results.

The above testing was performed in accordance with the latest revision of the applicable commercial, military and/or International test method unless otherwise noted. The above services were performed in accordance with Herron Testing Laboratories' Quality Assurance Program Edition 1, Revision 3 dated 6/30/09. Information and statements in this report are derived from material, information and/or specifications furnished by the client and exclude any expressed or implied warranties as to the fitness of the material tested or analyzed for any particular purpose or use. This report is the confidential property of our client and may not be used for advertising purposes. This report shall not be reproduced except in full, without written approval of this laboratory. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal Statutes. Sample remnants are held for a minimum of 6 months following issuance of test results, at which point they will be discarded unless notified in writing by the client. This material was not contaminated by mercury or chlorinated solvents during the handling and processing at Stork-Herron Testing Laboratories facilities.



Michael R. Gaydos  
General Manager, COO

# Monnig Industries, Inc.

HOT DIP & MECHANICAL GALVANIZING

P.O. BOX 98

GLASGOW, MO 65254

PH. 660-338-2242 FAX: 660-338-5199

AUGUST 30, 2011

DYSON CORPORATION  
50 FREEDOM ROAD  
PAINESVILLE, OH 44077

RE: GALVANIZING CERTIFICATE-CALTRAN

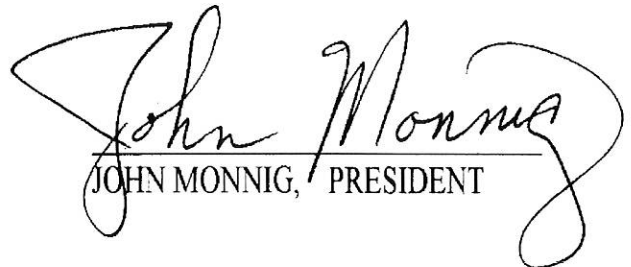
THIS WILL CERTIFY THAT THE RODS GALVANIZED ON THE ATTACHED  
SPREADSHEET MEETS OR EXCEEDS THE MINIMUM REQUIREMENTS OF ASTM A-  
123 & F2329 SPECIFICATIONS.


48 PWS ANCHOR RODS

ROD ID/MIL THICKNESS MEASUREMENTS

OPY4-14 / 6.0	OPY4-15 / 6.5	OPY4-16 / 6.5	OPY4-17 / 6.5	OPY4-18 / 7.0
OPY2-27 / 6.0	OPY2-28 / 6.5	OPY2-29 / 6.5	OPY2-30 / 6.5	OPY2-31 / 6.0
OPY2-32 / 6.5	OPY2-33 / 6.0	OPY2-34 / 4.5	OPY2-35 / 7.0	OPY2-36 / 6.0
OPY2-37 / 6.5	OPY2-38 / 6.5	OPY2-39 / 6.5	OPY3-16 / 6.5	OPY3-18 / 6.5
OPY3-19 / 6.0	OPY3-20 / 6.0	OPY3-21 / 6.5	OPY3-22 / 6.5	OPY3-23 / 5.5
OPY3-24 / 6.5	OPY3-25 / 6.5	OPY3-26 / 5.0	OPY3-27 / 6.0	OQX4-5 / 7.0
OQX4-6 / 6.5	OQX4-7 / 6.5	OQX4-9 / 6.5	OQX4-10 / 6.0	OQX4-11 / 6.5
OQX4-12 / 5.5	OQX 4-13 / 6.5	OQX5-1 / 6.0	OQX5-2 / 6.5	OQX5-3 / 6.5
OQX5-4 / 5.0	OQX5-5 / 6.0	OQX5-6 / 6.0	OQX5-7 / 6.0	OQX5-8 / 5.5
OQX5-9 / 6.5	OQX5-10 / 6.5	OQX5-11 / 6.0		

PATRICIA S. WESTHUES  
NOTARY PUBLIC STATE OF MISSOURI  
HOWARD COUNTY  
MY COMMISSION EXP. APR. 18, 2012

  
JOHN MONNIG, PRESIDENT

  
PATRICIA S. WESTHUES,  
NOTARY PUBLIC





Phoenix Manufacturing, Inc.  
P.O. BOX 330  
26666 Von Holten Rd.  
Cole Camp, MO. 65325  
660-668-2611  
660-668-3160 (fax)

#### SSPC-SP10 Near White Metal Blast

**Near-White Blast Cleaning** - Removal of nearly all mill scale, rust, rust scale, paint, or foreign matter by the use of abrasives propelled through nozzles or by centrifugal wheels to the degree hereafter specified. A Near-White Blast Cleaned Surface Finish is defined as one from which all oil, grease, dirt, mill scale, rust, corrosion products, oxides, paint or other foreign matter have been completely removed from the surface except for very light shadows, very slight streaks or slight discolorations caused by rust stain, mill scale oxides, or light, tight residues of paint or coating that may remain. At least 95 percent of each square inch of surface area shall be free of all visible residues, and the remainder shall be limited to the light discoloration mentioned above.

#### 48 PWS ANCHOR RODS

##### ROD IDs

OPY4-14	OPY4-15	OPY4-16	OPY4-17	OPY4-18
OPY2-27	OPY2-28	OPY2-29	OPY2-30	OPY2-31
OPY2-32	OPY2-33	OPY2-34	OPY2-35	OPY2-36
OPY2-37	OPY2-38	OPY2-39	OPY3-16	OPY3-18
OPY3-19	OPY3-20	OPY3-21	OPY3-22	OPY3-23
OPY3-24	OPY3-25	OPY3-26	OPY3-27	OQX4-5
OQX4-6	OQX4-7	OQX4-9	OQX4-10	OQX4-11
OQX4-12	OQX 4-13	OQX5-1	OQX5-2	OQX5-3
OQX5-4	OQX5-5	OQX5-6	OQX5-7	OQX5-8
OQX5-9	OQX5-10	OQX5-11		

## CERTIFICATE OF COMPLIANCE

 DYSON CORP.

 DOMESTIC NUT

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112051	660110-SA-017 CO 022	8900 MM	24 pcs	8/31/11

### CUSTOMER

American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

### PRODUCT DESCRIPTION

3.50"-UNC 2A x 8900mm OAL PWS anchor rod w/1850mm of useable thread one end and 280mm (13.78") on opposite end. Drill & tap 2"-4.5UNC-2A x 50mm deep on 1850mm threaded end, HDG per ASTM-A123 w/white metal blast prior to galvanize. BID ITEM 66 - FURNISH PWS CABLE SYSTEM

### SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

### DRAWING

The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA. Bar I.D.'s: OPY4-1, OPY4-2, OQW-3, OPY4-4, OQW-5, OPY4-6, OPY4-7, OPY4-8, OPY4-9, OPY4-10, OPY4-11, OPY4-12, OPY4-13, OPY4-14, OPY4-15, OPY4-16, OPY4-17, OPY4-18, OPY4-19, OPY4-20, OPY4-21, OPY4-22, OQY-23B, OPY4-24

Heat treatment lot OQW is from heat of steel ID 3M75738-1

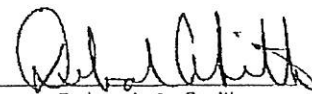
Heat treatment lot OPY is from heat of steel ID 3M75738-2

Heat treatment lot OQY is from heat of steel ID 4M76367-1

O-report  
8/30

### Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

  
Deborah A. Smith

Q.A. Admin. Assistant

8/29/11

## PWS ANCHOR RODS and EXTENSION ROD THREAD MAPPING

AUGUST 31, 2011

Date Measured	BAR I.D. CODE / BAR	LENGTH MM	LENGTH FT./IN	DYSON S.O. #	COUPLER END		TAPPED END							
					No-Go	Pitch Diameter [in.]	No-Go	0.75"	2.25"	12.75"	24.75"	36.75"	48.75"	60.75"
8/1/11	OPV4-1	8900	29'-2.39"	112051	Pass	3.332	Pass/Fail	3.332	3.331	3.332	3.332	3.332	3.332	3.332
8/1/11	OPV4-2	8900	29'-2.39"	112051	Pass	3.330	Pass	3.330	3.330	3.330	3.331	3.332	3.332	3.331
8/1/11	OQW-3	8900	29'-2.39"	112051	Pass	3.334	Pass	3.334	3.333	3.334	3.334	3.334	3.333	3.334
8/1/11	OPV4-4	8900	29'-2.39"	112051	Pass	3.330	Pass	3.331	3.330	3.330	3.330	3.331	3.331	3.331
8/1/11	OQW-5	8900	29'-2.39"	112051	Pass	3.323	Pass	3.332	3.332	3.329	3.329	3.330	3.331	3.331
8/1/11	OPV4-6	8900	29'-2.39"	112051	Pass	3.331	Pass	3.332	3.329	3.329	3.329	3.330	3.329	3.329
8/1/11	OPV4-7	8900	29'-2.39"	112051	Pass	3.327	Pass	3.334	3.333	3.331	3.331	3.331	3.331	3.331
8/1/11	OPV4-8	8900	29'-2.39"	112051	Pass	3.327	Pass	3.333	3.333	3.334	3.333	3.334	3.334	3.334
8/1/11	OPV4-9	8900	29'-2.39"	112051	Pass	3.329	Pass	3.332	3.333	3.333	3.333	3.333	3.330	3.333
8/1/11	OPV4-10	8900	29'-2.39"	112051	Pass	3.330	Pass	3.332	3.332	3.331	3.331	3.332	3.332	3.331
8/1/11	OPV4-11	8900	29'-2.39"	112051	Pass	3.323	Pass	3.333	3.332	3.332	3.332	3.332	3.332	3.332
8/1/11	OPV4-12	8900	29'-2.39"	112051	Pass	3.323	Pass	3.333	3.332	3.332	3.332	3.332	3.332	3.332
8/1/11	OPV4-13	8900	29'-2.39"	112051	Pass	3.326	Pass	3.334	3.333	3.333	3.333	3.333	3.333	3.333
8/1/11	OPV4-14	8900	29'-2.39"	112051	Pass	3.324	Pass	3.332	3.332	3.332	3.332	3.332	3.332	3.332
8/1/11	OPV4-15	8900	29'-2.39"	112051	Pass	3.323	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334
8/1/11	OPV4-16	8900	29'-2.39"	112051	Pass	3.323	Pass	3.333	3.332	3.332	3.331	3.331	3.330	3.330
8/1/11	OPV4-17	8900	29'-2.39"	112051	Pass	3.324	Pass	3.334	3.333	3.333	3.333	3.333	3.333	3.333
8/1/11	OPV4-18	8900	29'-2.39"	112051	Pass	3.331	Pass	3.332	3.331	3.331	3.331	3.331	3.331	3.331
8/6/11	OPV4-19	8900	29'-2.39"	112051	Pass	3.333	Pass	3.333	3.333	3.331	3.332	3.331	3.332	3.331
8/6/11	OPV4-20	8900	29'-2.39"	112051	Pass	3.331	Pass	3.323	3.333	3.333	3.333	3.333	3.333	3.333
8/6/11	OPV4-21	8900	29'-2.39"	112051	Pass	3.328	Pass	3.328	3.333	3.332	3.333	3.333	3.331	3.331
8/6/11	OPV4-22	8900	29'-2.39"	112051	Pass	3.330	Pass	3.325	3.333	3.333	3.333	3.333	3.333	3.333
8/6/11	OQV-23B	8900	29'-2.39"	112051	Pass	3.330	Pass	3.333	3.333	3.332	3.332	3.332	3.332	3.332
8/6/11	OPV4-24	8900	29'-2.39"	112051	Pass	3.323	Pass	3.329	3.333	3.333	3.333	3.333	3.333	3.334

# CERTIFICATE OF COMPLIANCE

 DYSON CORP.

 DOMESTIC NUT

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112052	660110-SA-017 CO 022	9000 MM	24 pcs	8/31/11

## CUSTOMER

American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

## PRODUCT DESCRIPTION

3.50"-4UNC-2A x 9000mm (29'-6.33") OAL FWS Anchor Rod w/1850mm (72.83") of useable thread one end and 200mm (13.78") on opposite end. Drill & Tap 2"-4-1/2 UNC-2A x 60mm (2.36") Deep on 1850mm threaded end. HDG per ASTM-A123 w/white metal blast prior to galvanize BID ITEM 66 -

## SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

## DRAWING

The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.

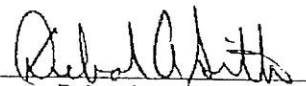
Bar I.D.'s: OPY2-18, OPY2-20, OPY2-21, OPY2-22, OPY2-23, OPY2-24, OPY2-25, OPY2-26, OPY2-10, OPY2-4, OPY2-9, OPY2-27, OPY2-28, OPY2-29, OPY2-30, OPY2-31, OPY2-32, OPY2-33, OPY2-34, OPY2-35, OPY2-36, OPY2-37, OPY2-38, OPY2-39

Heat treatment lot OPY is from heat of steel ID 3M75738-2

O - repeat

## Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

  
Deborah A. Smith

Q.A. Admin. Assistant

8/29/11

PWS ANCHOR RODS and EXTENSION ROD THREAD MAPPING

AUGUST 31, 2011

Date Measured	BAR I.D. CODE / BAR	LENGTH MM	LENGTH FT./IN	COUPLER END			TAPPED END									
				DYSON S.O. #	No-Go Pass/Fail	Pitch Diameter [in.]	No-Go Pass/Fail	0.75" 3.330 3.329 3.327 3.329 3.331 3.329 3.327 3.334 3.328 3.334 3.332 3.331 3.332 3.333 3.334 3.330 3.332 3.332 3.333 3.333 3.332 3.333								



# CERTIFICATE OF COMPLIANCE

 DYSON CORP.

 DOMESTIC NUT

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112053	660110-SA-017 CO 022	9100 MM	16 pcs	8/31/11

## CUSTOMER

American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

## PRODUCT DESCRIPTION

3.50" (4 UNC-2A x 9100mm (29'-10.27") OAL. PWS Anchor Rod w/1850mm (72.83") of useable thread one end and 280mm (11.378") on opposite end. Drill & Tap 2" - 4-1/2 UNC-2A x 60mm (2.36") Deep on 1850mm threaded end 110G per ASTM-A123 w/white metal blast prior to galvanize (HD ITEM) 66 -

## SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

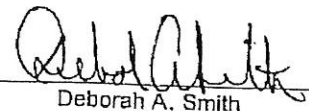
## DRAWING

The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.  
Bar I.D.'s: OPY3-1, OPY3-2, OPY3-6, OPY3-7, OPY3-9, OPY3-16, OPY3-18, OPY3-19, OPY3-20, OPY3-21, OPY3-22, OPY3-23, OPY3-24, OPY3-25, OPY3-26, OPY3-27  
Heat treatment lot OPY is from heat of steel ID 3M75738-2

## Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

  
Deborah A. Smith

Q.A. Admin. Assistant

8/29/11



**TAPPED END**

7/27/2011

Steve Marsh  
Dyson Corp.  
53 Freedom Road  
PAINESVILLE, OH 44077-1232

Date Received: 7/22/2011

Test Report No.: DYS006-11-07-30317-1  
REVISED

Material Testing and Non-Destructive  
Testing

5405 E. Schaaf Road  
Cleveland, OH 44131  
USA

Telephone : (216) 524-1450  
Fax : (216) 524-1459  
Website : www.storkherron.com

**TEST REPORT**

P.O. No.: 79155

ITAR-CONTROLLED DATA

Sample Description: On-Site MT Exam of Anchor Rods Representing 3.50"-4UNC 2A x Random Lengths\*, Material ASTM-A354, Gr. BD, Spec.: ASTM A490, ASTM F788, MIL-I-45208, AM#1 Applies, Heat#/Heat Codes 3M75738/OPY and OQW,\* Customer PO# 660110-SA-017 CO 022

**MAGNETIC PARTICLE INSPECTION REPORT**

<b>Standard:</b>	ASTM F788-06 (Acceptance Criteria)	
<b>Procedure:</b>	SOP 42.03 /ASTM E1444 (Method) per ASTM A490 / Caltran Special Provisions 10-1.59, 10-1.60 and 10-1.61, and Caltrans Standard Specifications 75-1.05	
<b>METHOD</b>		
<input type="checkbox"/> Dry		<input checked="" type="checkbox"/> Wet
<b>PARTICLES</b>		
<b>Magnaflux Particles:</b> <input type="checkbox"/> 8A Red <input type="checkbox"/> 14A <input type="checkbox"/> 3A Black <input checked="" type="checkbox"/> 14AM <input type="checkbox"/> 1 Gray <input type="checkbox"/> Other Batch No. 09D02K	<b>Part Preparation:</b> <input type="checkbox"/> None Required <input type="checkbox"/> Solvent Clean <input type="checkbox"/> Grinding <input checked="" type="checkbox"/> Other Precleaned by Customer	<b>Wet Particle Carrier:</b> <input type="checkbox"/> Magnaflux Carrier II <input checked="" type="checkbox"/> Pre Mixed <input type="checkbox"/> Concentration    MI Batch No.
<b>CURRENT</b>		
<input type="checkbox"/> AC		<input type="checkbox"/> FWDC
<input type="checkbox"/> Central Conductor (AMPS)		<input type="checkbox"/> Head Shot (AMPS)
<input type="checkbox"/> Coil (AMPS)		<input type="checkbox"/> Prods (AMPS/Spacing)
Field Verified by: <input checked="" type="checkbox"/> Pie Gage <input type="checkbox"/> QQI <input type="checkbox"/> Hall Effect Probe		
<b>EQUIPMENT</b>		
<input type="checkbox"/> Magnaflux H-720    S/N:    Cal Due Date:		
<input checked="" type="checkbox"/> Yoke <input type="checkbox"/> AC <input checked="" type="checkbox"/> DC    S/N: 3005    Spacing: 4" - 6"    Cal Due Date: 12/1/11		

The above testing was performed in accordance with the latest revision of the applicable commercial, military and/or international test method unless otherwise noted. The above services were performed in accordance with Herron Testing Laboratories' Quality Assurance Program Edition 1, Revision 3 dated 6/30/09. Information and statements in this report are derived from material, information and/or specifications furnished by the client and exclude any expressed or implied warranties as to the fitness of the material tested or analyzed for any particular purpose or use. This report is the confidential property of our client and may not be used for advertising purposes. This report shall not be reproduced except in full, without written approval of this laboratory. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal Statutes. Sample remnants are held for a minimum of 6 months following issuance of test results, at which point they will be discarded unless notified in writing by the client. This material was not contaminated by mercury or chlorinated solvents during the handling and processing at Stork-Herron Testing Laboratories facilities.



Michael R. Gaydos  
General Manager, COO

7/27/2011

Steve Marsh  
Dyson Corp.  
53 Freedom Road  
PAINESVILLE, OH 44077-1232

Date Received: 7/22/2011

Test Report No.: DYS006-11-07-30317-1  
REVISED

Material Testing and Non-Destructive  
Testing

5405 E. Schaaf Road  
Cleveland, OH 44131  
USA

Telephone : (216) 524-1450  
Fax : (216) 524-1459  
Website : www.storkherron.com

**TEST REPORT**

P.O. No.: 79155

ITAR-CONTROLLED DATA

INSPECTION RESULTS	
Quantity	Results
9 PCS OPY, OQW,* Heat# 3M75738 3.50"-4UNC-2A X Random Lengths* PWS Anchor Rod OPY3-16 OPY3-18 OPY3-23 OPY3-24 OPY3-19 OPY3-25 OPY3-20 OPY3-27 OPY3-21	O.D. only was inspected and found to be acceptable
Comments: Examined per customer request "ID of tube only"- Magnetic Flux Field cannot be verified for sensitivity; thus only a cursory examination was performed for informational purposes only, and no indications were noted at the time of inspection.*  Marking Requirements:  Demag and post cleaning requirements:	
Inspected by: Matthew Novak	Certification: ASNT-SNT-TC-1A Level <input type="checkbox"/> II <input checked="" type="checkbox"/> III

The reported results represent the actual attributes of the material tested and indicate full compliance with all applicable specification and contract requirements.

Export Controlled (ITAR)

This document contains technical data whose export and re-export/re-transfer is subject to control by the U.S. Department of State under the Arms Export Control Act and the International Traffic in Arms Regulations. The Department of State's prior written approval is required for the export or re-export/re-transfer of such technical data to any foreign person, foreign entity or foreign organization whether in the United States or abroad.

\*REVISED (08/01/11): Added Heat Code, Heat Number, Length, and expanded Comments.

The above testing was performed in accordance with the latest revision of the applicable commercial, military and/or International test method unless otherwise noted. The above services were performed in accordance with Herron Testing Laboratories' Quality Assurance Program Edition 1, Revision 3 dated 6/30/09. Information and statements in this report are derived from material, information and/or specifications furnished by the client and exclude any expressed or implied warranties as to the fitness of the material tested or analyzed for any particular purpose or use. This report is the confidential property of our client and may not be used for advertising purposes. This report shall not be reproduced except in full, without written approval of this laboratory. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal Statutes. Sample remnants are held for a minimum of 6 months following issuance of test results, at which point they will be discarded unless notified in writing by the client. This material was not contaminated by mercury or chlorinated solvents during the handling and processing at Stork-Herron Testing Laboratories facilities.



Michael R. Guydos  
General Manager, COO





09/02/2011 10:46





09/02/2011 10:46





09/02/2011 10:46









09/02/2011 10:47





09/02/2011 10:47





09/02/2011 10:48



ITEM	QTY	UNIT	DESCRIPTION	DATE	TIME	INITIALS	REMARKS
OPV-14-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-15-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-16-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-17-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-18-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-19-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-20-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-21-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-22-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-23-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-24-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-25-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-26-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-27-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-28-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-29-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	
OPV-30-	1	EA	8000 29-2-35	11/05/08	14:00	140210-10	

DATE: 11-12-05  
TIME: 14:00  
INITIALS: 140210-10

8219-210-11  
8219-210-11  
8219-210-11

09/02/2011 10:53



**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.9**REPORT OF INSPECTION OF MATERIAL****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** RIM-000098**Date Inspected:** 30-Aug-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Monnig Industries**Location:** Glasgow, MO

The following material has been inspected in accordance with Section 6 of the Standard Specifications and found to substantially comply\* with contract plans and specifications.

Item	Lot #	Bid Item#	Quantity	Material Description
1	B219-008-11	66	2	PWS Anchor Rod - load - 1
2	B219-010-11	66	19	PWS Anchor Rod - load -2

**Identification:** one Orange Tag attached to each load (2)**Shipped to:** Jobsite**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager, was present at Monnig Industries Inc. in Glasgow, MO as requested to release the Parallel Wire Strand (PWS) High Strength Anchor Rods for use on the San Francisco / Oakland / Bay Bridge (SFOBB), Self Anchored Suspension (SAS) project.

This QA Inspector met with Monnig Industries General Manager Ryan Monnig and was informed all PWS Anchor Rods had been galvanized, passed QC inspections, spherical and regular nuts had been threaded on all rods and that all rods had been packaged for shipment.

This QA Inspector observed the following PWS Rods were part of load-1: OQW-3 and OQW-5.

This QA Inspector observed the following PWS Rods were part of load-2: OQX4-5, OQX4-6, OQX4-7, OQX4-9, OQX4-10, OQX4-11, OQX4-12, OQX4-13, OQX5-1, OQX5-2, OQX5-3, OQX5-4, OQX5-5, OQX5-6, OQX5-7, OQX5-8, OQX5-9, OQX5-10 and OQX5-11.

This QA Inspector was provided a Certificate of Compliance (COC), Material Test Reports (MTR's), Magnetic Particle Testing (MT) inspection reports per material heat, Thread Dimension reports and a shipper from Dyson Corporation for the PWS Anchor Rods in loads 1 and 2.

This QA Inspector was provided a COC, Quality Control (QC)Blasting report and QC inspection report for galvanizing thicknesses from Monnig Industries for the PWS Anchor Rods in loads 1 and 2.

This QA Inspector had previously confirmed with Structural Material Representative (SMR) Kittric Guest that all material check samples had been accepted.

---

## REPORT OF INSPECTION OF MATERIAL

( Continued Page 2 of 2 )

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The documents provided appeared to comply with the contract requirements therefore an Orange Tag was placed in a plastic pouch and attached to each load.

This QA Inspector randomly observed as the material listed above was loaded onto each truck. See photos of documentation package and overall truck loaded shipment below.

### Summary of Conversations:

This QA Inspector had general conversations with Monnig General Manager Ryan Monnig and other Monnig personnel. Except as described above there were no other notable conversations.



### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510-385-5910), who represents the Office of Structural Materials for your project.

---

**Inspected By:** Hager, Craig

Quality Assurance Inspector

**Reviewed By:** Levell, Bill

QA Reviewer

---

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION  
**INSPECTION RELEASE TAG** *load #1*  
TL-0624 (REV. 10/97) *2- rods*

STATE LOT NO. *B219-008-11*

CONTRACT NO. *04-0120F4*

RELEASED (+) BY *Craig Hager* DATE *8/30/11*

FM 92 1554

• Based upon selective sampling

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION  
**INSPECTION RELEASE TAG** *load #2*  
TL-0624 (REV. 10/97) *19- rods*

STATE LOT NO. *B219-10-11*

CONTRACT NO. *04-0120F4*

RELEASED (+) BY *Craig Hager* DATE *8/11/30*

FM 92 1554

• Based upon selective sampling

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.9**REPORT OF INSPECTION OF MATERIAL****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** RIM-000097**Date Inspected:** 31-Aug-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Monnig Industries**Location:** Glasgow, MO

The following material has been inspected in accordance with Section 6 of the Standard Specifications and found to substantially comply\* with contract plans and specifications.

Item	Lot #	Bid Item#	Quantity	Material Description
1	B219-011-11	66	51	PWS Anchor Rods - load-3
2	B219-013-11	66	39	PWS Anchor Rods - load-4

**Identification:** one tag attached to each load (2)**Shipped to:** jobsite**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager, was present at Monnig Industries Inc. in Glasgow, MO as requested to release the Parallel Wire Strand (PWS) High Strength Anchor Rods for use on the San Francisco / Oakland / Bay Bridge (SFOBB), Self Anchored Suspension (SAS) project.

This QA Inspector met with Monnig Industries General Manager Ryan Monnig and was informed all PWS Anchor Rods had been galvanized, passed QC inspections, spherical and regular nuts had been threaded on all rods and that all rods had been packaged for shipment.

This QA Inspector observed the following PWS Rods were part of load-3: OQY-1A, OQX3-2, OQY-3A, OQY-4A, OQX3-5, OQY-6A, OQX3-7, OQX-8, OQY-9A, OQY-10A, OQX3-11, OQY-12A, OQX3-13, OQY-14A, OQY-15A, OQX3-16, OQY-17A, OQY-1, OQY-2, OQY-3, OQY-4, OQY-14, OQY-15, OQY-16, OQX4-17, OQX4-18, OQY-19, OQX4-20, OQX4-21, OQX4-22, OQX4-23, OQX4-24, OQX5-12, OQX5-13, OQX5-14, OQX5-15, OQX5-16, OQX5-17, OQX5-18, OQX5-19, OQX5-20, OQX5-21, OQX5-22, OQX5-23, OQX5-24, OQX5-25, OQX5-26, OQX5-27, OQX5-28, OQX5-29 and OQX5-30.

This QA Inspector observed the following PWS Rods were part of load-4: OQY-1C, OQY-2C, OQY-3C, OQY-4C, OQX2-5, OQY-6C, OQY-7C, OQX2-8, OQY-9C, OQY-10C, OQY-11C, OQY-12C, OQY-13C, OQY-14C, OQY-15C, OQY-16C, OQY-17C, OQY-18C, OQY-19C, OQY-20C, OQY-21C, OQY-22C, OQY-23C, OQY-24C, OQY-25, OQY-26, OQY-27, OQY-28, OQY-29, OQX4-30, OQY-31, OQY-32, OQY-23B, OQX6-1, OQX6-2, OQX6-3, OQW2-4, OQW2-5 and OQW2-6.

This QA Inspector was provided a Certificate of Compliance (COC), Material Test Reports (MTR's), Magnetic Particle Testing (MT) inspection reports per material heat, Thread Dimension reports and a shipper from Dyson Corporation for the PWS Anchor Rods in loads 3 and 4.



# REPORT OF INSPECTION OF MATERIAL

( Continued Page 2 of 3 )

This QA Inspector was provided a COC, Quality Control (QC)Blasting report and QC inspection report for galvanizing thicknesses from Monnig Industries for the PWS Anchor Rods in loads 3 and 4.

This QA Inspector had previously confirmed with Structural Material Representative (SMR) Kittrick Guest that all material check samples had been accepted.

The documents provided appeared to comply with the contract requirements therefore an Orange Tag was placed in a plastic pouch and attached to each load.

This QA Inspector randomly observed as the material listed above was loaded onto each truck. See photos of documentation package and overall truck loaded shipment below.

## Summary of Conversations:

This QA Inspector had general conversations with Monnig General Manager Ryan Monnig and other Monnig personnel. Except as described above there were no other notable conversations.



## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for

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## REPORT OF INSPECTION OF MATERIAL

( Continued Page 3 of 3 )

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your project.

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**Inspected By:** Hager, Craig

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION  
**INSPECTION RELEASE TAG** *load #3*  
TL-0624 (REV. 10/97) *51-rods*

STATE LOT NO. *B219-011-11*

CONTRACT NO. *04-0120F4*

RELEASED (•) BY *Craig Hager* DATE *8/30/11*

FM 92 1554 • Based upon selective sampling

## CERTIFICATE OF COMPLIANCE

 DYSON CORP.

 DOMESTIC NUT

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112051	660110-SA-017 CO 022	8900 MM	24 pcs	8/31/11

### CUSTOMER

American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

### PRODUCT DESCRIPTION

3.50"-UNC 2A x 8900mm OAL PWS anchor rod w/1850mm of useable thread one end and 280mm (13.78") on opposite end. Drill & tap 2"-4.5UNC-2A x 50mm deep on 1850mm threaded end, HDG per ASTM-A123 w/white metal blast prior to galvanize. BID ITEM 66 - FURNISH PWS CABLE SYSTEM

### SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

### DRAWING

The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.  
Bar I.D.'s: OPY4-1, OPY4-2, OQW-3, OPY4-4, OQW-5, OPY4-6, OPY4-7, OPY4-8, OPY4-9, OPY4-10, OPY4-11, OPY4-12, OPY4-13, OPY4-14, OPY4-15, OPY4-16, OPY4-17, OPY4-18, OPY4-19, OPY4-20, OPY4-21, OPY4-22, OQY-23B, OPY4-24

Heat treatment lot OQW is from heat of steel ID 3M75738-1


Heat treatment lot OPY is from heat of steel ID 3M75738-2

Heat treatment lot OQY is from heat of steel ID 4M76367-1

O-report  
8/30

### Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

  
Deborah A. Smith

Q.A. Admin. Assistant

8/29/11

Date Measured	BAR I.D CODE / BAR	LENGTH MM	LENGTH FT./IN	DYSON S.O. #	COUPLER END			TAPPED END								
					No-Go Pass/Fail	Pitch Diameter [In.] 0.75"	12.75"	No-Go Pass/Fail	Pitch Diameter Readings (+/- 1 Pitch) [Inches] 0.75" 12.75" 24.75" 36.75" 48.75" 60.75"							
8/1/11	OPY4-1	8900	29'-2.39"	112051	Pass	3.332	3.332	3.332	3.334	3.331	3.332	3.332	3.332	3.332	3.332	3.332
8/1/11	OPY4-2	8900	29'-2.39"	112051	Pass	3.330	3.332	3.332	3.330	3.330	3.331	3.332	3.332	3.332	3.331	3.331
8/1/11	OQW-3	8900	29'-2.39"	112051	Pass	3.334	3.334	3.334	3.334	3.333	3.334	3.334	3.334	3.333	3.334	3.334
8/1/11	OPY4-4	8900	29'-2.39"	112051	Pass	3.330	3.331	3.331	3.331	3.330	3.330	3.330	3.331	3.331	3.331	3.331
8/1/11	OQW-5	8900	29'-2.39"	112051	Pass	3.323	3.331	3.331	3.332	3.329	3.329	3.329	3.330	3.331	3.331	3.331
8/1/11	OPY4-6	8900	29'-2.39"	112051	Pass	3.331	3.331	3.331	3.332	3.329	3.329	3.329	3.330	3.329	3.329	3.329
8/1/11	OPY4-7	8900	29'-2.39"	112051	Pass	3.327	3.333	3.333	3.334	3.333	3.331	3.331	3.331	3.331	3.331	3.331
8/1/11	OPY4-8	8900	29'-2.39"	112051	Pass	3.327	3.333	3.333	3.333	3.333	3.334	3.333	3.334	3.334	3.334	3.334
8/1/11	OPY4-9	8900	29'-2.39"	112051	Pass	3.329	3.332	3.332	3.333	3.333	3.333	3.333	3.333	3.330	3.330	3.333
8/1/11	OPY4-10	8900	29'-2.39"	112051	Pass	3.330	3.333	3.333	3.332	3.332	3.331	3.332	3.332	3.332	3.332	3.331
8/1/11	OPY4-11	8900	29'-2.39"	112051	Pass	3.323	3.331	3.331	3.333	3.332	3.332	3.332	3.332	3.332	3.332	3.332
8/1/11	OPY4-12	8900	29'-2.39"	112051	Pass	3.323	3.331	3.331	3.333	3.332	3.332	3.332	3.332	3.332	3.332	3.332
8/1/11	OPY4-13	8900	29'-2.39"	112051	Pass	3.326	3.333	3.333	3.334	3.333	3.333	3.333	3.333	3.333	3.333	3.333
8/1/11	OPY4-14	8900	29'-2.39"	112051	Pass	3.324	3.332	3.332	3.332	3.332	3.332	3.332	3.332	3.332	3.332	3.332
8/1/11	OPY4-15	8900	29'-2.39"	112051	Pass	3.323	3.330	3.330	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334
8/1/11	OPY4-16	8900	29'-2.39"	112051	Pass	3.323	3.329	3.329	3.332	3.332	3.331	3.331	3.331	3.330	3.330	3.330
8/1/11	OPY4-17	8900	29'-2.39"	112051	Pass	3.324	3.332	3.332	3.334	3.333	3.333	3.333	3.333	3.333	3.333	3.333
8/1/11	OPY4-18	8900	29'-2.39"	112051	Pass	3.331	3.331	3.331	3.332	3.331	3.331	3.331	3.331	3.331	3.331	3.331
8/6/11	OPY4-19	8900	29'-2.39"	112051	Pass	3.333	3.334	3.334	3.333	3.333	3.332	3.332	3.331	3.332	3.331	3.331
8/6/11	OPY4-20	8900	29'-2.39"	112051	Pass	3.331	3.333	3.333	3.323	3.333	3.333	3.333	3.333	3.333	3.333	3.333
8/6/11	OPY4-21	8900	29'-2.39"	112051	Pass	3.328	3.332	3.332	3.328	3.333	3.332	3.333	3.333	3.331	3.331	3.331
8/6/11	OPY4-22	8900	29'-2.39"	112051	Pass	3.330	3.333	3.333	3.325	3.333	3.333	3.333	3.333	3.333	3.333	3.333
8/6/11	OQY-23B	8900	29'-2.39"	112051	Pass	3.330	3.331	3.331	3.333	3.333	3.332	3.332	3.332	3.332	3.332	3.332
8/6/11	OPY4-24	8900	29'-2.39"	112051	Pass	3.323	3.332	3.332	3.329	3.333	3.333	3.333	3.333	3.333	3.333	3.334



# Monnig Industries, Inc.

HOT DIP & MECHANICAL GALVANIZING

P.O. BOX 98

GLASGOW, MO 65254

PH. 660-338-2242 FAX: 660-338-5199

AUGUST 30, 2011

DYSON CORPORATION  
50 FREEDOM ROAD  
PAINESVILLE, OH 44077

RE: GALVANIZING CERTIFICATE-CALTRAN

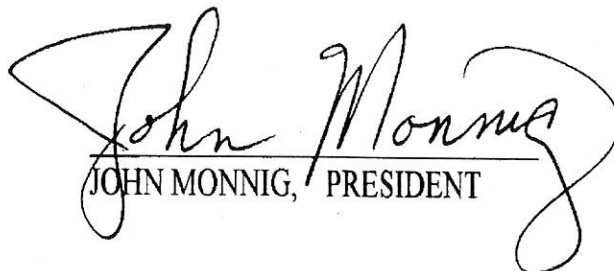
THIS WILL CERTIFY THAT THE RODS GALVANIZED ON THE ATTACHED  
SPREADSHEET MEETS OR EXCEEDS THE MINIMUM REQUIREMENTS OF ASTM A-  
123 & F2329 SPECIFICATIONS.


44 PWS ANCHOR RODS

ROD ID/MIL THICKNESS MEASUREMENTS

OPY2-18 / 5.5	OPY2-20 / 6.0	OPY2-21 / 5.0	OPY2-22 / 6.0	OPY2-23 / 6.5
OPY2-24 / 6.5	OPY2-25 / 6.0	OPY2-26 / 6.5	OPY2-10 / 6.5	OPY2-4 / 7.0
OPY2-9 / 6.0	OPY3-1 / 6.5	OPY3-2 / 6.5	OPY3-6 / 6.0	OPY3-7 / 6.5
OPY3-9 / 6.5	OTD-16 / 6.5	OTD-17 / 6.5	OTD-18 / 7.0	OTD-5 / 6.5
OTD-4 / 7.0	OOH2-6 / 7.0	OOH2-22 / 6.5	OOF2-1 / 6.5	OOF3-4 / 6.0
OOF4-3 / 4.5	OOF4-8 / 5.5	OOF4-9 / 7.0	OOF5-1 / 6.5	OOF5-2 / 6.5
OOF5-4 / 6.0	OPY4-1 / 6.5	OPY4-2 / 6.5	OQW-3 / 6.5	OPY4-4 / 7.0
OQW-5 / 6.5	OPY4-6 / 6.5	OPY4-7 / 5.5	OPY 4-8 / 7.0	OPY4-9 / 6.5
OPY4-10 / 6.5	OPY4-11 / 6.5	OPY4-12 / 5.0	OPY4-13 / 6.0	

PATRICIA S. WESTHUES  
NOTARY-PUBLIC STATE OF MISSOURI  
HOWARD COUNTY  
MY COMMISSION EXP. APR. 18, 2012

  
JOHN MONNIG, PRESIDENT

  
PATRICIA S. WESTHUES,  
NOTARY PUBLIC



Phoenix Manufacturing, Inc.  
P.O. BOX 330  
26666 Von Holten Rd.  
Cole Camp, MO. 65325  
660-668-2611  
660-668-3160 (fax)

#### SSPC-SP10 Near White Metal Blast

**Near-White Blast Cleaning** - Removal of nearly all mill scale, rust, rust scale, paint, or foreign matter by the use of abrasives propelled through nozzles or by centrifugal wheels, to the degree hereafter specified. A Near-White Blast Cleaned Surface Finish is defined as one from which all oil, grease, dirt, mill scale, rust, corrosion products, oxides, paint or other foreign matter have been completely removed from the surface except for very light shadows, very slight streaks or slight discolorations caused by rust stain, mill scale oxides, or light, tight residues of paint or coating that may remain. At least 95 percent of each square inch of surface area shall be free of all visible residues, and the remainder shall be limited to the light discoloration mentioned above.

#### 44 PWS ANCHOR RODS

##### ROD IDS

OPY2-18	OPY2-20	OPY2-21	OPY2-22	OPY2-23
OPY2-24	OPY2-25	OPY2-26	OPY2-10	OPY2-4
OPY2-9	OPY3-1	OPY3-2	OPY3-6	OPY3-7
OPY3-9	OTD-16	OTD-17	OTD-18	OTD-5
OTD-4	OOH2-6	OOH2-22	OOF2-1	OOF3-4
OOF4-3	OOF4-8	OOF4-9	OOF5-1	OOF5-2
OOF5-4	OPY4-1	OPY4-2	OQW-3	OPY4-4
OQW-5	OPY4-6	OPY4-7	OPY 4-8	OPY4-9
OPY4-10	OPY4-11	OPY4-12	OPY4-13	

7/27/2011

Steve Marsh  
Dyson Corp.  
53 Freedom Road  
PAINESVILLE, OH 44077-1232

Date Received: 7/22/2011

Test Report No.: DYS006-11-07-30317-1  
REVISED

Material Testing and Non-Destructive  
Testing

5405 E. Schaaf Road  
Cleveland, OH 44131  
USA

Telephone : (216) 524-1450  
Fax : (216) 524-1459  
Website : www.storkherron.com

**TEST REPORT**

P.O. No.: 79155


ITAR-CONTROLLED DATA

Sample Description: On-Site MT Exam of Anchor Rods Representing 3.50"-4UNC 2A x Random Lengths\*, Material ASTM-A354, Gr. BD, Spec.: ASTM A490, ASTM F788, MIL-I-45208, AM#1 Applies, Heat#/Heat Codes 3M75738/OPY and OQW,\* Customer PO# 660110-SA-017 CO 022

**MAGNETIC PARTICLE INSPECTION REPORT**

<b>Standard:</b>	ASTM F788-06 (Acceptance Criteria)	
<b>Procedure:</b>	SOP 42.03 /ASTM E1444 (Method) per ASTM A490 / Caltran Special Provisions 10-1.59, 10-1.60 and 10-1.61, and Caltrans Standard Specifications 75-1.05	
<b>METHOD</b>		
<input type="checkbox"/> Dry		<input checked="" type="checkbox"/> Wet
<b>PARTICLES</b>		
<b>Magnaflux Particles:</b> <input type="checkbox"/> 8A Red <input type="checkbox"/> 14A <input type="checkbox"/> 3A Black <input checked="" type="checkbox"/> 14AM <input type="checkbox"/> 1 Gray <input type="checkbox"/> Other Batch No. 09D02K	<b>Part Preparation:</b> <input type="checkbox"/> None Required <input type="checkbox"/> Solvent Clean <input type="checkbox"/> Grinding <input checked="" type="checkbox"/> Other Precleaned by Customer	<b>Wet Particle Carrier:</b> <input type="checkbox"/> Magnaflux Carrier II <input checked="" type="checkbox"/> Pre Mixed <input type="checkbox"/> Concentration    MI Batch No.
<b>CURRENT</b>		
<input type="checkbox"/> AC		<input type="checkbox"/> FWDC
<input type="checkbox"/> Central Conductor (AMPS)		<input type="checkbox"/> Head Shot (AMPS)
<input type="checkbox"/> Coil (AMPS)		<input type="checkbox"/> Prods (AMPS/Spacing)
Field Verified by: <input checked="" type="checkbox"/> Pie Gage <input type="checkbox"/> QQI <input type="checkbox"/> Hall Effect Probe		
<b>EQUIPMENT</b>		
<input type="checkbox"/> Magnaflux H-720    S/N:    Cal Due Date:		
<input checked="" type="checkbox"/> Yoke <input type="checkbox"/> AC <input checked="" type="checkbox"/> DC    S/N: 3005    Spacing: 4" - 6"    Cal Due Date: 12/1/11		

The above testing was performed in accordance with the latest revision of the applicable commercial, military and/or international test method unless otherwise noted. The above services were performed in accordance with Herron Testing Laboratories' Quality Assurance Program Edition 1, Revision 3 dated 6/30/09. Information and statements in this report are derived from material, information and/or specifications furnished by the client and exclude any expressed or implied warranties as to the fitness of the material tested or analyzed for any particular purpose or use. This report is the confidential property of our client and may not be used for advertising purposes. This report shall not be reproduced except in full, without written approval of this laboratory. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal Statutes. Sample remnants are held for a minimum of 6 months following issuance of test results, at which point they will be discarded unless notified in writing by the client. This material was not contaminated by mercury or chlorinated solvents during the handling and processing at Stork-Herron Testing Laboratories facilities.

  
Michael R. Gaydos  
General Manager, COO

7/27/2011

Steve Marsh  
Dyson Corp.  
53 Freedom Road  
PAINESVILLE, OH 44077-1232

Material Testing and Non-Destructive  
Testing

5405 E. Schaaf Road  
Cleveland, OH 44131  
USA

Date Received: 7/22/2011

Telephone : (216) 524-1450  
Fax : (216) 524-1459  
Website : www.storkherron.com

Test Report No.: DYS006-11-07-30317-1  
REVISED

**TEST REPORT**

P.O. No.: 79155

ITAR-CONTROLLED DATA

INSPECTION RESULTS	
Quantity	Results
9 PCS OPY, OQW,* Heat# 3M75738 3.50"-4UNC-2A X Random Lengths* PWS Anchor Rod OPY3-16 OPY3-18 OPY3-23 OPY3-24 OPY3-19 OPY3-25 OPY3-20 OPY3-27 OPY3-21	O.D. only was inspected and found to be acceptable
Comments: Examined per customer request "ID of tube only"- Magnetic Flux Field cannot be verified for sensitivity; thus only a cursory examination was performed for informational purposes only, and no indications were noted at the time of inspection.*  Marking Requirements:  Demag and post cleaning requirements:	
Inspected by: Matthew Novak	Certification: ASNT-SNT-TC-1A Level <input type="checkbox"/> II <input checked="" type="checkbox"/> III

The reported results represent the actual attributes of the material tested and indicate full compliance with all applicable specification and contract requirements.

Export Controlled (ITAR)

This document contains technical data whose export and re-export/re-transfer is subject to control by the U.S. Department of State under the Arms Export Control Act and the International Traffic in Arms Regulations. The Department of State's prior written approval is required for the export or re-export/re-transfer of such technical data to any foreign person, foreign entity or foreign organization whether in the United States or abroad.

\*REVISED (08/01/11): Added Heat Code, Heat Number, Length, and expanded Comments.

The above testing was performed in accordance with the latest revision of the applicable commercial, military and/or International test method unless otherwise noted. The above services were performed in accordance with Herron Testing Laboratories' Quality Assurance Program Edition 1, Revision 3 dated 6/30/09. Information and statements in this report are derived from material, information and/or specifications furnished by the client and exclude any expressed or implied warranties as to the fitness of the material tested or analyzed for any particular purpose or use. This report is the confidential property of our client and may not be used for advertising purposes. This report shall not be reproduced except in full, without written approval of this laboratory. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal Statutes. Sample remnants are held for a minimum of 6 months following issuance of test results, at which point they will be discarded unless notified in writing by the client. This material was not contaminated by mercury or chlorinated solvents during the handling and processing at Stork-Herron Testing Laboratories facilities.



Michael R. Guydos  
General Manager, COO



# Monnig Industries, Inc.

HOT DIP & MECHANICAL GALVANIZING

P.O. BOX 98

GLASGOW, MO 65254

PH. 660-338-2242 FAX: 660-338-5199

AUGUST 30, 2011

DYSON CORPORATION  
50 FREEDOM ROAD  
PAINESVILLE, OH 44077

RE: GALVANIZING CERTIFICATE-CALTRAN

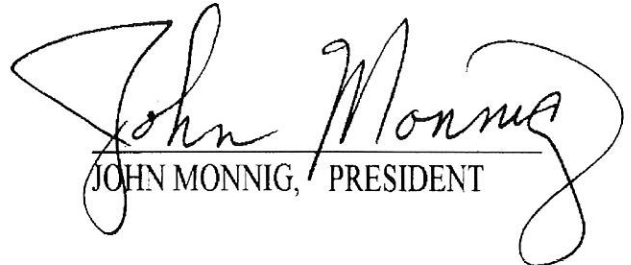
THIS WILL CERTIFY THAT THE RODS GALVANIZED ON THE ATTACHED  
SPREADSHEET MEETS OR EXCEEDS THE MINIMUM REQUIREMENTS OF ASTM A-  
123 & F2329 SPECIFICATIONS.


48 PWS ANCHOR RODS

ROD ID/MIL THICKNESS MEASUREMENTS

OPY4-14 / 6.0	OPY4-15 / 6.5	OPY4-16 / 6.5	OPY4-17 / 6.5	OPY4-18 / 7.0
OPY2-27 / 6.0	OPY2-28 / 6.5	OPY2-29 / 6.5	OPY2-30 / 6.5	OPY2-31 / 6.0
OPY2-32 / 6.5	OPY2-33 / 6.0	OPY2-34 / 4.5	OPY2-35 / 7.0	OPY2-36 / 6.0
OPY2-37 / 6.5	OPY2-38 / 6.5	OPY2-39 / 6.5	OPY3-16 / 6.5	OPY3-18 / 6.5
OPY3-19 / 6.0	OPY3-20 / 6.0	OPY3-21 / 6.5	OPY3-22 / 6.5	OPY3-23 / 5.5
OPY3-24 / 6.5	OPY3-25 / 6.5	OPY3-26 / 5.0	OPY3-27 / 6.0	OQX4-5 / 7.0
OQX4-6 / 6.5	OQX4-7 / 6.5	OQX4-9 / 6.5	OQX4-10 / 6.0	OQX4-11 / 6.5
OQX4-12 / 5.5	OQX 4-13 / 6.5	OQX5-1 / 6.0	OQX5-2 / 6.5	OQX5-3 / 6.5
OQX5-4 / 5.0	OQX5-5 / 6.0	OQX5-6 / 6.0	OQX5-7 / 6.0	OQX5-8 / 5.5
OQX5-9 / 6.5	OQX5-10 / 6.5	OQX5-11 / 6.0		

PATRICIA S. WESTHUES  
NOTARY PUBLIC STATE OF MISSOURI  
HOWARD COUNTY  
MY COMMISSION EXP. APR. 18, 2012

  
JOHN MONNIG, PRESIDENT

  
PATRICIA S. WESTHUES,  
NOTARY PUBLIC



Phoenix Manufacturing, Inc.  
P.O. BOX 330  
26666 Von Holten Rd.  
Cole Camp, MO. 65325  
660-668-2611  
660-668-3160 (fax)

#### SSPC-SP10 Near White Metal Blast

**Near-White Blast Cleaning** - Removal of nearly all mill scale, rust, rust scale, paint, or foreign matter by the use of abrasives propelled through nozzles or by centrifugal wheels to the degree hereafter specified. A Near-White Blast Cleaned Surface Finish is defined as one from which all oil, grease, dirt, mill scale, rust, corrosion products, oxides, paint or other foreign matter have been completely removed from the surface except for very light shadows, very slight streaks or slight discolorations caused by rust stain, mill scale oxides, or light, tight residues of paint or coating that may remain. At least 95 percent of each square inch of surface area shall be free of all visible residues, and the remainder shall be limited to the light discoloration mentioned above.

#### 48 PWS ANCHOR RODS

##### ROD IDs

OPY4-14	OPY4-15	OPY4-16	OPY4-17	OPY4-18
OPY2-27	OPY2-28	OPY2-29	OPY2-30	OPY2-31
OPY2-32	OPY2-33	OPY2-34	OPY2-35	OPY2-36
OPY2-37	OPY2-38	OPY2-39	OPY3-16	OPY3-18
OPY3-19	OPY3-20	OPY3-21	OPY3-22	OPY3-23
OPY3-24	OPY3-25	OPY3-26	OPY3-27	OQX4-5
OQX4-6	OQX4-7	OQX4-9	OQX4-10	OQX4-11
OQX4-12	OQX 4-13	OQX5-1	OQX5-2	OQX5-3
OQX5-4	OQX5-5	OQX5-6	OQX5-7	OQX5-8
OQX5-9	OQX5-10	OQX5-11		

# CERTIFICATE OF COMPLIANCE

**DYSON CORP.**

**DOMESTIC NUT**

**53 Freedom Road  
Painesville, OH 44077**

**440-946-3500  
440-352-2700 fax**

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
<b>L 112049</b>	<b>660110-SA-017 CO 022</b>	<b>8700 MM</b>	<b>31 pcs</b>	<b>8/31/11</b>

**CUSTOMER**

**American Bridge / Fluor JV**  
375 Burma Road  
Oakland, CA 94607  
USA

**PRODUCT DESCRIPTION**

3.50"-4UNC 2A x 8700mm OAL PWS Anchor Rod w/1830mm of useable thread one end and 280mm on opposite end. Drill & Tap 2"-4, 5UNC-2A x 60mm deep on 1830mm threaded end. HDG per ASTM-A123 w/white metal blast minor to galvanize. BID ITEM 66 - FURNISH PWS CABLE SYSTEM

**SPECIFICATIONS**

**ASTM-A354 Grade BD with special provisions**  
**10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05**

**DRAWING**

The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.  
Bar I.D.'s: OQX4-5, OQX4-6, OQX4-7, OQX4-9, OQX4-10, OQX4-11, OQX4-12, OQX4-13, OQY-1, OQY-2, OQY-3, OQY-4, OQY-14, OQY-15, OQY-16, OQX4-17, OQX4-18, OQY-19, OQX4-20, OQX4-21, OQX4-22, OQX4-23, OQX4-24, OQY-25, OQY-26, OQY-27, OQY-28, OQY-29, OQX4-30, OQY-31, OQY-32

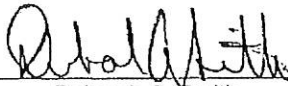
Heat treatment lot OQX is from heat of steel ID 4M76367-2

Heat treatment lot OQY is from heat of steel ID 4M76367-1

*double  
w/ date  
8/30/11*

**Attachments:**

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

  
Deborah A. Smith

Q.A. Admin. Assistant

8/29/11

Date	BAR I.D	LENGTH MM	LENGTH FT./IN	DYSON S.O. #	COUPLER END			TAPPED END								
					No-Go Pass/Fail	Pitch Diameter [In.] 0.75"	12.75"	No-Go Pass/Fail	0.75"	2.25"	12.75"	24.75"	36.75"	48.75"	60.75"	
8/3/11	OOX4-5	8700	28'-6.52"	112049	Pass	3.323	3.331	3.333	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334
8/3/11	OOX4-6	8700	28'-6.52"	112049	Pass	3.323	3.328	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333
8/3/11	OOX4-7	8700	28'-6.52"	112049	Pass	3.323	3.332	3.333	3.331	3.332	3.332	3.332	3.332	3.332	3.332	3.332
8/3/11	OOX4-9	8700	28'-6.52"	112049	Pass	3.327	3.329	3.333	3.333	3.332	3.332	3.332	3.332	3.332	3.332	3.332
8/3/11	OOX4-10	8700	28'-6.52"	112049	Pass	3.327	3.332	3.332	3.331	3.331	3.331	3.331	3.331	3.331	3.331	3.331
8/3/11	OOX4-11	8700	28'-6.52"	112049	Pass	3.329	3.334	3.330	3.331	3.331	3.331	3.331	3.331	3.331	3.331	3.331
8/3/11	OOX4-12	8700	28'-6.52"	112049	Pass	3.332	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334
8/3/11	OOX4-13	8700	28'-6.52"	112049	Pass	3.323	3.334	3.333	3.331	3.332	3.332	3.331	3.332	3.331	3.331	3.331
8/5/11	OOY-1	8700	28'-6.52"	112049	Pass	3.324	3.332	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333
8/5/11	OOY-2	8700	28'-6.52"	112049	Pass	3.323	3.332	3.332	3.331	3.331	3.331	3.331	3.331	3.331	3.331	3.331
8/5/11	OOY-3	8700	28'-6.52"	112049	Pass	3.328	3.330	3.330	3.329	3.330	3.329	3.330	3.329	3.330	3.330	3.330
8/5/11	OOY-4	8700	28'-6.52"	112049	Pass	3.333	3.332	3.328	3.331	3.331	3.331	3.331	3.331	3.331	3.331	3.331
8/5/11	OOY-14	8700	28'-6.52"	112049	Pass	3.332	3.332	3.331	3.331	3.331	3.331	3.331	3.331	3.331	3.331	3.331
8/5/11	OOY-15	8700	28'-6.52"	112049	Pass	3.325	3.333	3.332	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333
8/5/11	OOY-16	8700	28'-6.52"	112049	Pass	3.332	3.332	3.331	3.331	3.331	3.331	3.331	3.331	3.331	3.331	3.331
8/5/11	OOX4-17	8700	28'-6.52"	112049	Pass	3.334	3.333	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334
8/5/11	OOX4-18	8700	28'-6.52"	112049	Pass	3.323	3.331	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333
8/5/11	OOY-19	8700	28'-6.52"	112049	Pass	3.324	3.332	3.333	3.332	3.332	3.332	3.331	3.331	3.332	3.332	3.332
8/5/11	OOX4-20	8700	28'-6.52"	112049	Pass	3.325	3.332	3.333	3.333	3.333	3.332	3.332	3.332	3.332	3.332	3.332
8/5/11	OOX4-21	8700	28'-6.52"	112049	Pass	3.323	3.332	3.332	3.331	3.332	3.332	3.332	3.332	3.332	3.332	3.332
8/5/11	OOX4-22	8700	28'-6.52"	112049	Pass	3.327	3.333	3.333	3.333	3.332	3.333	3.334	3.333	3.333	3.333	3.334
8/5/11	OOX4-23	8700	28'-6.52"	112049	Pass	3.331	3.334	3.330	3.329	3.331	3.329	3.330	3.330	3.330	3.330	3.330
8/5/11	OOX4-24	8700	28'-6.52"	112049	Pass	3.323	3.331	3.331	3.331	3.331	3.332	3.332	3.332	3.332	3.332	3.332
8/5/11	OOY-25	8700	28'-6.52"	112049	Pass	3.323	3.331	3.331	3.331	3.331	3.332	3.332	3.332	3.332	3.332	3.332
8/5/11	OOY-26	8700	28'-6.52"	112049	Pass	3.328	3.333	3.333	3.333	3.333	3.333	3.333	3.332	3.332	3.332	3.332
8/5/11	OOY-27	8700	28'-6.52"	112049	Pass	3.327	3.333	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334
8/5/11	OOY-28	8700	28'-6.52"	112049	Pass	3.327	3.333	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334
8/5/11	OOY-29	8700	28'-6.52"	112049	Pass	3.330	3.334	3.332	3.331	3.332	3.331	3.331	3.331	3.331	3.331	3.331
8/5/11	OOX4-30	8700	28'-6.52"	112049	Pass	3.323	3.329	3.333	3.333	3.334	3.333	3.334	3.334	3.334	3.334	3.334
8/5/11	OOY-31	8700	28'-6.52"	112049	Pass	3.323	3.333	3.333	3.333	3.332	3.332	3.330	3.328	3.326	3.326	3.326
8/5/11	OOY-32	8700	28'-6.52"	112049	Pass	3.323	3.326	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334



## CERTIFICATE OF COMPLIANCE

 DYSON CORP.

 DOMESTIC NUT

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112050	660110-SA-017 CO 022	8800 MM	30 pcs	8/31/11

### CUSTOMER

American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

### PRODUCT DESCRIPTION

3.50"-4UNC 2A x 8800mm (28'-10.46") OAL PWS Anchor Rod w/1850mm of useable thread one end and 280mm on opposite end. Drill & Tap 2"-4.5UNC-2A x 60mm (2.36") Deep on 1850mm threaded end. HDG per ASTM-A123 w/white metal blast prior to galvanize. RID ITEM 66 - FURNISH PWS CABLE.

### SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

### DRAWING

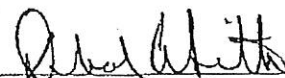
The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.  
Bar I.D.'s: OQX5-1, OQX5-2, OQX5-3, OQX5-4, OQX5-5, OQX5-6, OQX5-7, OQX5-8, OQX5-9, OQX5-10, OQX5-11, OQX5-12, OQX5-13, OQX5-14, OQX5-15, OQX5-16, OQX5-17, OQX5-18, OQX5-19, OQX5-20, OQX5-21, OQX5-22, OQX5-23, OQX5-24, OQX5-25, OQX5-26, OQX5-27, OQX5-28, OQX5-29, OQX5-30  
Heat treatment lot OQX is from heat of steel ID 4M76367-2

○ repeat w/  
8/30/11

### Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

  
Deborah A. Smith

Q.A. Admin. Assistant

8/29/11

Date Measured	BAR I.D	LENGTH MM	LENGTH FT./IN	DYSON S.O. #	COUPLER END			TAPPED END									
					No-Go Pass/Fail	Pitch Diameter [in.] 0.75"	12.75"	No-Go Pass/Fail	0.75"	2.25"	12.75"	24.75"	36.75"	48.75"	60.75"		
7/29/11	OOX5-1	8800	28'-10.46"	112050	Pass	3.325	3.333	Pass	3.334	3.334	3.334	3.333	3.333	3.333	3.333	3.333	
7/29/11	OOX5-2	8800	28'-10.46"	112050	Pass	3.323	3.323	Pass	3.331	3.331	3.331	3.332	3.332	3.332	3.332	3.332	
7/29/11	OOX5-3	8800	28'-10.46"	112050	Pass	3.330	3.333	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	
7/29/11	OOX5-4	8800	28'-10.46"	112050	Pass	3.334	3.323	Pass	3.323	3.333	3.333	3.333	3.333	3.333	3.333	3.333	
7/29/11	OOX5-5	8800	28'-10.46"	112050	Pass	3.333	3.333	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	
7/29/11	OOX5-6	8800	28'-10.46"	112050	Pass	3.331	3.331	Pass	3.332	3.331	3.331	3.331	3.331	3.331	3.331	3.331	
7/29/11	OOX5-7	8800	28'-10.46"	112050	Pass	3.330	3.330	Pass	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333	
7/29/11	OOX5-8	8800	28'-10.46"	112050	Pass	3.333	3.333	Pass	3.333	3.334	3.334	3.334	3.334	3.334	3.334	3.334	
7/29/11	OOX5-9	8800	28'-10.46"	112050	Pass	3.333	3.333	Pass	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333	
7/29/11	OOX5-10	8800	28'-10.46"	112050	Pass	3.332	3.333	Pass	3.327	3.331	3.332	3.332	3.332	3.332	3.332	3.331	
7/29/11	OOX5-11	8800	28'-10.46"	112050	Pass	3.334	3.332	Pass	3.332	3.332	3.332	3.331	3.331	3.331	3.331	3.331	
7/29/11	OOX5-12	8800	28'-10.46"	112050	Pass	3.332	3.334	Pass	3.334	3.334	3.333	3.333	3.333	3.333	3.333	3.333	
7/29/11	OOX5-13	8800	28'-10.46"	112050	Pass	3.334	3.332	Pass	3.323	3.333	3.333	3.333	3.332	3.332	3.332	3.332	
7/29/11	OOX5-14	8800	28'-10.46"	112050	Pass	3.332	3.334	Pass	3.332	3.334	3.333	3.334	3.334	3.334	3.334	3.334	
7/30/11	OOX5-15	8800	28'-10.46"	112050	Pass	3.331	3.332	Pass	3.323	3.334	3.334	3.334	3.334	3.334	3.334	3.334	
7/30/11	OOX5-16	8800	28'-10.46"	112050	Pass	3.331	3.331	Pass	3.333	3.334	3.332	3.332	3.332	3.332	3.333	3.334	
7/30/11	OOX5-17	8800	28'-10.46"	112050	Pass	3.334	3.331	Pass	3.334	3.333	3.333	3.333	3.333	3.333	3.333	3.333	
7/30/11	OOX5-18	8800	28'-10.46"	112050	Pass	3.334	3.334	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	
7/30/11	OOX5-19	8800	28'-10.46"	112050	Pass	3.334	3.334	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	
7/30/11	OOX5-20	8800	28'-10.46"	112050	Pass	3.334	3.334	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	
7/30/11	OOX5-21	8800	28'-10.46"	112050	Pass	3.334	3.334	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	
7/30/11	OOX5-22	8800	28'-10.46"	112050	Pass	3.332	3.334	Pass	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333	
7/30/11	OOX5-23	8800	28'-10.46"	112050	Pass	3.334	3.332	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	
7/30/11	OOX5-24	8800	28'-10.46"	112050	Pass	3.333	3.334	Pass	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333	
7/30/11	OOX5-25	8800	28'-10.46"	112050	Pass	3.334	3.333	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	
7/30/11	OOX5-26	8800	28'-10.46"	112050	Pass	3.328	3.334	Pass	3.333	3.334	3.334	3.334	3.334	3.334	3.334	3.334	
7/30/11	OOX5-27	8800	28'-10.46"	112050	Pass	3.327	3.333	Pass	3.334	3.333	3.333	3.333	3.333	3.334	3.334	3.334	
7/30/11	OOX5-28	8800	28'-10.46"	112050	Pass	3.326	3.333	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	
7/30/11	OOX5-29	8800	28'-10.46"	112050	Pass	3.326	3.333	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	
7/30/11	OOX5-30	8800	28'-10.46"	112050	Pass	3.323	3.333	Pass	3.330	3.333	3.333	3.334	3.334	3.334	3.334	3.334	

8/2/2011

Steve Marsh  
Dyson Corp.  
53 Freedom Road  
PAINESVILLE, OH 44077-1232

Date Received: 8/1/2011

Test Report No.: DYS006-11-08-30874-1

Material Testing and Non-Destructive  
Testing

5405 E. Schaaf Road  
Cleveland, OH 44131  
USA

Telephone : (216) 524-1450  
Fax : (216) 524-1459  
Website : www.storkherron.com

TEST REPORT

P.O. No.: 79319


ITAR-CONTROLLED DATA

Sample Description: On-Site MT Exam of Nine (9) Anchor Rods Representing 3.50"- 4UNC 2A Random Length Rods, Material ASTM-A354, Gr. BD, Spec.: ASTM A490, ASTM F788, MIL-I-45208, AM#1 Applies, Heat//Heat Code 4M76367/OQX & OQY, Customer PO# 660110-SA-017 CO 022

**MAGNETIC PARTICLE INSPECTION REPORT**

Standard:	ASTM F788-06 (Acceptance Criteria)	
Procedure:	SOP 42.03 /ASTM E1444 (Method) per ASTM A490 Caltran Special Provisions 10-1.59, 10-1.60, 10-1.61 and Caltrans Standard Specifications 75-1.05	
<b>METHOD</b>		
<input type="checkbox"/> Dry <input checked="" type="checkbox"/> Wet		
<b>PARTICLES</b>		
<b>Magnaflux Particles:</b> <input type="checkbox"/> 8A Red <input type="checkbox"/> 14A <input type="checkbox"/> 3A Black <input checked="" type="checkbox"/> 14AM <input type="checkbox"/> 1 Gray <input type="checkbox"/> Other Batch No. 09D02K	<b>Part Preparation:</b> <input type="checkbox"/> None Required <input type="checkbox"/> Solvent Clean <input type="checkbox"/> Grinding <input checked="" type="checkbox"/> Other Precleaned by Customer	<b>Wet Particle Carrier:</b> <input type="checkbox"/> Magnaflux Carrier II <input checked="" type="checkbox"/> Pre Mixed <input type="checkbox"/> Concentration MI Batch No.
<b>CURRENT</b>		
<input type="checkbox"/> AC <input type="checkbox"/> FWDC		
<input type="checkbox"/> Central Conductor (AMPS) <input type="checkbox"/> Head Shot (AMPS)		
<input type="checkbox"/> Coil (AMPS) <input type="checkbox"/> Prods (AMPS/Spacing)		
Field Verified by: <input checked="" type="checkbox"/> Pie Gage <input type="checkbox"/> QQI <input type="checkbox"/> Hall Effect Probe		
<b>EQUIPMENT</b>		
<input type="checkbox"/> Magnaflux H-720 S/N: Cal Due Date:		
<input checked="" type="checkbox"/> Yoke <input type="checkbox"/> AC <input checked="" type="checkbox"/> DC S/N: 3005 Spacing: 4" - 6" Cal Due Date: 12/1/11		

The above testing was performed in accordance with the latest revision of the applicable commercial, military and/or International test method unless otherwise noted. The above services were performed in accordance with Herron Testing Laboratories' Quality Assurance Program Edition 1, Revision 3 dated 8/30/09. Information and statements in this report are derived from material, information and/or specifications furnished by the client and exclude any expressed or implied warranties as to the fitness of the material tested or analyzed for any particular purpose or use. This report is the confidential property of our client and may not be used for advertising purposes. This report shall not be reproduced except in full, without written approval of this laboratory. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal Statutes. Sample remnants are held for a minimum of 6 months following issuance of test results, at which point they will be discarded unless notified in writing by the client. This material was not contaminated by mercury or chlorinated solvents during the handling and processing at Stork-Herron Testing Laboratories facilities.

  
Michael R. Gaydos  
General Manager, COO

8/2/2011

Steve Marsh  
Dyson Corp.  
53 Freedom Road  
PAINESVILLE, OH 44077-1232

Date Received: 8/1/2011

Test Report No.: DYS006-11-08-30874-1

Material Testing and Non-Destructive  
Testing

5405 E. Schaaf Road  
Cleveland, OH 44131  
USA

Telephone : (216) 524-1450  
Fax : (216) 524-1459  
Website : www.storkherron.com

P.O. No.: 79319

**TEST REPORT**  
ITAR-CONTROLLED DATA

INSPECTION RESULTS	
Quantity	Results
5 PCS QX Heat #4M76367 3.50"-4UNC-2A X random lengths PWS Anchor Rod QX5-3 QX5-9 QX5-10 QX5-13 QX5-15	O.D. only was inspected and found to be acceptable
Comments: "ID of tube only"- Magnetic Flux Field cannot be verified for sensitivity; thus only a cursory examination was performed for informational purposes only.	
Marking Requirements:	
Demag and post cleaning requirements:	
Inspected by: Matthew Novak	Certification: ASNT-SNT-TC-1A Level <input type="checkbox"/> II <input checked="" type="checkbox"/> III

The reported results represent the actual attributes of the material tested and indicate full compliance with all applicable specification and contract requirements.

Export Controlled (ITAR)

This document contains technical data whose export and re-export/re-transfer is subject to control by the U.S. Department of State under the Arms Export Control Act and the International Traffic in Arms Regulations. The Department of State's prior written approval is required for the export or re-export/re-transfer of such technical data to any foreign person, foreign entity or foreign organization whether in the United States or abroad.

The above testing was performed in accordance with the latest revision of the applicable commercial, military and/or International test method unless otherwise noted. The above services were performed in accordance with Herron Testing Laboratories' Quality Assurance Program Edition 1, Revision 3 dated 6/30/09. Information and statements in this report are derived from material, information and/or specifications furnished by the client and exclude any expressed or implied warranties as to the fitness of the material tested or analyzed for any particular purpose or use. This report is the confidential property of our client and may not be used for advertising purposes. This report shall not be reproduced except in full, without written approval of this laboratory. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal Statutes. Sample remnants are held for a minimum of 6 months following issuance of test results, at which point they will be discarded unless notified in writing by the client. This material was not contaminated by mercury or chlorinated solvents during the handling and processing at Stork-Herron Testing Laboratories facilities.



Michael R. Gaydos  
General Manager, COO



# Monnig Industries, Inc.

HOT DIP & MECHANICAL GALVANIZING

P.O. BOX 98

GLASGOW, MO 65254

PH. 660-338-2242 FAX: 660-338-5199

AUGUST 30, 2011

DYSON CORPORATION  
50 FREEDOM ROAD  
PAINESVILLE, OH 44077

RE: GALVANIZING CERTIFICATE-CALTRAN

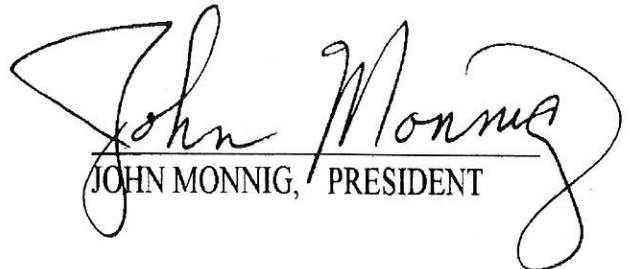
THIS WILL CERTIFY THAT THE RODS GALVANIZED ON THE ATTACHED  
SPREADSHEET MEETS OR EXCEEDS THE MINIMUM REQUIREMENTS OF ASTM A-  
123 & F2329 SPECIFICATIONS.

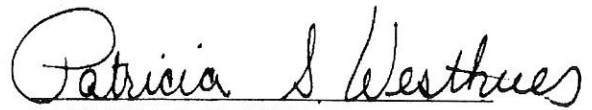
51 PWS ANCHOR RODS

ROD ID/MIL THICKNESS MEASUREMENTS

OQX5-12 / 6.0	OQX5-13 / 5.5	OQX5-14 / 5.0	OQX5-15 / 6.0	OQX5-16 / 6.0
OQX5-17 / 5.5	OQX5-18 / 5.5	OQX5-19 / 6.0	OQX5-20 / 6.5	OQX5-21 / 6.0
OQX5-22 / 4.5	OQX5-23 / 5.0	OQX5-24 / 5.5	OQX5-25 / 5.5	OQX5-26 / 5.5
OQX5-27 / 6.0	OQX5-28 / 5.5	OQX5-29 / 6.0	OQX5-30 / 6.0	OQY-1A / 6.0
OQX3-2 / 5.5	OQY-3A / 6.5	OQY-4A / 6.5	OQX3-5 / 6.5	OQY-6A / 6.0
OQX3-7 / 5.5	OQX3-8 / 6.0	OQY-9A / 6.0	OQY-10A / 5.5	OQX3-11 / 6.0
OQY-12A / 6.0	OQX3-13 / 6.0	OQY-14A / 5.5	OQY-15A / 6.0	OQX3-16 / 6.0
OQY-17A / 5.0	OQY-1 / 6.5	OQY-2 / 6.0	OQY-3 / 6.0	OQY-4 / 5.5
OQY-14 / 6.0	OQY-15 / 6.5	OQY-16 / 5.5	OQX4-17 / 6.0	OQX4-18 / 5.0
OQY-19 / 6.0	OQX4-20 / 5.5	OQX4-21 / 6.0	OQX4-22 / 6.0	OQX4-23 / 5.5
OQX4-24 / 6.5				

PATRICIA S. WESTHUES  
NOTARY PUBLIC STATE OF MISSOURI  
HOWARD COUNTY  
MY COMMISSION EXP. APR. 18, 2012

  
JOHN MONNIG, PRESIDENT

  
PATRICIA S. WESTHUES,  
NOTARY PUBLIC



Phoenix Manufacturing, Inc.  
P.O. BOX 330  
26666 Von Holten Rd.  
Cole Camp, MO. 65325  
660-668-2611  
660-668-3160 (fax)

#### SSPC-SP10 Near White Metal Blast

**Near-White Blast Cleaning** - Removal of nearly all mill scale, rust, rust scale, paint, or foreign matter by the use of abrasives propelled through nozzles or by centrifugal wheels, to the degree hereafter specified. A Near-White Blast Cleaned Surface Finish is defined as one from which all oil, grease, dirt, mill scale, rust, corrosion products, oxides, paint or other foreign matter have been completely removed from the surface except for very light shadows, very slight streaks or slight discolorations caused by rust stain, mill scale oxides, or light, tight residues of paint or coating that may remain. At least 95 percent of each square inch of surface area shall be free of all visible residues, and the remainder shall be limited to the light discoloration mentioned above.


#### 51 PWS ANCHOR RODS

#### ROD ID/MIL THICKNESS MEASUREMENTS

OQX5-12	OQX5-13	OQX5-14	OQX5-15	OQX5-16
OQX5-17	OQX5-18	OQX5-19	OQX5-20	OQX5-21
OQX5-22	OQX5-23	OQX5-24	OQX5-25	OQX5-26
OQX5-27	OQX5-28	OQX5-29	OQX5-30	OQY-1A
OQX3-2	OQY-3A	OQY-4A	OQX3-5	OQY-6A
OQX3-7	OQX3-8	OQY-9A	OQY-10A	OQX3-11
OQY-12A	OQX3-13	OQY-14A	OQY-15A	OQX3-16
OQY-17A	OQY-1	OQY-2	OQY-3	OQY-4
OQY-14	OQY-15	OQY-16	OQX4-17	OQX4-18
OQY-19	OQX4-20	OQX4-21	OQX4-22	OQX4-23
OQX4-24				

*Gare Cook*

# CERTIFICATE OF COMPLIANCE

 DYSON CORP.

 DOMESTIC NUT

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112048	660110-SA-017 CO 022	8600 MM	17 pcs	8/31/11

## CUSTOMER

American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

## PRODUCT DESCRIPTION

3.50"-4UNC 2A x 860mm (28"-2.58") OAL PWS Anchor Rod w/1850mm (72.83") of useable thread one end and 280mm (11.02") on opposite end. Drill & Tap 2"-4-1/2 UNC 2A x 60mm (2.36") Deep on 1850mm threaded end. Material per ASTM-A354, gr BD; Hot Dipped Galvanized per ASTM-A123 which the metal blast prior to galvanize. **SEE ITEM 66 - FURNISH PWS CABLE SYSTEM**

## SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

## DRAWING

The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

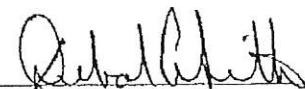
1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.  
Bar I.D.'s: OQY-1A, OQX3-2, OQY-3A, OQY-4A, OQX3-5, OQY-6A, OQX3-7, OQX-8, OQY-9A, OQY-10A, OQX3-11, OQY-12A, OQX3-13, OQY-14A, OQY-15A, OQX3-16, OQY-17A

Heat treatment lot OQX is from heat of steel ID 4M76367-2

Heat treatment lot OQY is from heat of steel ID 4M76367-1

## Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

  
Deborah A. Smith

Q.A. Admin. Assistant

8/29/11

Date Measured	BAR		LENGTH	LENGTH	DYSON	COUPLER END			TAPPED END										
	I.D	CODE / BAR				MM	FT./IN	S.O. #	No-Go	Pass/Fail	Pitch Diameter [In.]	No-Go	Pass/Fail	0.75"	2.25"	12.75"	24.75"	36.75"	48.75"
8/5/11		OQY-1A	8600	28'-2.58"	112048			Pass	3.331	3.331	3.332	3.332	3.332	3.332	3.332	3.332	3.332	3.332	3.331
8/5/11		OQX3-2	8600	28'-2.58"	112048			Pass	3.323	3.329	3.332	3.332	3.331	3.331	3.331	3.329	3.329	3.329	3.329
8/5/11		OQY-3A	8600	28'-2.58"	112048			Pass	3.327	3.333	3.331	3.331	3.331	3.330	3.330	3.329	3.330	3.329	3.329
8/5/11		OQY-4A	8600	28'-2.58"	112048			Pass	3.323	3.328	3.332	3.332	3.331	3.331	3.330	3.330	3.329	3.329	3.331
8/5/11		OQX3-5	8600	28'-2.58"	112048			Pass	3.325	3.327	3.327	3.328	3.329	3.329	3.327	3.327	3.327	3.327	3.327
8/5/11		OQY-6A	8600	28'-2.58"	112048			Pass	3.323	3.331	3.331	3.333	3.333	3.332	3.332	3.334	3.334	3.332	3.332
8/5/11		OQX3-7	8600	28'-2.58"	112048			Pass	3.323	3.334	3.334	3.334	3.334	3.334	3.333	3.333	3.333	3.333	3.333
8/5/11		OQX3-8	8600	28'-2.58"	112048			Pass	3.323	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.333
8/5/11		OQY-9A	8600	28'-2.58"	112048			Pass	3.332	3.332	3.332	3.333	3.333	3.332	3.332	3.332	3.332	3.332	3.332
8/5/11		OQY-10A	8600	28'-2.58"	112048			Pass	3.323	3.331	3.331	3.333	3.333	3.332	3.332	3.332	3.332	3.332	3.332
8/5/11		OQX3-11	8600	28'-2.58"	112048			Pass	3.329	3.333	3.333	3.334	3.334	3.334	3.334	3.333	3.333	3.333	3.333
8/5/11		OQY-12A	8600	28'-2.58"	112048			Pass	3.331	3.332	3.332	3.334	3.334	3.333	3.333	3.333	3.333	3.332	3.333
8/5/11		OQX3-13	8600	28'-2.58"	112048			Pass	3.329	3.332	3.332	3.331	3.331	3.330	3.330	3.330	3.330	3.330	3.330
8/5/11		OQY-14A	8600	28'-2.58"	112048			Pass	3.325	3.334	3.334	3.334	3.334	3.333	3.333	3.332	3.332	3.331	3.331
8/5/11		OQY-15A	8600	28'-2.58"	112048			Pass	3.326	3.332	3.332	3.333	3.332	3.332	3.331	3.331	3.331	3.331	3.331
8/5/11		OQX3-16	8600	28'-2.58"	112048			Pass	3.327	3.333	3.333	3.334	3.334	3.333	3.332	3.332	3.332	3.332	3.332
8/5/11		OQY-17A	8600	28'-2.58"	112048			Pass	3.329	3.334	3.334	3.334	3.333	3.333	3.333	3.333	3.333	3.333	3.333



## CERTIFICATE OF COMPLIANCE

 DYSON CORP.

 DOMESTIC NUT

53 Freedom Road  
Painesville, OH 44077

440-946-3500  
440-352-2700 fax

DYSON ORDER#	CUSTOMER ORDER#	ITEM NUMBER	QUANTITY SHIPPED	DATE SHIPPED
L 112050	660110-SA-017 CO 022	8800 MM	30 pcs	8/31/11

### CUSTOMER

American Bridge / Fluor JV  
375 Burma Road  
Oakland, CA 94607  
USA

### PRODUCT DESCRIPTION

3.50"-4UNC 2A x 8800mm (28'-10.46") OAL PWS Anchor Rod w/1850mm of useable thread one end and 280mm on opposite end. Drill & Tap 2"-4.5UNC-2A x 60mm (2.36") Deep on 1850mm threaded end. HDG per ASTM-A123 w/white metal blast prior to galvanize. RID ITEM 66 - FURNISH PWS CABLE.

### SPECIFICATIONS

ASTM-A354 Grade BD with special provisions  
10-1.59, 10-1.60, 10-1.61 std specifications 75-1.05

### DRAWING

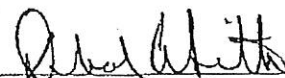
The product listed above was manufactured, tested, sampled, and inspected in accordance with the specification, purchase order, and any supplementary requirements and was found to meet those requirements unless otherwise noted.

1. The steel was melted and manufactured in the USA and the product was manufactured and tested in the USA.  
Bar I.D.'s: OQX5-1, OQX5-2, OQX5-3, OQX5-4, OQX5-5, OQX5-6, OQX5-7, OQX5-8, OQX5-9, OQX5-10, OQX5-11, OQX5-12, OQX5-13, OQX5-14, OQX5-15, OQX5-16, OQX5-17, OQX5-18, OQX5-19, OQX5-20, OQX5-21, OQX5-22, OQX5-23, OQX5-24, OQX5-25, OQX5-26, OQX5-27, OQX5-28, OQX5-29, OQX5-30  
Heat treatment lot OQX is from heat of steel ID 4M76367-2

○ repeat w/  
8/30/11

### Attachments:

Mill Test Report  
Mag Particle Certification  
Galvanizing Certification  
Pitch Diameter Record

  
Deborah A. Smith

Q.A. Admin. Assistant

8/29/11

Date Measured	BAR I.D	LENGTH MM	LENGTH FT./IN	DYSON S.O. #	COUPLER END			TAPPED END											
					No-Go Pass/Fail	Pitch Diameter [in.] 0.75"	12.75"	No-Go Pass/Fail	0.75"	2.25"	12.75"	24.75"	36.75"	48.75"	60.75"				
7/29/11	OQX5-1	8800	28'-10.46"	112050	Pass	3.325	3.333	3.333	3.334	3.334	3.333	3.333	3.333	3.333	3.333	3.333			
7/29/11	OQX5-2	8800	28'-10.46"	112050	Pass	3.323	3.323	3.323	3.331	3.331	3.332	3.332	3.332	3.332	3.332	3.332			
7/29/11	OQX5-3	8800	28'-10.46"	112050	Pass	3.330	3.333	3.333	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334			
7/29/11	OQX5-4	8800	28'-10.46"	112050	Pass	3.334	3.323	3.323	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333			
7/29/11	OQX5-5	8800	28'-10.46"	112050	Pass	3.333	3.333	3.333	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334			
7/29/11	OQX5-6	8800	28'-10.46"	112050	Pass	3.331	3.331	3.331	3.332	3.332	3.331	3.331	3.331	3.331	3.331	3.331			
7/29/11	OQX5-7	8800	28'-10.46"	112050	Pass	3.330	3.330	3.330	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333			
7/29/11	OQX5-8	8800	28'-10.46"	112050	Pass	3.333	3.333	3.333	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334			
7/29/11	OQX5-9	8800	28'-10.46"	112050	Pass	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333			
7/29/11	OQX5-10	8800	28'-10.46"	112050	Pass	3.332	3.333	3.333	3.327	3.327	3.332	3.332	3.332	3.332	3.332	3.331			
7/29/11	OQX5-11	8800	28'-10.46"	112050	Pass	3.334	3.332	3.332	3.332	3.332	3.331	3.331	3.331	3.331	3.331	3.331			
7/29/11	OQX5-12	8800	28'-10.46"	112050	Pass	3.332	3.334	3.334	3.334	3.334	3.333	3.333	3.333	3.333	3.333	3.333			
7/29/11	OQX5-13	8800	28'-10.46"	112050	Pass	3.334	3.332	3.332	3.333	3.333	3.333	3.333	3.332	3.332	3.332	3.332			
7/29/11	OQX5-14	8800	28'-10.46"	112050	Pass	3.332	3.334	3.334	3.332	3.332	3.334	3.334	3.334	3.334	3.334	3.334			
7/30/11	OQX5-15	8800	28'-10.46"	112050	Pass	3.331	3.332	3.332	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334			
7/30/11	OQX5-16	8800	28'-10.46"	112050	Pass	3.331	3.331	3.331	3.333	3.333	3.332	3.332	3.332	3.332	3.333	3.334			
7/30/11	OQX5-17	8800	28'-10.46"	112050	Pass	3.334	3.331	3.331	3.334	3.333	3.333	3.333	3.333	3.333	3.333	3.333			
7/30/11	OQX5-18	8800	28'-10.46"	112050	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334			
7/30/11	OQX5-19	8800	28'-10.46"	112050	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334			
7/30/11	OQX5-20	8800	28'-10.46"	112050	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334			
7/30/11	OQX5-21	8800	28'-10.46"	112050	Pass	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334			
7/30/11	OQX5-22	8800	28'-10.46"	112050	Pass	3.332	3.334	3.334	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333			
7/30/11	OQX5-23	8800	28'-10.46"	112050	Pass	3.334	3.332	3.332	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334			
7/30/11	OQX5-24	8800	28'-10.46"	112050	Pass	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333	3.333			
7/30/11	OQX5-25	8800	28'-10.46"	112050	Pass	3.334	3.333	3.333	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334			
7/30/11	OQX5-26	8800	28'-10.46"	112050	Pass	3.328	3.334	3.334	3.333	3.333	3.334	3.334	3.334	3.334	3.334	3.334			
7/30/11	OQX5-27	8800	28'-10.46"	112050	Pass	3.327	3.333	3.333	3.334	3.334	3.333	3.333	3.333	3.334	3.334	3.334			
7/30/11	OQX5-28	8800	28'-10.46"	112050	Pass	3.326	3.333	3.333	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334			
7/30/11	OQX5-29	8800	28'-10.46"	112050	Pass	3.326	3.333	3.333	3.334	3.334	3.334	3.334	3.334	3.334	3.334	3.334			
7/30/11	OQX5-30	8800	28'-10.46"	112050	Pass	3.323	3.333	3.333	3.333	3.333	3.333	3.334	3.334	3.334	3.334	3.334			

8/5/2011

Steve Marsh  
Dyson Corp.  
53 Freedom Road  
PAINESVILLE, OH 44077-1232

Material Testing and Non-Destructive  
Testing

5405 E. Schaaf Road  
Cleveland, OH 44131  
USA

Date Received: 8/3/2011

Test Report No.: DYS006-11-08-31132-1

Telephone : (216) 524-1450  
Fax : (216) 524-1459  
Website : www.storkherron.com

**TEST REPORT**

ITAR-CONTROLLED DATA

P.O. No.: 79319

Sample Description: One (1) Lot (4 Pcs.) MT Exam of Anchor Rods, Representing 3.50"- 4UNC 2A Random Length Rods, Material Per ASTM-A354, gr BD, ASTM E1444 Per ASTM A490 with Acceptance Per ASTM F788, MIL-I-45208A, AM#1 Applies, Cust PO # 660110-SA-017 CO 022, Heat #/Code 4M76367/OQY

**MAGNETIC PARTICLE INSPECTION REPORT**

<b>Standard:</b>	ASTM F788-06 (Acceptance Criteria)	
<b>Procedure:</b>	SOP 42.03 / ASTM E1444(Method) per ASTM A490 / Caltrans Special Provisions 10-1.59, 10-1.60, 10-1.61 and Caltrans Standard Specifications 75-1.05	
<b>METHOD</b>		
<input type="checkbox"/> Dry <input checked="" type="checkbox"/> Wet		
<b>PARTICLES</b>		
<b>Magnaflux Particles:</b> <input type="checkbox"/> 8A Red <input type="checkbox"/> 14A <input type="checkbox"/> 3A Black <input checked="" type="checkbox"/> 14AM <input type="checkbox"/> 1 Gray <input type="checkbox"/> Other Batch No. 09D02K.	<b>Part Preparation:</b> <input type="checkbox"/> None Required <input type="checkbox"/> Solvent Clean <input type="checkbox"/> Ultrasonic Cleaner / Water <input checked="" type="checkbox"/> Other Precleaned by Customer	<b>Wet Particle Carrier:</b> <input type="checkbox"/> Ardrex Base Oil <input checked="" type="checkbox"/> Pre Mixed <input type="checkbox"/> Concentration      Ml Lot No.
<b>CURRENT</b>		
<input type="checkbox"/> AC <input type="checkbox"/> FWDC <input type="checkbox"/> HWDC		
<input type="checkbox"/> Central Conductor (AMPS) <input type="checkbox"/> Head Shot (AMPS)		
<input type="checkbox"/> Coil (AMPS) <input type="checkbox"/> Prods (AMPS/Spacing)		
Field Verified by: <input checked="" type="checkbox"/> Pie Gage <input type="checkbox"/> QQI <input type="checkbox"/> Hall Effect Probe		
<b>EQUIPMENT</b>		
<input type="checkbox"/> MagWerks MVS-2445 S/N: 000404 Cal Due Date: 9/22/2011		
<input type="checkbox"/> Magnaflux H-720 S/N: 81417 Cal Due Date: 9/22/2011		
<input checked="" type="checkbox"/> Yoke <input type="checkbox"/> AC <input checked="" type="checkbox"/> DC S/N: 3005 Spacing: 4"-6" Cal Due Date: 12/1/11		

The above testing was performed in accordance with the latest revision of the applicable commercial, military and/or International test method unless otherwise noted. The above services were performed in accordance with Herron Testing Laboratories' Quality Assurance Program Edition 1, Revision 3 dated 6/30/09. Information and statements in this report are derived from material, information and/or specifications furnished by the client and exclude any expressed or implied warranties as to the fitness of the material tested or analyzed for any particular purpose or use. This report is the confidential property of our client and may not be used for advertising purposes. This report shall not be reproduced except in full, without written approval of this laboratory. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal Statutes. Sample remnants are held for a minimum of 6 months following issuance of test results, at which point they will be discarded unless notified in writing by the client. This material was not contaminated by mercury or chlorinated solvents during the handling and processing at Stork-Herron Testing Laboratories facilities.



Michael R. Gaydos  
General Manager, COD

8/5/2011

Steve Marsh  
Dyson Corp.  
53 Freedom Road  
PAINESVILLE, OH 44077-1232

Date Received: 8/3/2011

Test Report No.: DYS006-11-08-31132-1

Material Testing and Non-Destructive  
Testing

5405 E. Schaaf Road  
Cleveland, OH 44131  
USA

Telephone : (216) 524-1450  
Fax : (216) 524-1459  
Website : www.storkherron.com

**TEST REPORT**

P.O. No.: 79319

ITAR-CONTROLLED DATA


INSPECTION RESULTS		WO# 006-110831132 (PO# 79319)
Quantity	Results	
4 PCS of 9 PCS Completes P.O. 79319 OQY Heat # 4M76367 3.50"-4UNC-2A X Random Lengths PWS Anchor Rods OQY-4, OQY-3, OQY-2, OQY-1 For balance of order see Work Order DYS006-110830874, Dated 8/1/11, P.O. 79319	O.D. only was inspected and found to be acceptable	
Comments: Examined per customer request "ID of tube only" -Magnetic Flux Field cannot be verified for sensitivity; thus only a cursory examination was performed for informational purposes only, and no indications were noted at the time of inspection.  Marking Requirements: Demag and post cleaning requirements: N/A <input type="checkbox"/> Post Preservation: Ardrex 3968 Lot#: 05030711 Expiration Date: 4-13-2013		
Inspected by: Matthew Novak	Certification: Level <input type="checkbox"/> II <input checked="" type="checkbox"/> III Recertification Date: 6/25/13	Inspection Date: 8/4/11

*The reported results represent the actual attributes of the material tested and indicate full compliance with all applicable specification and contract requirements.*

*Export Controlled (ITAR)*

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The above testing was performed in accordance with the latest revision of the applicable commercial, military and/or international test method unless otherwise noted. The above services were performed in accordance with Herron Testing Laboratories' Quality Assurance Program Edition 1, Revision 3 dated 6/30/09. Information and statements in this report are derived from material, information and/or specifications furnished by the client and exclude any expressed or implied warranties as to the fitness of the material tested or analyzed for any particular purpose or use. This report is the confidential property of our client and may not be used for advertising purposes. This report shall not be reproduced except in full, without written approval of this laboratory. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal Statutes. Sample remnants are held for a minimum of 6 months following issuance of test results, at which point they will be discarded unless notified in writing by the client. This material was not contaminated by mercury or chlorinated solvents during the handling and processing at Stork-Herron Testing Laboratories facilities.

  
Michael R. Gaydos  
General Manager, COO



**DEPARTMENT OF TRANSPORTATION**

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Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.25A**MATERIAL SUITABILITY REPORT****Resident Engineer:**Siegenthaler, Peter**Report No:** MSR-000051**Address:** 333 Burma Road**Report Date:** 31-Aug-2011**City:** Oakland, CA 94607**SMR Authorization #:****Project Name:** SAS Superstructure**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date of NCR:****Contractor:** Dyson Corp. & Subs**Location:** Monnig Ind. Glasgow, MO

The following material has been inspected and found not to comply with contract plans and specifications; however, METS has determined this material may be suitable for its intended purpose.

Lot #	Bid Item #	Quantity	Material Description
B219-012-11	66	16 ea	PWS High Strength Anchor Rods - load - 4

**Identification:**

one Blue Tag attached to each load (1 tag total) see photo below

**Description of Non-Conformance (NCRs):****Summary of Items Observed:**

This QA Inspector observed the following PWS Rods were part of load -4: OPY4-19, OPY4-20, OPY4-21, OPY4-22, OPY4-24, OTD-1H, OOH-1F, OOH-2F, OOH-3F, OOH-4F, OOH-5F, OOH-1E, OTD-2E, OTD-1D, OTD-2D and OTD-3D.

BTL item: Heat treatment lots OOF, OOH, OTD and OPY contained some rods with thread sizes outside the specified range. Per RFI 2502 it was determined that oversized threads would be fit for purposes provided the nut is able to thread freely down the bar/rod and an acceptable dimensional report is submitted.

This QA Inspector observed a spherical nut and regular nut were threaded full length and shipped as such. This QA Inspector observed a dimensional report from Dyson Corporation accepting the rods was submitted for the heat treatment lots.

This QA Inspector observed a Certificate Of Compliance (COC), Material Test Report (MTR), Magnetic Particle Testing reports per material heat and shipper were submitted from Dyson Corporation. This QA Inspector observed a COC and QC reports for blasting and galvanizing were submitted from Monnig Industries. The documents submitted appeared to comply with the contract requirements. This QA Inspector previously confirmed with Structural Material Representative (SMR) Kittrick Guest the material check samples had been accepted.

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## MATERIAL SUITABILITY REPORT

( Continued Page 2 of 2 )

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### Summary of Conversations:

This QA Inspector had general conversations with Monnig Industries personnel and the SMR. Except as described above there were no other notable conversations.



### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Hager,Craig	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.25B.yyy**MATERIAL SUITABILITY DOCUMENTATION REPORT****Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Report No:** MSD-000785**Contractor:** Dyson Corp. & Subs**Date:** 21-Sep-2011**Location:** Painesville, OH**BTL Mat Des.:****BTL Item No.:****Initiated By/Why:****BTL Summary:**

The shipment of PWS anchor rods from Monnig Ind to Pier 7 fell off the truck in Nevada and sustained various levels of damage including smeared threads and loss of galvanized coating. The Load consisted of 55 rods (49 full length and 6 short rods). The 6 short rods did not fall off the truck, however all 49 full length rods did. This shipment was previously released under Blue Tag B219-012-11 and Orange Tag B219-013-11. When the load arrived at Pier 7 on Sept 7, 2011, ABF personnel sent the entire shipment back to Dyson for mitigation.

**METS Comments****METS Discussion:****Proposed Resolution:**

The 6 short rods are acceptable

29 rods should be acceptable after repair to galvanizing (RFI forthcoming)

7 rods should be acceptable after repair to threads and galvanizing (RFI forthcoming)

The remainder will be scrapped.

**Date discussed with the Construction Engineer:****Time:****Various:****Construction Comments****Name of the Construction Engineer involved:** Bob Brignanao**Construction agrees with METS recommendation:** Yes No**Recommendation from Construction (If NO is checked above):**

Discussions are currently ongoing with general concurrence between Construction and METS.

**Contract Change Order required:** Yes No **If Yes, CCO number:****Designer Comments****Name of Design Engineer involved (if applicable):****Recommendation from the Design Engineer (if applicable):****Screening Team involvement:**

Yes No

**Issue requires FAST Involvement:**

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# MATERIAL SUITABILITY DOCUMENTATION REPORT

( Continued Page 2 of 2 )

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Yes      No

**Decision by FAST (if YES is checked above):**

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**METS Summary of Final Decision:**

33 Salvaged rods were later accepted via RFI process. See ABF RFIs 2588, 2585, 2579, 2578 and 2577.

**Comments:**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Kit Guest 510-295-5393, who represents the Office of Structural Materials for your project.

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**Inspected By:**      Guest, Kittric

Quality Assurance Inspector

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**Reviewed By:**      Choy, Nina

QA Reviewer





09/07/2011 09:29



























A close-up photograph of a metal surface, possibly a pipe or structural component. The surface is covered with a blue paint or coating. There is a significant area of peeling and chipping of the blue paint, revealing a lighter, metallic or greyish substrate underneath. The damage is concentrated in the center-left of the frame. The lighting is bright, creating strong highlights and shadows. In the bottom right corner, there is a date and time stamp in orange text.

09/07/2011 09:31





09/07/2011 09:31





09/07/2011 09:32













09/07/2011 09:32









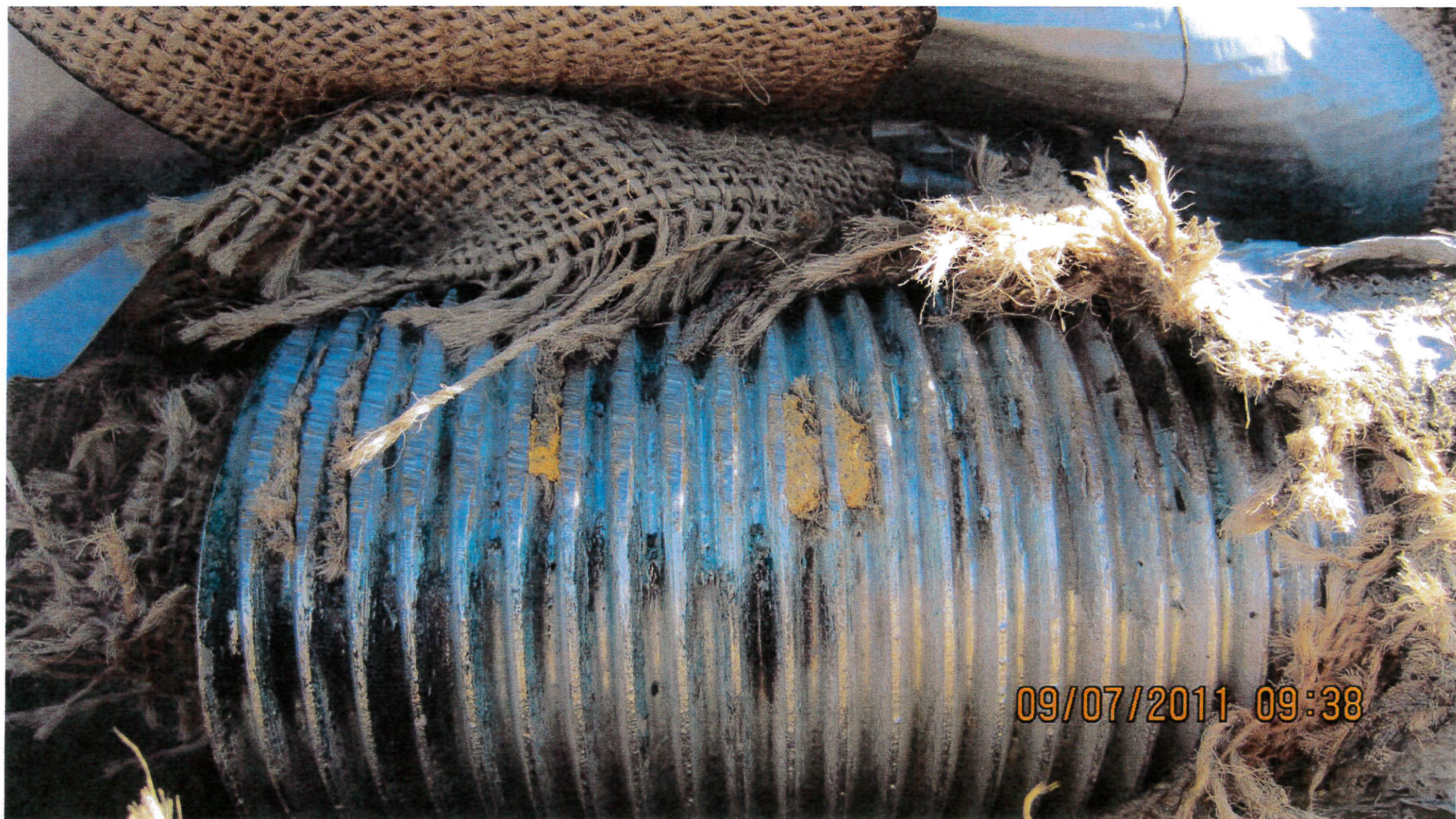
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09/07/2011 09:36





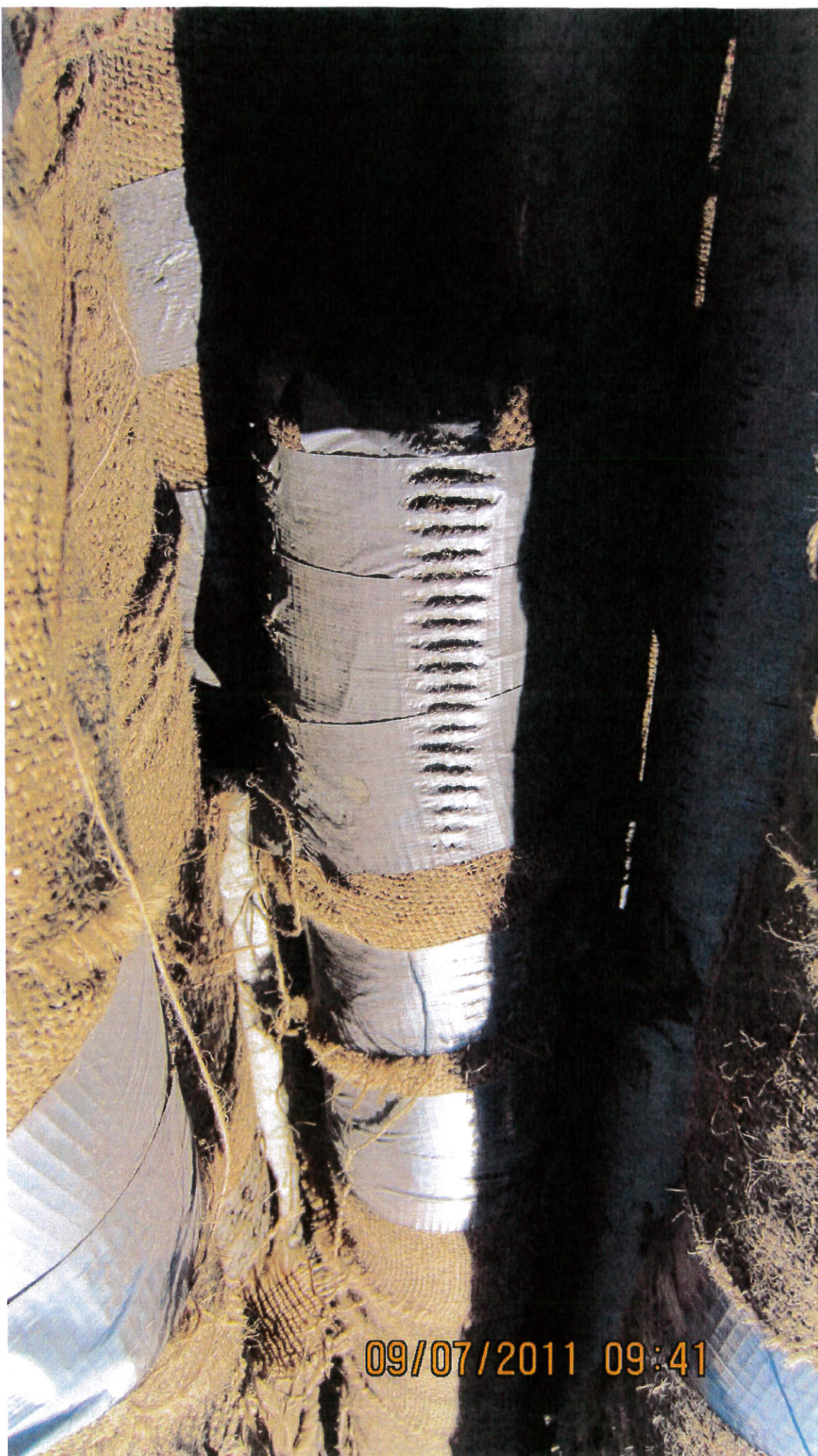












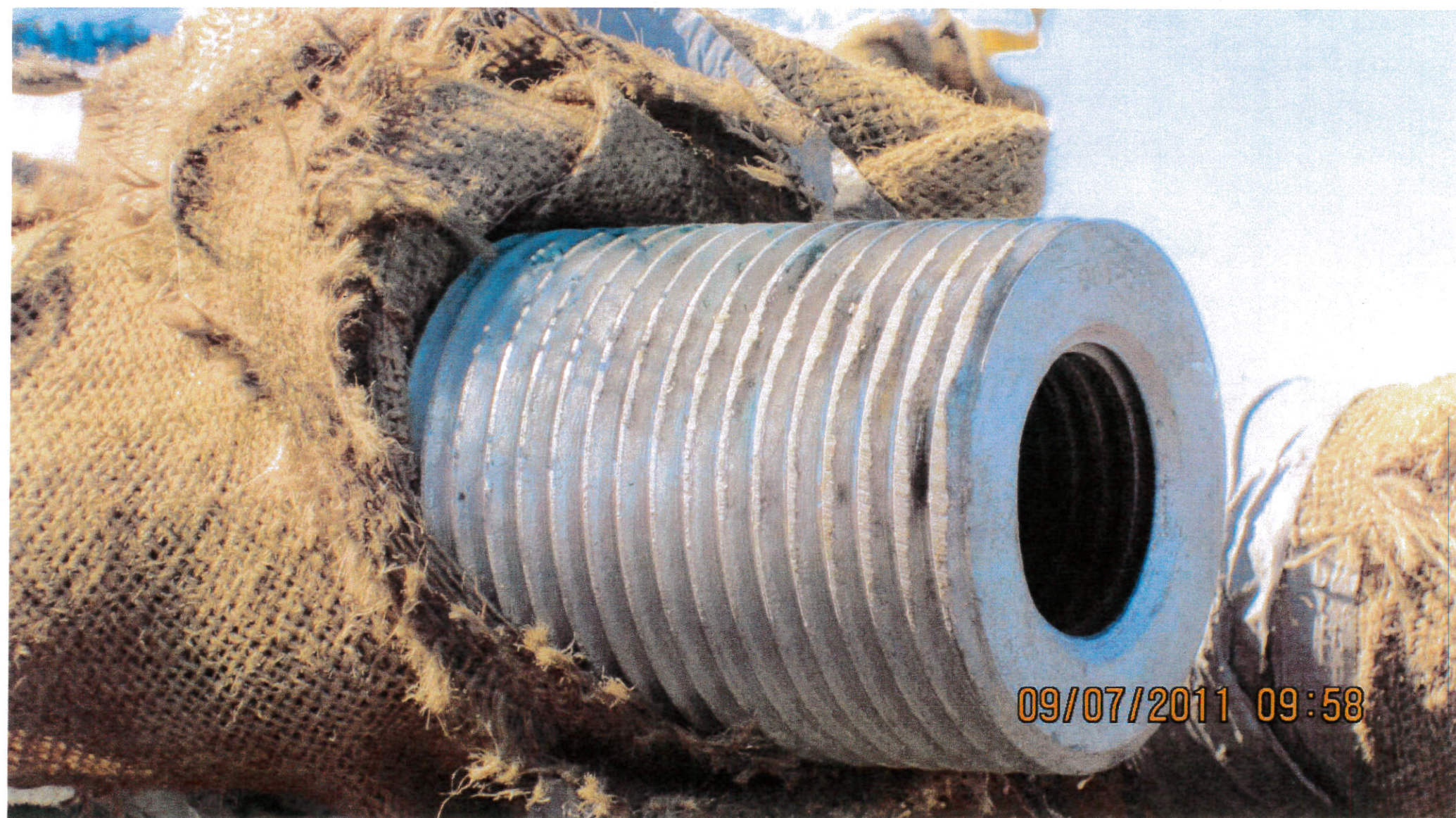
















09/07/2011 10:00



A close-up photograph of a metal structure, possibly a ship's hull or a large industrial component. The image shows a dark, rectangular metal plate or bulkhead. A lighter-colored, possibly aluminum, metal strip or beam is attached to the top edge of the dark plate. The attachment appears to be a weld or a bolted joint, but there is visible damage or wear at the interface. The lighter metal has a rough, fibrous texture, suggesting it might be a composite material or a heavily corroded metal. The background is a light, metallic surface. In the bottom right corner, there is an orange date and time stamp.

09/07/2011 10:00





09/07/2011 10:00

A close-up photograph of a metal structure, possibly a ship's hull or a large container. The image shows a sharp corner or edge where a blue-painted metal surface meets a dark, textured, and possibly corroded or weathered surface. The blue paint is chipped and peeling in some areas, revealing the underlying metal. The dark surface has a rough, fibrous texture, suggesting it might be a different material or a heavily corroded metal. The lighting is bright, creating strong highlights and shadows that emphasize the textures and the sharpness of the corner.

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003647**Date Inspected:** 09-Sep-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH**Quality Control Contact:** Russ Welsh**Quality Control Present:** Yes No**Material transfer:** Yes No N/A**Sampled Items:** Yes No N/A**Stock Transfer:** Yes No N/A**OK to Cut:** Yes No N/A**Rebar Test Witness:** Yes No N/A**Delayed/Cancelled:** Yes No N/A**Other:****Bridge No:** 34-0006**Component:** Main Cable Anchor Rods**Bid Item:** 66**Lot No:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Dustyn Broening was present at Dyson Corporation in Painesville, OH, as requested, to monitor the fabrication main cable PWS anchor rods for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson QC Manager (QCM) Russell Welsh who accompanied this QAI to the location where machining of main cable anchor rods was in-process.

Work is in progress on 3.5" diameter, A354 grade BD, Q&T main cable anchor rods lot #OYG and OYH within the roll threading shop at this time. QCM has relayed that the 3" diameter ASTM F436 washers that are to be re-manufactured have not been started at this time. (See attached photos)



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## SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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### Summary of Conversations:

Other basic communication was performed between this QAI and the QCM during this visit.

### Comments

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**Inspected By:** Broening,Dustyn

Quality Assurance Inspector

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**Reviewed By:** Edmondson,Fred

QA Reviewer



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003622**Date Inspected:** 12-Sep-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, Ohio**Quality Control Contact:** Mr. Russell Welsh**Quality Control Present:** Yes No**Material transfer:** Yes No N/A**Sampled Items:** Yes No N/A**Stock Transfer:** Yes No N/A**OK to Cut:** Yes No N/A**Rebar Test Witness:** Yes No N/A**Delayed/Cancelled:** Yes No N/A**Other:****Bridge No:** 34-0006**Component:** Main cable anchor rods**Bid Item:** 66**Lot No:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Fred Edmondson was present at Dyson Corporation in Painesville, OH as requested to monitor the fabrication of various high strength rods, bolts and washers for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson Corporation Quality Control Manager (QCM) Mr. Russell Welsh and ABF Inspector (ABFI) Mr. Mark Roach who accompanied this QAI to the location where Dyson personnel were in the process of sorting, for the purpose of identifying and inspecting for damage, the 3.5 inch main cable anchor rods that have been in a traffic accident while in-route to Oakland, CA. This QAI was informed that Dyson is not in possession of a Bill-of-Lading for this returned load of rods at this time.

**Summary of Conversations:**

As noted in the body of the report above. Other conversation fundamental to completion of the task at hand occurred between this QA inspector and Dyson Personnel.

**Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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## SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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**Inspected By:** Edmondson,Fred

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003671**Date Inspected:** 21-Sep-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH

**Quality Control Contact:** Russell Welsh

<b>Material transfer:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Stock Transfer:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Rebar Test Witness:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>

<b>Quality Control Present:</b>	<b>Yes</b>	<b>No</b>
<b>Sampled Items:</b>	<b>Yes</b>	<b>No</b>
<b>OK to Cut:</b>	<b>Yes</b>	<b>No</b>
<b>Delayed/Cancelled:</b>	<b>Yes</b>	<b>No</b>

**Other:****Bridge No:** 34-0006**Component:** 3.5 inch PWS Anchor Rods**Bid Item:** 66**Lot No:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Fred Edmondson was present at Dyson Corporation in Painesville, OH as requested to monitor the fabrication of various high strength rods, bolts and washers for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson Corporation Quality Control Manager (QCM) Mr. Russell Welsh, Sales Manager (SM) Mr. Pat Sheffield and ABF Inspector (ABFI) Mr. Mark Roach who accompanied this QAI to the locations where Dyson personnel have stored the 49 anchor rods that are in mitigation. Reference attached photographs.

This QAI visually inspected the threaded areas of the 49 anchor rods and the six extension rods and discovered one anchor rod OOH-5F, with smeared and flattened OD threads (9 linear inches on the 1850mm threaded end) had been overlooked and had been included in 24 rods to be re-galvanized without thread repair. There are now 23 rods that require re-galvanizing only - 12 are going to be re-threaded and re-galvanized - and 13 are scrapped. Anchor rod OOH-5F may be scrapped or re-threaded and re-galvanized.

The different categories are separated and the 13 scrapped out outside (in the yard).

This QAI verified the identification (I.D.) of the 23 to be galvanized and the 12 to be repaired and then galvanized. There are two discrepancies - the stamped I.D. - OTD-3D should be OTD-23D or vice-versa (wrong number on list) .and stamped I.D. - OQY-30 should be OQX4-30 or vice-versa.

Current Status - 3.5 inch PWS anchor rods



# SOURCE INSPECTION REPORT

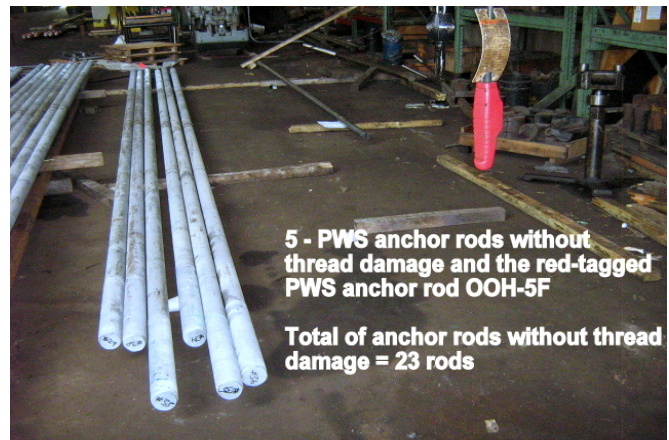
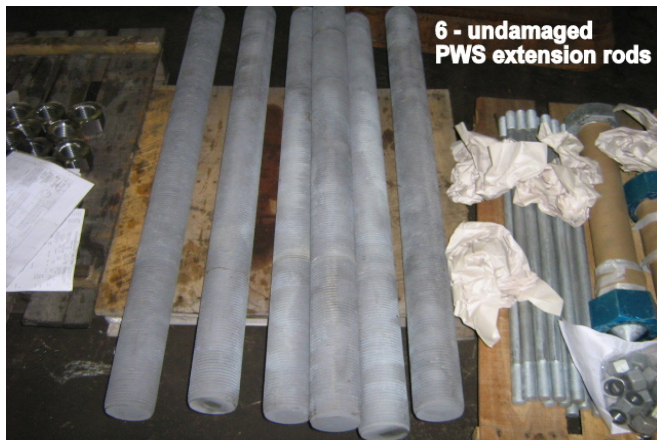
( Continued Page 2 of 3 )

274 - required

143 - shipped to jobsite

49 - in mitigation (23 - re-galvanize, 13 - scrap, 12 - re-thread and re-galvanize, 1 - either scrap or re-thread and re-galvanize)

82 - in fabrication + 13 scrap to begin when material arrives



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## SOURCE INSPECTION REPORT

( Continued Page 3 of 3 )

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### Summary of Conversations:

Sales Manager Sheffield commented that a shipment date for the anchor rods that require re-galvanizing only has not been determined at this date.

### Comments

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**Inspected By:** Edmondson,Fred

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003669**Date Inspected:** 26-Sep-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH

**Quality Control Contact:** Russell Welsh  
**Material transfer:** Yes No N/A  
**Stock Transfer:** Yes No N/A  
**Rebar Test Witness:** Yes No N/A

**Quality Control Present:** Yes No  
**Sampled Items:** Yes No N/A  
**OK to Cut:** Yes No N/A  
**Delayed/Cancelled:** Yes No N/A

**Other:****Bridge No:** 34-0006**Component:** 3.5 inch PWS Anchor Rods**Bid Item:** 66**Lot No:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Fred Edmondson was present at Dyson Corporation in Painesville, OH as requested to monitor the fabrication of various high strength rods, bolts and washers for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson Corporation Quality Control Manager (QCM) Mr. Russell Welsh, Sales Manager (SM) Mr. Pat Sheffield.

This QAI observed the in-process cutting (shortening) of previously cut-threaded 3.5 inch anchor rods. The coupler end of the rods is being cut and will be cut-threaded to match the cut threads on the tapped end. The acceptance criteria of the cut threads on the anchor rods to be reworked will be as stated in ABF RFI 2502R00.

Anchor rod OOH-5F, with smeared and flattened OD threads (9 linear inches on the 1850mm threaded end) previously included in 24 rods to be regalanized without thread repair is going to be salvaged by cutting, rethreading and regalanizing.

Current Status - 3.5 inch PWS anchor rods

274 -Required

143 - Shipped to jobsite

49 - In mitigation (30 – galvanize repair, 13-scrap, 6-thread and galvanize repair,



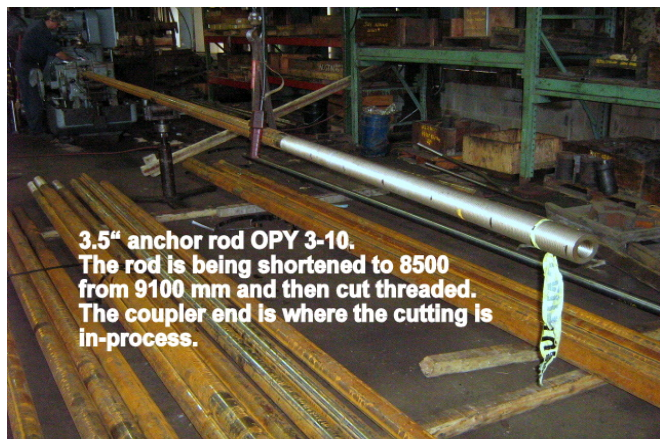
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## SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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82 – In fabrication + 13-scrap to begin when material arrives



### Summary of Conversations:

Sales Manager Sheffield commented that a shipment date for the anchor rods that require re-galvanizing only will be September 27, 2011.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Edmondson, Fred

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003679**Date Inspected:** 27-Sep-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH

<b>Quality Control Contact:</b>	Russell Welsh		
<b>Material transfer:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Stock Transfer:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Rebar Test Witness:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>

<b>Quality Control Present:</b>	<b>Yes</b>	<b>No</b>
<b>Sampled Items:</b>	<b>Yes</b>	<b>No</b>
<b>OK to Cut:</b>	<b>Yes</b>	<b>No</b>
<b>Delayed/Cancelled:</b>	<b>Yes</b>	<b>No</b>

**Other:****Bridge No:** 34-0006**Component:** 3.5 inch Main Cable Anchor Rods**Bid Item:** 66**Lot No:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Fred Edmondson was present at Dyson Corporation in Painesville, OH as requested to monitor the fabrication of various high strength rods, bolts and washers for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson Corporation Quality Control Supervisor (QCs) Mr. Russell Welsh, Sales Manager (SM) Mr. Pat Sheffield, and Caltrans Structures Material Representative (SMR) Mr. Kit Guest.

This QAI observed the in-process cutting (shortening) of previously cut-threaded 3.5 inch anchor rods. The coupler end of the rods will be cut-threaded to match the cut threads on the tapped end. The acceptance criteria of the cut threads on the anchor rods to be reworked will be as stated in ABF RFI 2502R00.

This QAI and SMR Guest discovered to anchor rods identified as OQY-12C and OQY-21C with smeared OD threads (approximately 75mm in length on the tapped end) previously included in 24 rods to be regalvanized without requiring thread repair. Dyson is going to reinspect the anchor rods that are slated to go to Monnig without thread repair.

This QAI and SMR Kit observed 40 anchor rods with the tap end roll-threaded and stored with the threaded end protected with burlap and 43 anchor rods where the roll threading is in-process. SM Sheffield commented that Dyson is waiting to determine how many of which length is needed to complete the 274 required prior to cutting and roll threading the coupler end.

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## SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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Current Status - 3.5 inch PWS anchor rods

274 -Required

143 - Shipped to jobsite

49 - In mitigation (28 – galvanize repair, 13-scrap, 8-thread and galvanize repair,

82 – In fabrication + 13 to replace scrapped rods



### Summary of Conversations:

Sales Manager Sheffield commented that a shipment date for the damaged anchor rods that require re-galvanizing only will be September 29, 2011. Also, SM Sheffield commented that the material necessary for completing the 3.5 inch anchor rod order of 274 is on-site and in-process.

### Comments

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**Inspected By:** Edmondson,Fred

Quality Assurance Inspector

**Reviewed By:** Levell,Bill

QA Reviewer

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003689**Date Inspected:** 29-Sep-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH

**Quality Control Contact:** Russell Welsh  
**Material transfer:** Yes No N/A  
**Stock Transfer:** Yes No N/A  
**Rebar Test Witness:** Yes No N/A

**Quality Control Present:** Yes No  
**Sampled Items:** Yes No N/A  
**OK to Cut:** Yes No N/A  
**Delayed/Cancelled:** Yes No N/A

**Other:****Bridge No:** 34-0006**Component:** 3.5 inch Main Cable Anchor Rods**Bid Item:** 66**Lot No:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Fred Edmondson was present at Dyson Corporation in Painesville, OH as requested to monitor the fabrication of various high strength rods, bolts and washers for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson Corporation Quality Control Supervisor (QCs) Mr. Russell Welsh, Sales Manager (SM) Mr. Pat Sheffield, Mr. MarK Roach KTA inspector and Mr. Raymond Reick, ABF .

This QAI observed Dyson personnel performing visual inspection of the following galvanized 3.5" diameter A354 Grade BD, Q&T main cable anchor rods (anchor rods) involved in the accident - Ref. MSD-00785 for shipment to Monnig Industries, 400 Industrial Drive, Glasgow, MO.

OPY4-24, OQY-18C, OQY-31, OQY-13C, OQY-28, OQY-29, OTD-2E, OQY-15C, OPY4-22, OPY4-21, OQY-23B, OPY4-20, OQY23C, OQY20C, OQY-22C, OTD-1H, OPY4-19, OQY-3C, OTD-23D, OTD-1D, OTD-2D, OOH-2F, OOH-3F, OQY-25, OQY-14C, OQY-26, OQX4-30, OQY-19C, OQY-21C, OOH-4F, OOH-1E, OQY-27, and OQY-32.

The following anchor rods were previously cut-threaded and will be included in this shipment:

OPY2-13, OPY2-15, OPY2-3, OPY2-7, OTD-12, OOH2-19, OOH2-10, OOH2-7, OOH2-8, OOH2-17, OOH2-24, OOF2-2, OOF3-8, OOF4-2, OOF4-5.

This QAI observed that roll-threading of the remaining anchor rods is continuing.

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## SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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Current Status - 3.5 inch PWS anchor rods.

274 -Required

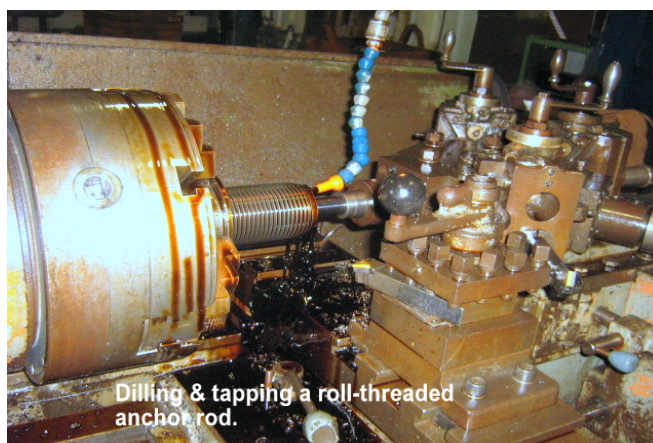
143 - Shipped to jobsite

49 - In mitigation (28 – galvanize repair, 13-scrap, 8-thread and galvanize repair,

82 – In fabrication + 13 to replace scrapped rods

### Summary of Conversations:

Sales Manager Sheffield commented that a shipment date for the damaged anchor rods that require re-galvanizing will be September 30, 2011.



### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Edmondson,Fred

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003694**Date Inspected:** 30-Sep-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH

**Quality Control Contact:** Russell Welsh  
**Material transfer:** Yes No N/A  
**Stock Transfer:** Yes No N/A  
**Rebar Test Witness:** Yes No N/A

**Quality Control Present:** Yes No  
**Sampled Items:** Yes No N/A  
**OK to Cut:** Yes No N/A  
**Delayed/Cancelled:** Yes No N/A

**Other:****Bridge No:** 34-0006**Component:** 3.5 inch Main Cable Anchor Rods**Bid Item:** 66**Lot No:** B305-021-11**Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Fred Edmondson was present at Dyson Corporation in Painesville, OH as requested to monitor the fabrication of various high strength rods, bolts and washers for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson Corporation Quality Control Supervisor (QCs) Mr. Russell Welsh, Sales Manager (SM) Mr. Pat Sheffield, and Mr. Mark Roach, KTA inspector and Mr. Raymond Reick, ABF.

This QAI observed Dyson personnel preparing to ship the following galvanized 33 ea - 3.5" diameter A354 Grade BD, Q&T main cable anchor rods (anchor rods) involved in the accident (Ref. MSD-00785) for shipment to Monnig Industries, 400 Industrial Drive, Glasgow, MO.

OPY4-24, OQY-18C, OQY-31, OQY-13C, OQY-28, OQY-29, OTD-2E, OQY-15C, OPY4-22, OPY4-21, OQY-23B, OPY4-20, OQY23C, OQY20C, OQY-22C, OTD-1H, OPY4-19, OQY-3C, OTD-23D, OTD-1D, OTD-2D, OOF-2F, OOH-3F, OQY-25, OQY-14C, OQY-26, OQX4-30, OQY-19C, OQY-21C, OOH-4F, OOH-1E, OQY-27, and OQY-32.

Anchor rods OOH-1F and OOH-5F are going to Monnig, with this shipment, for sand blasting only and will be returned to Dyson for further processing that will include extending the thread length on the tapped end.

This QAI was presented supporting documents which included MTR's, Certificates of Conformance and NDT tests results. After reviewing the documentation, this QAI attached a Green Tag with Blue Dot to the



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# SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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documentation and assigned Lot No. B305-021-11. (Reference MSDR 00785).

The supporting documentation and Green Tag with Blue Dot was placed into a plastic pouch and taped to one of the bundles of rods to be shipped. Reference attached photographs.

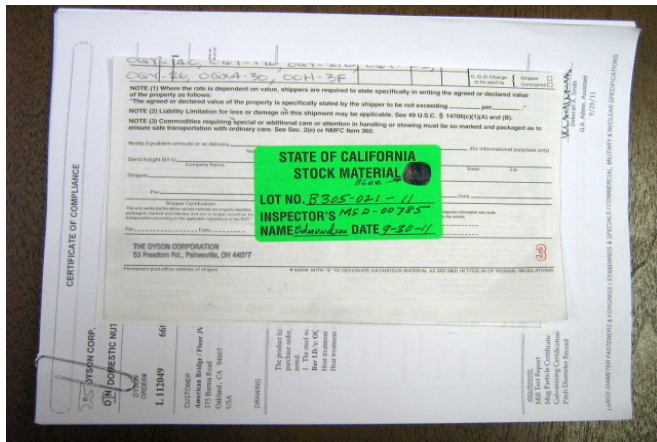
Current Status - 3.5 inch PWS anchor rods

274 -Required

143 - Shipped to jobsite

49 - In mitigation (33 - to Monnig for galvanize coating repair 10-1-11, 2- thread and galvanize coating repair, 14-scrap

82 – In fabrication + 14 to replace scrapped rods



## Summary of Conversations:

Sales Manager Sheffield informed this QAI that the shipment of the damaged anchor rods that require re-galvanizing will be Saturday October 1, 2011.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Edmondson,Fred

Quality Assurance Inspector

**Reviewed By:** Levell,Bill

QA Reviewer

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**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.8**COMPONENT MATERIAL INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** CMI-000380**Date Inspected:** 30-Sep-2011**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH**Bridge No.:** 34-0006**OSM Arrival Time:** 800**OSM Departure Time:** 1630**Component:#** 3.5" dia. Main Cable Anchor Rods

The following material has been inspected in accordance with Section 6 of the Standard Specifications at the above location. At this point in the fabrication process it appears to comply with contract plans and specifications.

To be shipped to the following vendor or locations: Monnig Industries, Inc., 400 Industrial Drive, Glasgow, MO 65254

Lot #	Bid Item #	Quantity	Material Description
B305-021-11 66		33 ea	3.5" diameter A354 Grade BD, Q&T main cable anchor rods

**Identification:** 3.5" diameter, A354 Grade BD, Q&T, Main Cable Anchor Rods**Summary of Items Observed:**

This QAI observed Dyson personnel preparing to ship the following galvanized 33 ea - 3.5" diameter A354 Grade BD, Q&T main cable anchor rods (anchor rods) involved in the accident (Ref. MSD-00785) for shipment to Monnig Industries, 400 Industrial Drive, Glasgow, MO.

OPY4-24, OQY-18C, OQY-31, OQY-13C, OQY-28, OQY-29, OTD-2E, OQY-15C, OPY4-22, OPY4-21, OQY-23B, OPY4-20, OQY23C, OQY20C, OQY-22C, OTD-1H, OPY4-19, OQY-3C, OTD-23D, OTD-1D, OTD-2D, OOF-2F, OOH-3F, OQY-25, OQY-14C, OQY-26, OQX4-3O, OQY-19C, OQY-21C, OOH-4F, OOH-1E, OQY-27, and OQY-32.

Anchor rods OOH-1F and OOH-5F are going to Monnig, with this shipment, for sand blasting only and will be returned to Dyson for further processing that will include extending the thread length on the tapped end.

This QAI was presented supporting documents which included MTR's, Certificates of Conformance and NDT tests results. After reviewing the documentation, this QAI attached a Green Tag with Blue Dot to the documentation and assigned Lot No. B305-021-11. (Reference MSDR 00785).

The supporting documentation and Green Tag with Blue Dot was placed into a plastic pouch and taped to one of the bundles of rods to be shipped. Reference attached photographs.

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# COMPONENT MATERIAL INSPECTION REPORT

( Continued Page 2 of 2 )

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CERTIFICATE OF COMPLIANCE

NOTE (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property as shown below.

NOTE (2) The agreed or declared value of the property is specifically stated by the shipper to be not exceeding \_\_\_\_\_ per \_\_\_\_\_.

NOTE (3) Liability Limitation for loss or damage to this shipment may be applicable. See 49 U.S.C. § 14706(d)(1)(A) and (B).

NOTE (4) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation with ordinary care. See Sec. 209 or NMFC Item 265.

NOTE (5) For international purposes only.

THE DYSON CORPORATION  
53 Freedom Rd., Patuxent, OH 44077

STATE OF CALIFORNIA  
STOCK MATERIAL  
LOT NO. E-305-021-11  
INSPECTOR'S MSD-00785  
NAME: Edmondson DATE 2-22-11



## Summary of Conversations:

Sales Manager Sheffield informed this QAI that the shipment of the damaged anchor rods that require re-galvanizing will be Saturday October 1, 2011.

## Comments

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**Inspected By:** Edmondson, Fred

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer

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Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003697**Date Inspected:** 03-Oct-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH

**Quality Control Contact:** Russell Welsh  
**Material transfer:** Yes No N/A  
**Stock Transfer:** Yes No N/A  
**Rebar Test Witness:** Yes No N/A

**Quality Control Present:** Yes No  
**Sampled Items:** Yes No N/A  
**OK to Cut:** Yes No N/A  
**Delayed/Cancelled:** Yes No N/A

**Other:****Bridge No:** 34-0006**Component:** 3.5 inch Main cablr Anchor Rods**Bid Item:** 66**Lot No:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Fred Edmondson was present at Dyson Corporation in Painesville, OH as requested to monitor the fabrication of various high strength rods, bolts and washers for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson Corporation Quality Control Supervisor (QCs) Mr. Russell Welsh, Sales Manager (SM) Mr. Pat Sheffield, and Mr. Mark Roach, KTA inspector.

This QAI observed that Dyson has shipped the 33 ea - 3.5" diameter A354 Grade BD, Q&T main cable anchor rods (anchor rods) involved in the accident (Ref. MSD-00785) to Monnig Industries, 400 Industrial Drive, Glasgow, MO. Anchor rods OOH-1F and OOH-5F sent to Monnig, with this shipment for sand blasting only, has not returned to Dyson for further processing. Further processing will include extending the thread length on the tapped end.

This QAI observed that Dyson personnel have completed roll-threading the 80 remaining main cable anchor rods (tapped end only). This QAI observed Dyson personnel measuring the pitch-diameter (mapping) of the roll-threaded tapped end of the anchor rods. This QAI observed Dyson personnel steel-dye stamping identification on the tapped ends for traceability purposes. QCS Welsh commented to this QAI that the results of the mapping will be made available to this QAI.

Current Status - 3.5 inch PWS anchor rods

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## SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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274 -Required

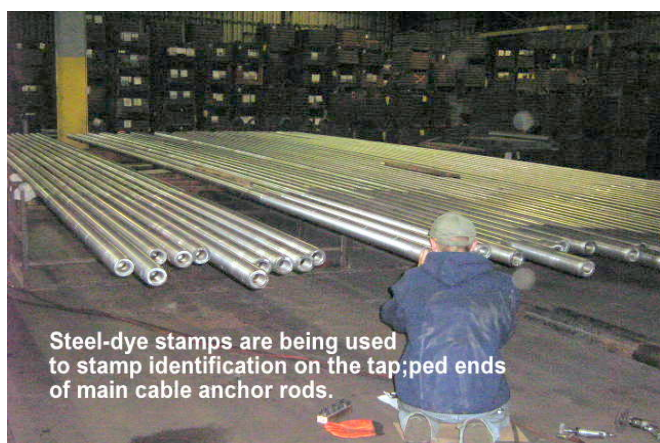
143 - Shipped to jobsite

33 - Shipped to Monnig for galvanize coating repair 10-1-1,

2 – Shipped to Monnig for blasting only, will return ti Dyson for extending threads on tapped end.

14-scrap

82 – In fabrication (plus 14 to replace scrapped rods)



### Summary of Conversations:

As  
noted above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Edmondson,Fred

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer

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DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003700**Date Inspected:** 04-Oct-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH

**Quality Control Contact:** Russell Welsh  
**Material transfer:** Yes No N/A  
**Stock Transfer:** Yes No N/A  
**Rebar Test Witness:** Yes No N/A

**Quality Control Present:** Yes No  
**Sampled Items:** Yes No N/A  
**OK to Cut:** Yes No N/A  
**Delayed/Cancelled:** Yes No N/A

**Other:****Bridge No:** 34-0006**Component:** 3.5 inch Main Cable Anchor Rods**Bid Item:** 66**Lot No:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Fred Edmondson was present at Dyson Corporation in Painesville, OH as requested to monitor the fabrication of various high strength rods, bolts and washers for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson Corporation Quality Control Supervisor (QCS) Mr. Russell Welsh, Sales Manager (SM) Mr. Pat Sheffield, and Mr. Mark Roach, KTA inspector.

This QAI was informed that Dyson plans to include the following cut-threaded - 3.5" diameter A354 Grade BD, Q&T main cable anchor rods (anchor rods) in the next shipment to Monnig. All of the following anchor rods are to be 8500mm in length. The anchor rods are identified as: OPY2-2, OPY2-6, OPY3-8, OTD-13, OOH2-23, OOH2-16, OOH2-20, OOH2-2, OOH2-4, OOF2-4, OOF4-4, OPY2-13, OPY2-15, OPY2-3 and OPY2-7. Anchor rods OPY2-13, OPY2-15, OPY2-3 and OPY2-7 will be shortened from 9000mm to 8500mm.

Current Status - 3.5 inch PWS anchor rods. 274 –Required

143 - Shipped to jobsite.

33 - Shipped to Monnig for galvanize coating repair 10-1-11. (Accident)

2 - Shipped to Monnig for blasting only, will return to Dyson for extending threads on tapped end.

14 - Scrapped

80 - Roll-threaded on tapped-end only .



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## SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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16 - Cut-threaded needed to make a total of 274.

### Summary of Conversations:

As noted above.

### Comments

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<b>Inspected By:</b>	Edmondson,Fred	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003701**Date Inspected:** 05-Oct-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, CA

**Quality Control Contact:** Russell Welsh  
**Material transfer:** Yes No N/A  
**Stock Transfer:** Yes No N/A  
**Rebar Test Witness:** Yes No N/A

**Quality Control Present:** Yes No  
**Sampled Items:** Yes No N/A  
**OK to Cut:** Yes No N/A  
**Delayed/Cancelled:** Yes No N/A

**Other:****Bridge No:** 34-0006**Component:** 3.5 inch Main Cable Anchor Rods**Bid Item:** 66**Lot No:** B305-022-11 and B305-023-11**Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Fred Edmondson was present at Dyson Corporation in Painesville, OH as requested to monitor the fabrication of various high strength rods, bolts and washers for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson Corporation Quality Control Supervisor (QCS) Mr. Russell Welsh, Sales Manager and Mr. Mark Roach, KTA inspector.

This QAI observed Dyson personnel preparing the following 15ea cut-threaded - 3.5" diameter A354 Grade BD, Q&T main cable anchor rods (anchor rods) for shipment to Monnig. All of the following anchor rods are 8500mm in length. The anchor rods are identified as:

OPY2-2, OPY2-6, OPY3-8, OTD-13, OOH2-23, OOH2-16, OOH2-20, OOH2-2, OOH2-4, OOF2-4, OOF4-4, OPY2-13, OPY2-15, OPY2-3 and OPY2-7. Anchor rods OPY2-13, OPY2-15, OPY2-3 and OPY2-7 have been shortened from 9000mm to 8500mm. Referenced attached photos.

The following 11ea anchor rods are cut-threaded at various lengths and will be included in this shipment:

OTD-12, OOH2-19, OOH2-10, OOH2-7, OOH2-8, OOH2-17, OOH2-24, OOF2-2, OOF3-8, OOF4-2, OOF4-5. Referenced attached photos.

This QAI conducted a random visual inspection and review of the Material Test Reports (MTR's) for 55ea 3.50" -4UNC-2B, A563 GR DH Heavy Hex Spherical Nuts and 7.00" - 4UNC 2A X 3.50" - 4UNC 2B Heavy Hex Coupling Nuts which are to be sent to The Art Galvanizing Works Inc. at 3935 Valley Rd, Cleveland,

# SOURCE INSPECTION REPORT

( Continued Page 2 of 3 )

OH for Hot Dip Galvanizing (HDG). This QAI verified that the spherical nuts and coupling nuts will be returned to Dyson for internal threading.

The nuts were placed in separate “Dyson buckets” for transporting to and from The Art Galvanizing Works. This QAI attached Green Tags with Lot No. B305-22-11 to the bucket with the coupling nuts and Lot No. B305-23-11 to the bucket with the spherical nuts for traceability purposes. Reference attached photos.

Current Status - 3.5 inch PWS anchor rods. 274 –Required

143 - Shipped to jobsite.

33 - Shipped to Monnig for galvanize coating repair 10-1-11 (accident).

2 - Shipped to Monnig for blasting - returning to Dyson to extend threads on tapped-end (accident).

14- Scrapped (accident).

80 - Roll-threaded on tapped-end only .

16 - Cut-threaded needed to make a total of 274.

26 – Cut-threaded are being readied for shipment to Monnig.



## Summary of Conversations:

Conversation fundamental to completion of the tasks at hand occurred between this QAI and Dyson personnel



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## SOURCE INSPECTION REPORT

( Continued Page 3 of 3 )

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### Comments

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<b>Inspected By:</b>	Edmondson,Fred
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Levell,Bill
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QA Reviewer
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Bay Area Branch  
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(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003711**Date Inspected:** 07-Oct-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH

**Quality Control Contact:** Russell Welsh

<b>Material transfer:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Stock Transfer:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Rebar Test Witness:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>

**Quality Control Present:** **Yes** **No**

<b>Sampled Items:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>OK to Cut:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Delayed/Cancelled:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>

**Other:****Bridge No:** 34-0006**Component:** 3.5 inch Main cable Anchor Rods**Bid Item:** 66**Lot No:** B305-024-11 and B305-025-11**Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Fred Edmondson was present at Dyson Corporation in Painesville, OH as requested to monitor the fabrication of various high strength rods, bolts and washers for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson Corporation Quality Control Supervisor (QCs) Mr. Russell Welsh and Mr. Mark Roach, KTA inspector.

This QAI observed Dyson personnel preparing to ship 34 ea - 3.5" diameter A354 Grade BD, Q&T main cable anchor rods (anchor rods) for shipment to Monnig Industries, 400 Industrial Drive, Glasgow, MO.

This QAI was presented supporting documentation which included MTR's, Certificates of Conformance and NDT tests results. After reviewing the documentation, this QAI attached a Green Tag to the documentation and assigned Lot No. B305-024-11 to the following anchor rods: (cut-threaded) OPY3-8, OOH2-23, OOH2-16, OOH2-4, OOF2-4, OPY2-15, OOH2-17, OOH2-10, OOF3-8, OOF4-5, (roll-threaded) R1001-OPY, R1002-OTD, R1005-OQW, R1006-OTD, R1007-OOH, R1008-OQX, R1010-OTD, and R1011-OTD.

This QAI attached a Green tag with Blue Dot to the documentation and assigned Lot No. B305-25-11 to the following (cut-threaded) anchor rods with oversize pitch-diameters (Reference MSDR – 00784): OPY2-2, OPY2-6, OTD-13, OOH2-20, OOH2-2, OOF4-4, OPY2-13, OPY2-3, OPY2-7, OOH2-8, OOH2-19, OOH2-24, OOH2-7, OOF2-2 and OTD-12, OOF4-2.

# SOURCE INSPECTION REPORT

( Continued Page 2 of 3 )

The supporting documentation with Green Tag, Lot No. B305-024-11 and Green Tag with Blue Dot Lot No. B305-025-11 was placed into a plastic pouch and taped to one of the bundles of rods to be shipped. Reference attached photographs.

Current Status - 3.5 inch PWS anchor rods

274 -Required

143 - Shipped to jobsite

33 - to Monnig for galvanize coating repair 10-1-11, (accident)

2 - thread and galvanize coating repair, (accident and to return to Dyson)

14 - scrapped (accident)

34 - shipped to Monnig 10-7-11

80 - In fabrication



Bill of Lading & Supporting Documentation



Tightening straps



Bill of Lading & Supporting Documentation



Pulling away.

## Summary of Conversations:

Fundamental conversation, necessary for completion of the tasks at hand, occurred between this QAI and Dyson personnel.



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## SOURCE INSPECTION REPORT

( Continued Page 3 of 3 )

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### Comments

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<b>Inspected By:</b>	Edmondson,Fred
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Levell,Bill
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QA Reviewer
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# REQUEST FOR INFORMATION (RFI)

RFI No.: ABF-RFI-002595R00 Submitted By: Baltzer, Karsten Pages: 1  
RFI Date: 06-October-2011 Contact Name: Baltzer, Karsten Pages Attached:             
Phone No. 510-808-4598

<b>Subject:</b> PWS Anchor Caltrans Sampling	
<b>References:</b>	
<b>Sub/Sup:</b> DYS	<b>Sub RFI #:</b>
<b>Response Required by:</b> 11-October-2011 <b>Response affects critical path activity?</b> Yes	

**Description:**

Following Working Campus discussion ABFJV propose the following sampling for each of the remaining 8 heats of PWS Anchor Rods.

Threaded sampling for each Heat:

Before the 9700mm long PWS Anchor Rods are cut to length Caltrans will identify what rod, from the heat, the threaded samples are to come from.

Dyson will roll additional 800 mm of thread on the coupler end. After rolling the PWS Anchor Rods will be cut to 8900mm and the 800mm cutoff threaded part will be provided to Caltrans for testing.

Two 300mm material sample from each heat:

When the remaining PWS Anchor Rods, from the heat, are cut to length the cutoff will be mark with the heat number and two 300mm samples from the cutoff will be provided to Caltrans for testing.

**Contractor Disposition:**

This RFI is being submitted for:

The Cost and Time Impact from this RFI is: Not selected

**Response:****Agreed Ext. Due Date:****Pages:** 1**Pages Attached:** 0

The proposed modification to the QA sampling plan is acceptable.

**Administrative Action:**

This response resolves the RFI.

<b>Date:</b> 07-October-2011	<b>Respondent:</b> Brignano, Bob	<b>Phone No.:</b> 510-286-0503
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**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.8**COMPONENT MATERIAL INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** CMI-000383**Date Inspected:** 07-Oct-2011**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH**Bridge No.:** 34-0006**OSM Arrival Time:** 800**OSM Departure Time:** 1630**Component:#** 3.5 inch Main Cable Anchor Rods

The following material has been inspected in accordance with Section 6 of the Standard Specifications at the above location. At this point in the fabrication process it appears to comply with contract plans and specifications.

To be shipped to the following vendor or locations: Monnig Industries, 400 Industrial Drive, Glasgow, MO.

Lot #	Bid Item #	Quantity		Material Description
B305-024-11	66	18	ea	3.5" diameter A354 Grade BD, Q&T main cable anchor rods
B305-025-11	66	16	ea	3.5" diameter A354 Grade BD, Q&T main cable anchor

**Identification:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Fred Edmondson was present at Dyson Corporation in Painesville, OH as requested to monitor the fabrication of various high strength rods, bolts and washers for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson Corporation Quality Control Supervisor (QCs) Mr. Russell Welsh and Mr. Mark Roach, KTA inspector.

This QAI observed Dyson personnel preparing to ship 34 ea - 3.5" diameter A354 Grade BD, Q&T main cable anchor rods (anchor rods) for shipment to Monnig Industries, 400 Industrial Drive, Glasgow, MO.

This QAI was presented supporting documentation which included MTR's, Certificates of Conformance and NDT tests results. After reviewing the documentation, this QAI attached a Green Tag to the documentation and assigned Lot No. B305-024-11 to the following anchor rods: (cut-threaded) OPY3-8, OOH2-23, OOH2-16, OOH2-4, OOF2-4, OPY2-15, OOH2-17, OOH2-10, OOF3-8, OOF4-5, (roll-threaded) R1001-OPY, R1002-OTD, R1005-OQW, R1006-OTD, R1007-OOH, R1008-OQX, R1010-OTD, and R1011-OTD.

This QAI attached a Green tag with Blue Dot to the documentation and assigned Lot No. B305-25-11 to the following (cut-threaded) anchor rods with oversize pitch-diameters (Reference MSDR – 00784):

OPY2-2, OPY2-6, OTD-13, OOH2-20, OOH2-2, OOF4-4, OPY2-13, OPY2-3, OPY2-7, OOH2-8, OOH2-19, OOH2-24, OOH2-7, OOF2-2 and OTD-12, OOF4-2.

The supporting documentation with Green Tag, Lot No. B305-024-11 and Green Tag with Blue Dot Lot No.



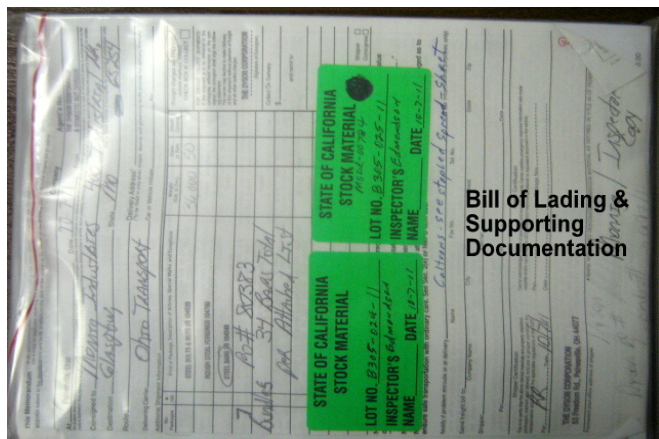
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## COMPONENT MATERIAL INSPECTION REPORT

( Continued Page 2 of 2 )

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B305-025-11 was placed into a plastic pouch and taped to one of the bundles of rods to be shipped. Reference attached photographs.



Bill of Lading & Supporting Documentation



Tightening straps



Bill of Lading & Supporting Documentation



Pulling away.

### Summary of Conversations:

Fundamental conversation, necessary for completion of the tasks at hand, occurred this QAI and Dyson personnel.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Edmondson, Fred

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003714**Date Inspected:** 10-Oct-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH

**Quality Control Contact:** Russell Welsh  
**Material transfer:** Yes No N/A  
**Stock Transfer:** Yes No N/A  
**Rebar Test Witness:** Yes No N/A

**Quality Control Present:** Yes No  
**Sampled Items:** Yes No N/A  
**OK to Cut:** Yes No N/A  
**Delayed/Cancelled:** Yes No N/A

**Other:****Bridge No:** 34-0006**Component:** 3.5 inch main cable anchor rods**Bid Item:** 66**Lot No:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Fred Edmondson was present at the Dyson Corporation in Painesville, OH as requested to monitor the fabrication of various high strength rods, bolts and washers for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson Corporation Quality Control Supervisor (QCS) Mr. Russell Welsh and Mr. Mark Roach, KTA inspector.

This QAI observed Dyson personnel measuring the pitch diameters of roll-threaded 3.5 inch diameter, A354 Grade BD, Q&T main cable anchor rods (anchor rods. This QAI observed that roll-threading of the coupler end of the remaining anchor rods is in process.

This QAI observed the anchor rods, selected by this QAI on 10-7-11 to provide the samples (eight heat treatment lots) to be sent to the Caltrans translab, were roll threaded for a length of ten feet at the coupler end, over the weekend. The tapped end of these anchor rods was roll-threaded and thread protected in the past. The anchor rods mentioned above are identified as follows: OYG-1,OYH-2,OYI-3,OYJ-4,OYL-5,OYM-6,OYN-7 and OYO-8.

Current Status - 3.5 inch PWS anchor rods

274 –Required

143 - Shipped to jobsite

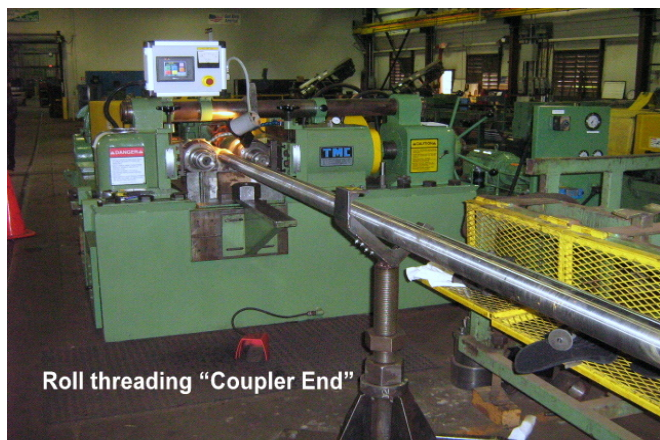
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## SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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33 - to Monnig for galvanize coating repair 10-1-11, (accident)  
2 - thread and galvanize coating repair, (accident and to return to Dyson)  
14 - scrapped (accident)  
34 - shipped to Monnig 10-7-11  
80 - In fabrication



### Summary of Conversations:

Fundamental conversation, necessary to complete the tasks at hand, occurred between this QAI and Dyson personnel. During a telephone conversation, this QAI and SMR Kit Guest reviewed contract documents that indicate the threaded anchor rods (above) to be used for sampling are in general compliance with the project contract documents.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Edmondson, Fred

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003720**Date Inspected:** 11-Oct-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, Ohio**Quality Control Contact:** Linda Welsh**Quality Control Present:** Yes No**Material transfer:** Yes No N/A**Sampled Items:** Yes No N/A**Stock Transfer:** Yes No N/A**OK to Cut:** Yes No N/A**Rebar Test Witness:** Yes No N/A**Delayed/Cancelled:** Yes No N/A**Other:****Bridge No:** 34-0006**Component:** 3.5 inch main cable anchor rods**Bid Item:** 66**Lot No:****Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Fred Edmondson was present at the Dyson Corporation in Painesville, OH as requested to monitor the fabrication of various high strength rods, bolts and washers for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson Corporation Quality Control Supervisor (QCI) Ms. Linda Welsh and Mr. Mark Roach, KTA inspector.

This QAI observed Dyson personnel measuring the pitch diameters of roll-threaded 3.5 inch diameter A354 Grade BD, Q&T main cable anchor rods (anchor rods. This QAI observed that roll-threading of the coupler end of the remaining anchor rods is in process.

The overhead crane used for positioning the anchor rods for cutting does not work.

Dyson has called in a company to trouble-shoot and repair the crane. In the meantime, Dyson will arrange a work-around for cutting the rods to be sampled (8 heat treatment lots - 8 rods - 24 pieces).

Current Status - 3.5 inch PWS anchor rods

274 -Required

143 - Shipped to jobsite

33 - to Monnig for galvanize coating repair 10-1-11, (accident)

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## SOURCE INSPECTION REPORT

( Continued Page 2 of 2 )

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2 - thread and galvanize coating repair, (accident and to return to Dyson)

14 - scrapped (accident)

34 - shipped to Monnig 10-7-11

80 - In fabrication

### Summary of Conversations:

Fundamental conversation, necessary to complete the tasks at hand, occurred between this QAI and Dyson personnel.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Edmondson,Fred	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.9**REPORT OF INSPECTION OF MATERIAL****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** RIM-000106**Date Inspected:** 12-Oct-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH

The following material has been inspected in accordance with Section 6 of the Standard Specifications and found to substantially comply\* with contract plans and specifications.

Item	Lot #	Bid Item#	Quantity	Material Description
1	B305-026-11	53	5	3.00" 4UNC 2B Heavy Hex Nut, A563 Gr. DH, HDG
2	B305-026-11	53	5	3.00" 4UNC 2A X 25" Heavy Hex Bolt, A354 Gr. BD, HDG,
3	B305-026-11	53	5	3.00" dia. Hardened Flat Washer, F436 Type 1, HDG,
4	B305-026-11	53	9	1.00" dia. 8UNC 2A X 33" Double End Stud, A354 Gr. BC, HDG,
5	B305-026-11	53	18	1.00" 8UNC 2B Dyson D-Loc Nut w/ Poly insert, A563 Gr. DH, HDG.
6	B305-027-11	66	6	3.50"- 4UNC 2B X 51" Extension Rods, A354 Gr. BD, HDG

**Identification:** 1.00", 3.00", 3.5" Bolts , Nuts and Washers**Shipped to:** Oakland, CA**Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Fred Edmondson was present at the Dyson Corporation in Painesville, OH as requested to monitor the fabrication of various high strength rods, bolts and washers for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson Corporation Quality Control Supervisor (QCS) Mr. Russell Welsh and Mr. Mark Roach, KTA inspector.

This QAI reviewed supporting documentation and conducted a random visual inspection of the following items to be shipped to the job-site. The items appeared to in general compliance with the contract documents and this QAI assigned Lot Numbers as follows: Lot No. B305-027-11 - 6 ea 3.50"- 4UNC 2B X 51" Extension Rods, A354 Gr. BD, HDG, and Lot No. B305-026-11 for the following: 5 ea - 3.00" 4UNC 2A X 25" Heavy Hex Bolt, A354 Gr. BD, HDG, 5 ea - 4UNC 2B Heavy Hex Nut, A563 Gr. DH, HDG, 5 ea - 3.00" dia. Hardened Flat Washer, F436 Type 1, HDG, 9 ea - 1.00" dia. 8UNC 2A X 33" Double End Stud, A354 Gr. BC, HDG, 18 ea - 1.00" 8UNC 2B Dyson D-Loc Nut w/ Poly insert, A563 Gr. DH, HDG.



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## REPORT OF INSPECTION OF MATERIAL

( Continued Page 2 of 2 )

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6 - 3.5 " dia. extension rods.



5 - A354 3" X 25" bolts nut and washer assy's. and 9 - 1" threaded rods with Loc-Nuts for the Tower



### Summary of Conversations:

Fundamental conversation, necessary to complete the tasks at hand, occurred between this QAI and Dyson personnel.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Edmondson, Fred
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Levell, Bill
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QA Reviewer
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 76.15**SOURCE INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-003724**Date Inspected:** 13-Oct-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Dyson Corp. & Subs**Location:** Painesville, OH

**Quality Control Contact:** Russell Welsh  
**Material transfer:** Yes No N/A  
**Stock Transfer:** Yes No N/A  
**Rebar Test Witness:** Yes No N/A

**Quality Control Present:** Yes No  
**Sampled Items:** Yes No N/A  
**OK to Cut:** Yes No N/A  
**Delayed/Cancelled:** Yes No N/A

**Other:****Bridge No:** 34-0006**Component:** 3.50" Main Cable Anchor Rods**Bid Item:** 53 and 66**Lot No:** B305-026-11 through B305-035-11**Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Fred Edmondson was present at the Dyson Corporation in Painesville, OH as requested to monitor the fabrication of various high strength rods, bolts and washers for the San Francisco Oakland Bay Bridge (SFOBB) project.

This QAI met with Dyson Corporation Quality Control Supervisor (QCS) Mr. Russell Welsh and Mr. Mark Roach, KTA inspector.

This QAI randomly observed Dyson personnel cutting the sample pieces from the roll-threaded 3.5 inch diameter A354 Grade BD, Q&T main cable anchor rods (anchor rods) with Heat Numbers A113149 and A113151. The samples have been selected by this QAI from the eight Heat Treatment Batches (Lots), from the above heat numbers, as follows: Lot OYG/OYK – Lot OYG, Lot OYH, Lot OYI/OYP – OYI, Lot OYJ, Lot OYL, Lot OYM, Lot OYN and Lot OYO.

For some heat treatment lots, the threaded sample is from a different anchor rod (same heat treatment lot) than the two “Material Only” samples to enable compliance with individual anchor rod length requirements. The heat number and heat treatment alphabetical code, (above) are on the MTRs and COC’s. The samples are identified by Lot Codes.

This QA inspector reviewed the supporting documentation and verified the anchor rod material is in general conformed to A354 Gr. BD Q & T round stock.

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## SOURCE INSPECTION REPORT

( Continued Page 2 of 3 )

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The sampled coupons were placed onto four wooden pallets and secured with steel bands and shrink wrap for shipment to the Caltrans translab. Two heat treatment lots were placed on each pallet.

To identify each heat treatment lot, 2 ea TL-101s (8 total) with supporting documentation were attached to each pallet. This QAI assigned a unique Lot Number (B305 -028-11 through the B305-035-11) to each heat treatment lot.

This QAI reviewed supporting documentation and conducted a random visual inspection of the following items to be shipped to the job-site. The items appeared to in general compliance with the contract documents and this QAI assigned Lot Numbers as follows: Lot No. B305-027-11- 6 ea 3.50"- 4UNC 2B X 51" Extension Rods, A354 Gr. BD, HDG, Lot No. B305-026-11- 5 ea - 3.00" 4UNC 2A X 25" Heavy Hex Bolt, A354 Gr. BD, HDG, 5 ea - 4UNC 2B Heavy Hex Nut, A563 Gr. DH, HDG, 5 ea - 3.00" dia. Hardened Flat Washer, F436 Type 1, HDG, 9 ea - 1.00" dia. 8UNC 2A X 33" Double End Stud, A354 Gr. BC, HDG, 18 ea - 1.00" 8UNC 2B Dyson D-Loc Nut w/ Poly insert, A563 Gr. DH, HDG.

Current Status - 3.5 inch PWS anchor rods

274 -Required

143 - Shipped to jobsite

33 - to Monnig for galvanize coating repair 10-1-11, (accident)

2 - thread and galvanize coating repair, (accident and to return to Dyson)

14 - scrapped (accident)

34 - shipped to Monnig 10-7-11

80 - In fabrication



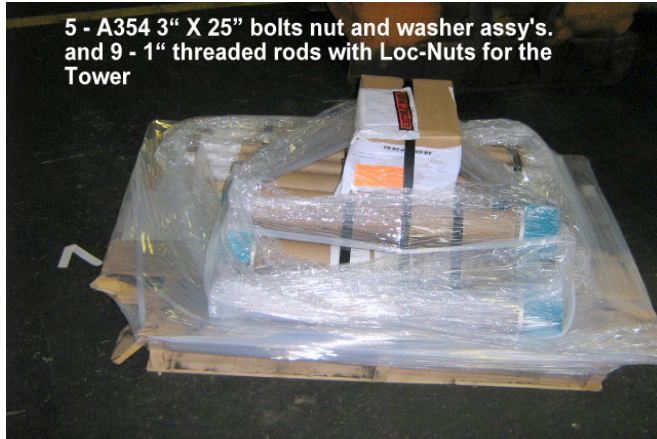


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## SOURCE INSPECTION REPORT

( Continued Page 3 of 3 )

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### Summary of Conversations:

Fundamental conversation, necessary to complete the tasks at hand, occurred between this QAI and Dyson personnel.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Edmondson,Fred

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer