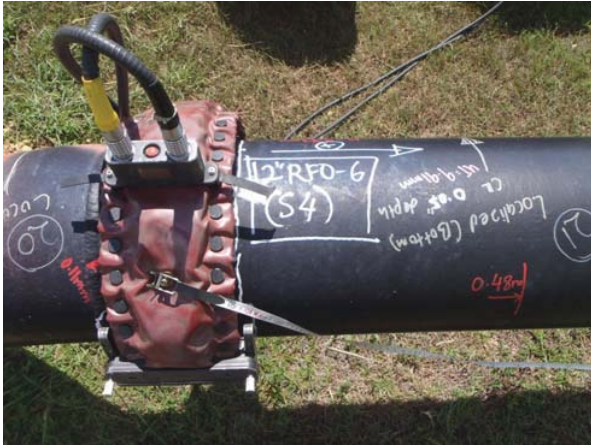




Test ID: G4-214#2209	Result: Medium Concern
Pipe: 12" RFO (S4)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 4.6FR, T(0,1)
Location: Weld bend -0.11m	Calibration: Automatic (1271.25 mV)
Size: 12 inch (10.3mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6425'N, 144°41.1241'E
Tested: 16 Jun 2014 12:00	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
W2	12.29	25	0	90	Weld	
B3	13.4	-	0	80	45 deg Bend	
F1	14.44	-	0	50	Flange	



Ring location



Positive direction



Negative direction



Localized corrosion at 6H00

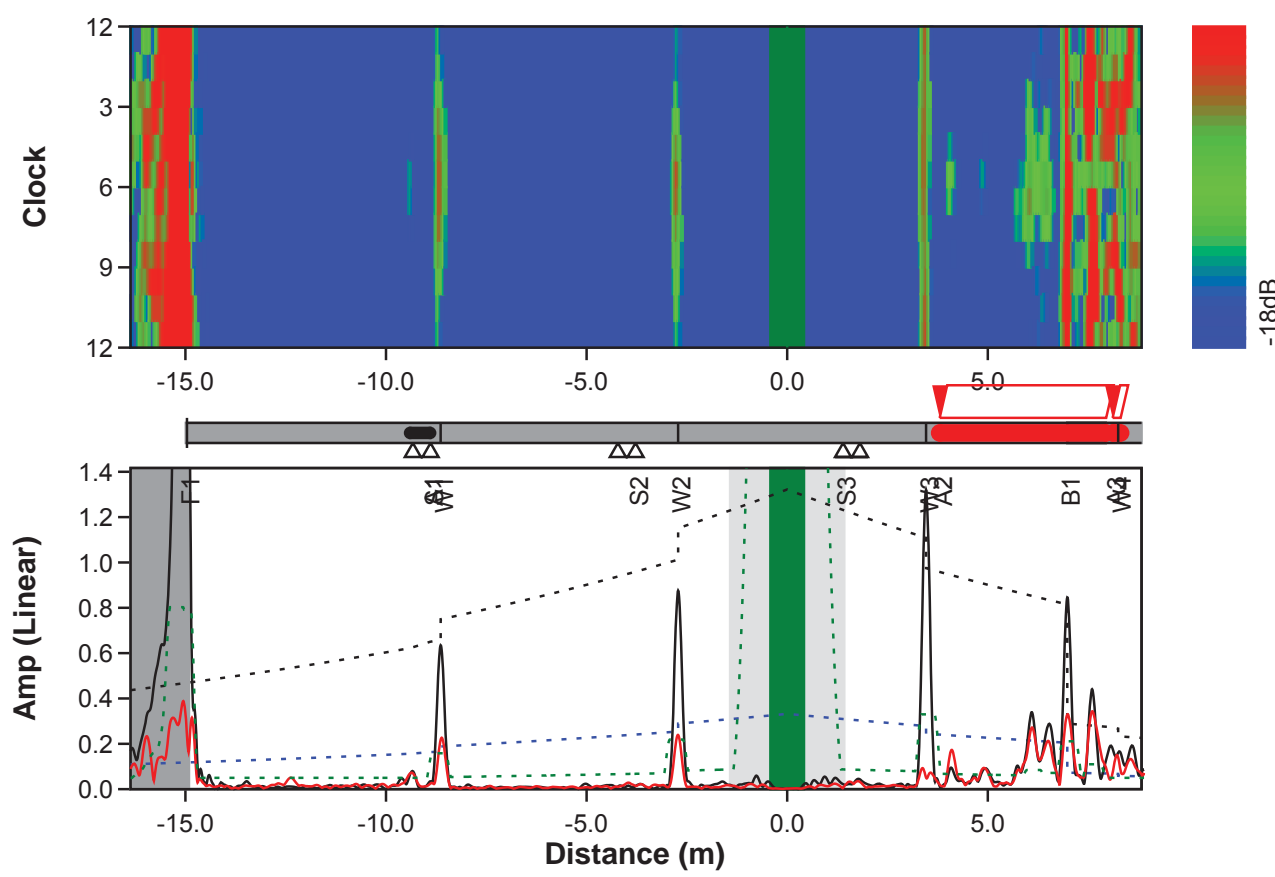


Closed view of corrosion



Test ID: G4-214#2210	Result: Major Concern
Pipe: 12" RFO (S5)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 6.4FR, T(0,1)
Location: Weld -2.70m	Calibration: Automatic (869.669 mV)
Size: 12 inch (10.3mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6561'N, 144°41.1210'E
Tested: 16 Jun 2014 12:48	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 14" RFO-No.6 - Test Point No.: S5
Positive direction with product flow.
Found external corrosion concentrate at bottom side (refer class, note and location as table below).
Location of signals measuring from center of ring.
Thickness at ring position are (12 o'clock:10.26 mm), (3 o'clock:10.31 mm), (6 o'clock:10.40 mm), (9 o'clock:10.41 mm)





Test ID: G4-214#2210	Result: Major Concern
Pipe: 12" RFO (S5)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 6.4FR, T(0,1)
Location: Weld -2.70m	Calibration: Automatic (869.669 mV)
Size: 12 inch (10.3mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6561'N, 144°41.1210'E
Tested: 16 Jun 2014 12:48	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
F1	-14.96	-	0	90	Flange	
A1	-8.9	1	0.5	20	Minor	Visually confirm external corrosion under pipe support. No access to confirm corrosion depth.
S1	-8.89	-	0.44	20	Support	
W1	-8.63	19	0	60	Weld	
S2	-3.78	-	0.44	0	Support	
W2	-2.71	17	0	70	Weld	Datum of screening
S3	1.39	-	0.42	35	Support	
W3	3.46	25	0	90	Weld	
A2	3.8	1	4.15	25	Severe	Visually confirm external corrosion at 6H00 with max. pit depth is 0.32"@ 8.1 mm. UT reading adjacent to pit is 9.47 mm. Remaining wall thickness is 1.37 mm (85.5% wall loss)
B1	6.98	-	0	60	1D Bend	
A3	8.11	16	0.2	35	Severe	Visually confirm external corrosion at 6H00 with max. pit depth is 0.23"@ 5.8 mm. UT reading adjacent to pit is 9.42 mm. Remaining wall thickness is 3.62 mm (61.5% wall loss)
W4	8.25	-	0	10	Weld	



Ring location



Positive direction



Negative direction



Severe corrosion localized at 6H00



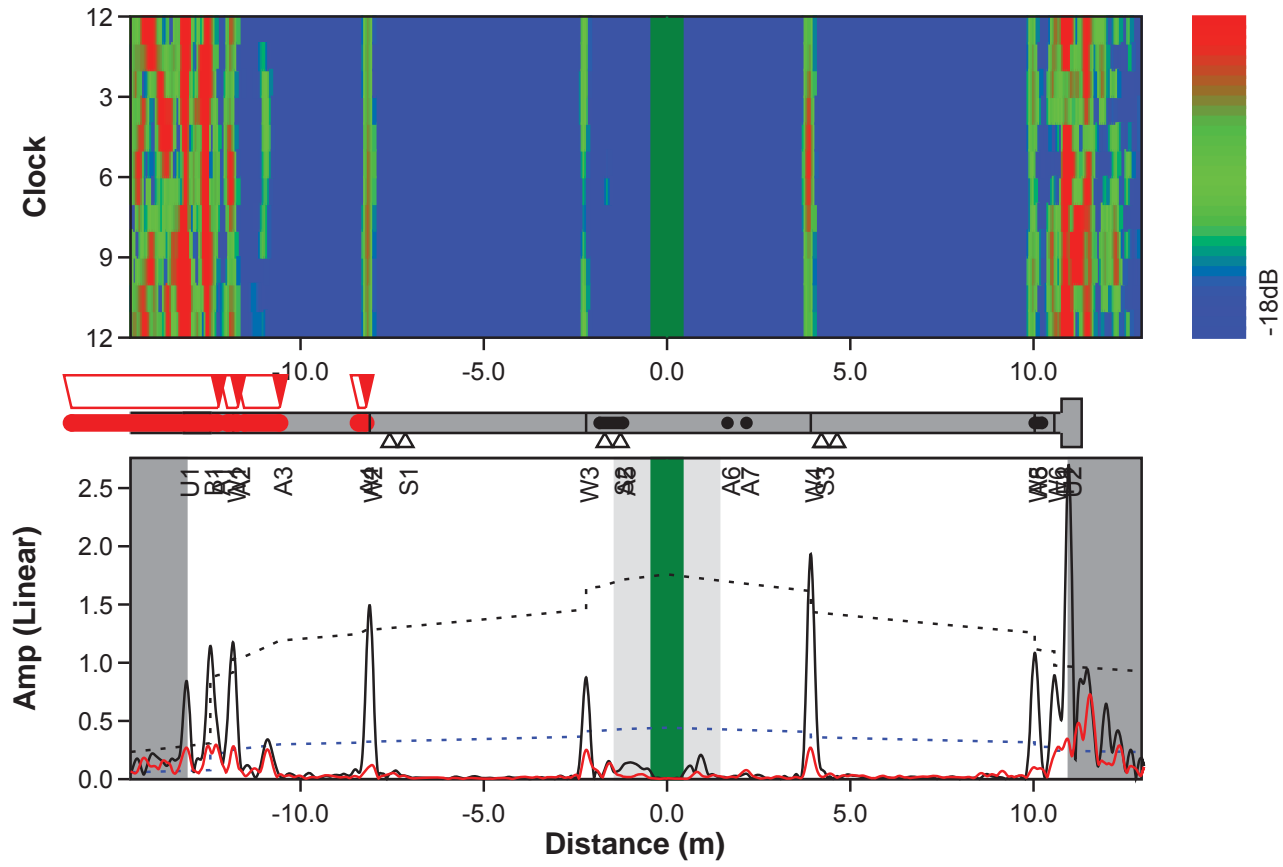
Closed view of corrosion



Closed view of corrosion

Test ID: G4-214#2211	Result: Major Concern
Pipe: 12" RFO (S6)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 5.6FR, T(0,1)
Location: Weld -2.20m	Calibration: Automatic (1253.63 mV)
Size: 12 inch (10.3mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6619'N, 144°41.1287'E
Tested: 17 Jun 2014 07:54	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 14" RFO-No.6 - Test Point No.: S6
 Positive direction with product flow.
 Found external corrosion concentrate at bottom side (refer class, note and location as table below).
 Location of signals measuring from center of ring.
 Thickness at ring position are (12 o'clock:10.26 mm), (3 o'clock:10.31 mm), (6 o'clock:10.40 mm), (9 o'clock:10.41 mm)





Test ID: G4-214#2211	Result: Major Concern
Pipe: 12" RFO (S6)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 5.6FR, T(0,1)
Location: Weld -2.20m	Calibration: Automatic (1253.63 mV)
Size: 12 inch (10.3mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6619'N, 144°41.1287'E
Tested: 17 Jun 2014 07:54	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
U1	-13.11	-	~		End	
B1	-12.46	-	0	70	1D Bend	
A1	-12.25	15	4	50	Severe	Visually confirm external corrosion at 6H00 with max. pit depth is 0.32"@ 8.1 mm. UT reading adjacent to pit is 9.47 mm. Remaining wall thickness is 1.37 mm (85.5% wall loss)
W1	-11.83	25	0	80	Weld	
A2	-11.71	20	0.28	80	Severe	Visually confirm external corrosion at 6H00 with max. pit depth is 0.23"@ 5.8 mm. UT reading adjacent to pit is 9.42 mm. Remaining wall thickness is 3.62 mm (61.5% wall loss)
A3	-10.57	1	0.97	35	Severe	Visually confirm localized corrosion at 6H00 with max. pit depth is 0.21"@ 5.3 mm. UT reading adjacent to pit is 9.41 mm. Remaining wall thickness is 4.11 mm (56.3% wall loss)
A4	-8.22	25	0.2	90	Severe	Visually confirm localized corrosion at 6H00 with max. pit depth is 0.20"@ 5.0 mm. UT reading adjacent to pit is 9.78 mm. Remaining wall thickness is 4.78 mm (51.1% wall loss)
W2	-8.11	25	0	90	Weld	
S1	-7.14	-	0.43	6	Support	
W3	-2.2	12	0	70	Weld	Datum of screening
S2	-1.27	-	0.43	70	Support	
A5	-1.2	2	0.64	17	Minor	Visually confirm corrosion under pipe support (6H00) with max. pit depth is 0.07"@ 1.8 mm. UT reading adjacent to pit is 9.67 mm. Remaining wall thickness is 7.87 mm (18.6% wall loss)



Test ID: G4-214#2211	Result: Major Concern
Pipe: 12" RFO (S6)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 5.6FR, T(0,1)
Location: Weld -2.20m	Calibration: Automatic (1253.63 mV)
Size: 12 inch (10.3mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6619'N, 144°41.1287'E
Tested: 17 Jun 2014 07:54	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
A6	1.65	0	0	0	Minor	Visually confirm external corrosion at 12H00 with max. pit depth is 0.06"@ 1.5 mm. UT reading adjacent to pit is 9.40 mm. Remaining wall thickness is 7.90 mm (15.9% wall loss)
A7	2.16	1	0	0	Minor	Visually confirm external corrosion at 6H00 with max. pit depth is 0.08"@ 2.0 mm. UT reading adjacent to pit is 9.40 mm. Remaining wall thickness is 7.40 mm (21.3% wall loss)
W4	3.92	25	0	90	Weld	
S3	4.21	-	0.43	80	Support	
A8	10.03	20	0.2	90	Minor	Visually confirm external corrosion at 6H00 with max. pit depth is 0.05"@ 1.30 mm. UT reading adjacent to pit is 9.54 mm. Remaining wall thickness is 8.24 mm (13.6% wall loss)
W5	10.03	20	0	90	Weld	
W6	10.56	-	0	70	Weld	
F1	10.76	-	0	70	T	
U2	10.96	-	~		End	



Ring location



Positive direction



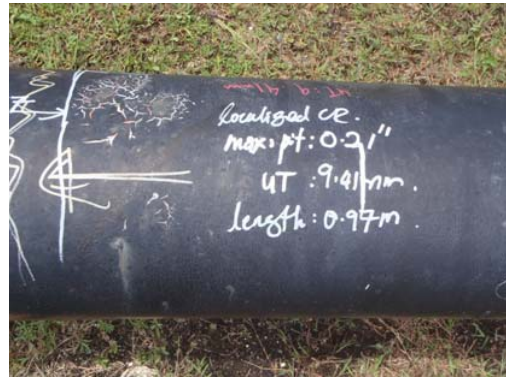
Negative direction



Localize corrosion at 6H00



Closed view of corrosion



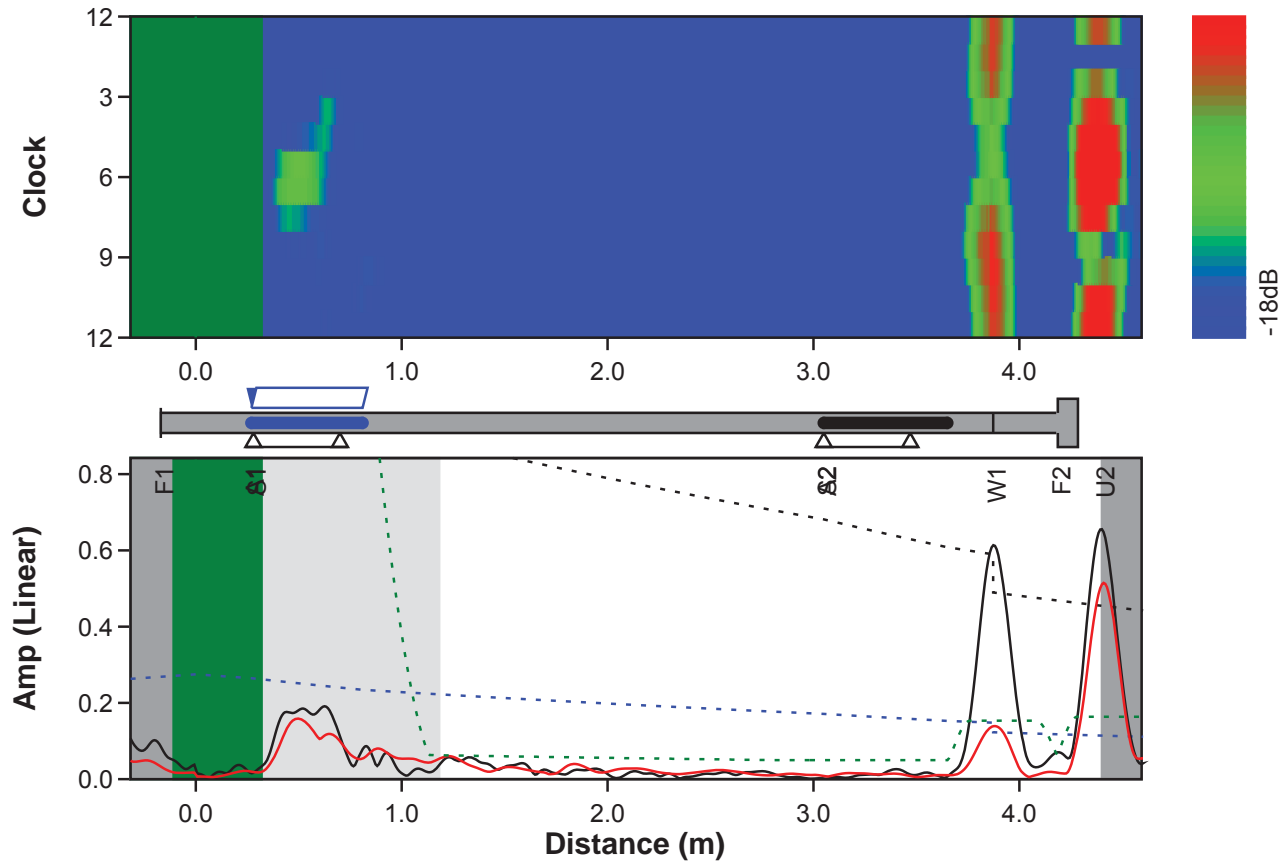
Localized corrosion at 6H00



closed view of corrosion

Test ID: G4-214#2212	Result: Medium Concern
Pipe: 12" RFO (S7)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 9.6FR, T(0,1)
Location: Flange -0.14m	Calibration: Automatic (864.553 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6674'N, 144°41.1322'E
Tested: 17 Jun 2014 09:03	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 14" RFO-No.6 - Test Point No.: S7
 Positive direction with product flow.
 Found external corrosion under pipe support at bottom side (refer class, note and location as table below).
 Location of signals measuring from center of ring.
 Thickness at ring position are (12 o'clock:5.70 mm), (3 o'clock:6.46 mm), (6 o'clock:6.21 mm), (9 o'clock:5.75 mm)





Test ID: G4-214#2212	Result: Medium Concern
Pipe: 12" RFO (S7)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 9.6FR, T(0,1)
Location: Flange -0.14m	Calibration: Automatic (864.553 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6674'N, 144°41.1322'E
Tested: 17 Jun 2014 09:03	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
F1	-0.17	-	0	50	Flange	Datum of screening
A1	0.27	1	0.54	40	Medium	Visually confirm external corrosion under pipe support (6H00) with max. pit depth is 0.1" @ 2.5 mm. UT reading adjacent to pit is 6.35 mm. Remaining wall thickness is 3.85 mm (39.4 % wall loss)
S1	0.28	-	0.42	40	Support	
S2	3.05	-	0.42	0	Support	
A2	3.05	0	0.6	0	Minor	Visually confirm external corrosion under pipe support. No access to confirm corrosion depth.
W1	3.87	-	0	80	Weld	
F2	4.18	-	0	60	T	
U2	4.4	-	~		End	



Ring location



Positive direction

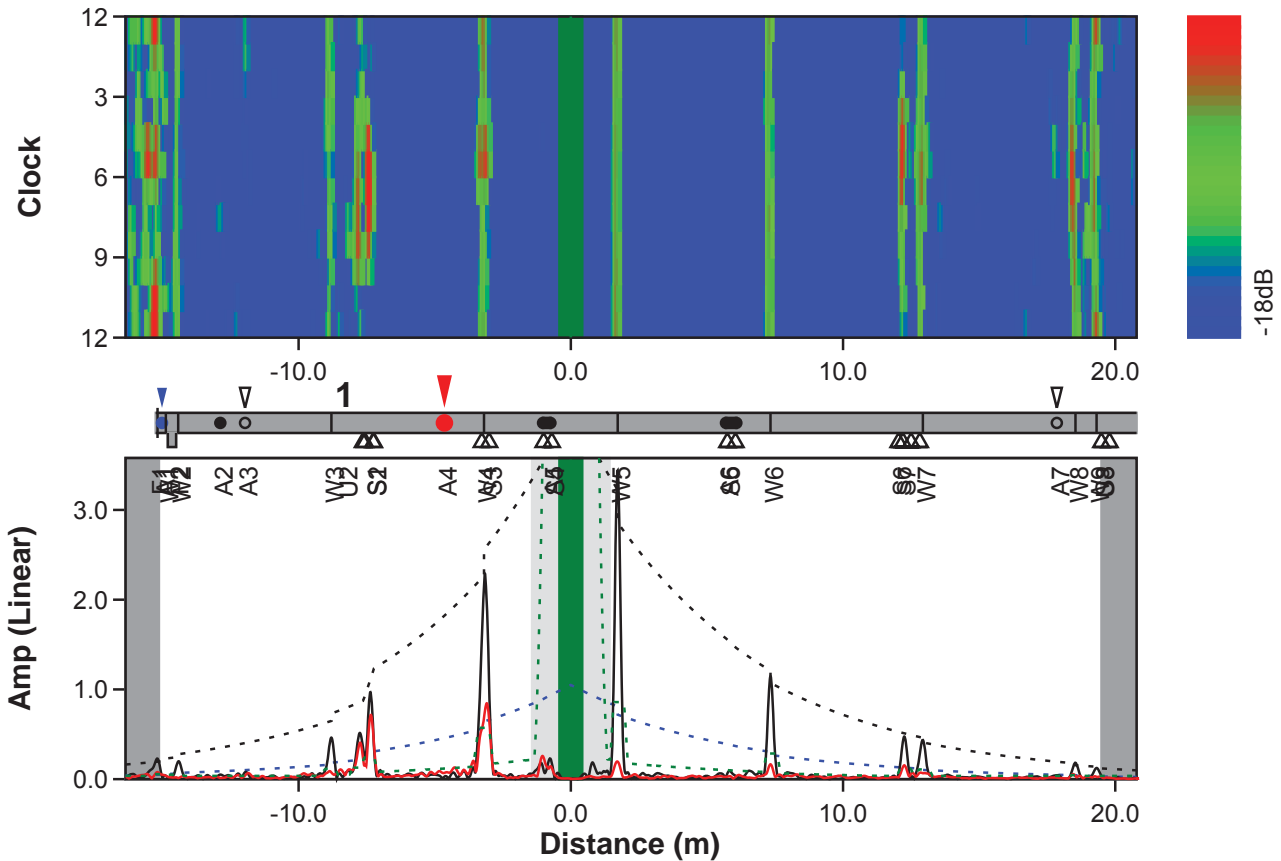


General view of negative direction



Test ID: G4-214#2213	Result: Major Concern
Pipe: 12" RFO (S8)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 5.8FR, T(0,1)
Location: Weld +1.72 m	Calibration: Automatic (939.087 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6697'N, 144°41.1395'E
Tested: 17 Jun 2014 11:46	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 14" RFO-No.6 - Test Point No.: S8
 Positive direction with product flow.
 Found external corrosion at several location (refer class, note and location as table below).
 Location of signals measuring from center of ring.
 Thickness at ring position are (12 o'clock:6.32 mm), (3 o'clock:6.44 mm), (6 o'clock:6.30 mm), (9 o'clock:6.29 mm)





Test ID: G4-214#2213	Result: Major Concern
Pipe: 12" RFO (S8)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 5.8FR, T(0,1)
Location: Weld +1.72 m	Calibration: Automatic (939.087 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6697'N, 144°41.1395'E
Tested: 17 Jun 2014 11:46	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
F1	-15.18	-	0	70	End	
A1	-15.01	13	0	50	Medium	Visually confirm external corrosion at 5H00 with max. pit depth is 0.18"@ 4.5 mm. UT reading adjacent to pit is 12.73 mm. Remaining wall thickness is 8.23 mm (35.3% wall loss)
W1	-14.87	-	0	0	Weld	
F2	-14.5	-	0	80	Y	
W2	-14.42	-	0	90	Weld	
A2	-12.87	3	0	60	Minor	UT confirm internal corrosion with maximum wall thickness is 5.36 mm (15.6% wall loss)
A3	-11.96	5	0	25	Anomaly	UT confirm no significant finding. Minimum thickness reading is 5.72 mm.
W3	-8.79	15	0	80	Weld	
U2	-8.3	-	0	5	User1	Insert weld patch (0.08 x 0.08m) - see attached picture
S1	-7.26	-	0.3	20	Support	
S2	-7.23	-	0.4	16	Saddle	Patch plate at 3 to 10H00
A4	-4.64	0	0	0	Severe	Visually confirm external corrosion at 6H00 with max. pit depth is 0.14"@ 3.5 mm. UT reading adjacent to pit is 6.36 mm. Remaining wall thickness is 2.86 mm (55.0% wall loss)
W4	-3.18	20	0	60	Weld	
S3	-3	-	0.27	50	Saddle	Patch plate at 6H00
A5	-0.75	1	0.27	40	Minor	Visually confirm external corrosion under pipe support. No access to confirm corrosion depth.
S4	-0.7	-	0.3	40	Support	



Test ID: G4-214#2213	Result: Major Concern
Pipe: 12" RFO (S8)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 5.8FR, T(0,1)
Location: Weld +1.72 m	Calibration: Automatic (939.087 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6697'N, 144°41.1395'E
Tested: 17 Jun 2014 11:46	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
W5	1.72	25	0	90	Weld	Datum of screening
A6	5.7	1	0.38	60	Minor	Visually confirm external corrosion under pipe support. No access to confirm corrosion depth.
S5	5.75	-	0.3	70	Support	
W6	7.33	20	0	90	Weld	
S6	12.04	-	0.78	70	Saddle	Patch plate
S7	12.2	-	0.3	70	Support	
W7	12.93	-	0	80	Weld	
A7	17.85	5	0	60	Anomaly	UT confirm no significant finding. Minimum thickness reading is 5.97 mm.
W8	18.53	-	0	70	Weld	
W9	19.31	-	0	70	Weld	
S8	19.48	-	0.3	60	Support	
U3	19.49	-	~		End	
W10	24.92	-	0	80	Weld	



Ring location



Positive direction



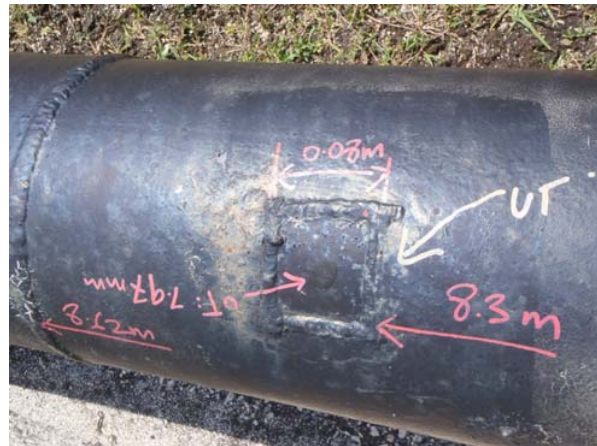
Negative direction



Localized corrosion at 6H00



Closed view of corrosion

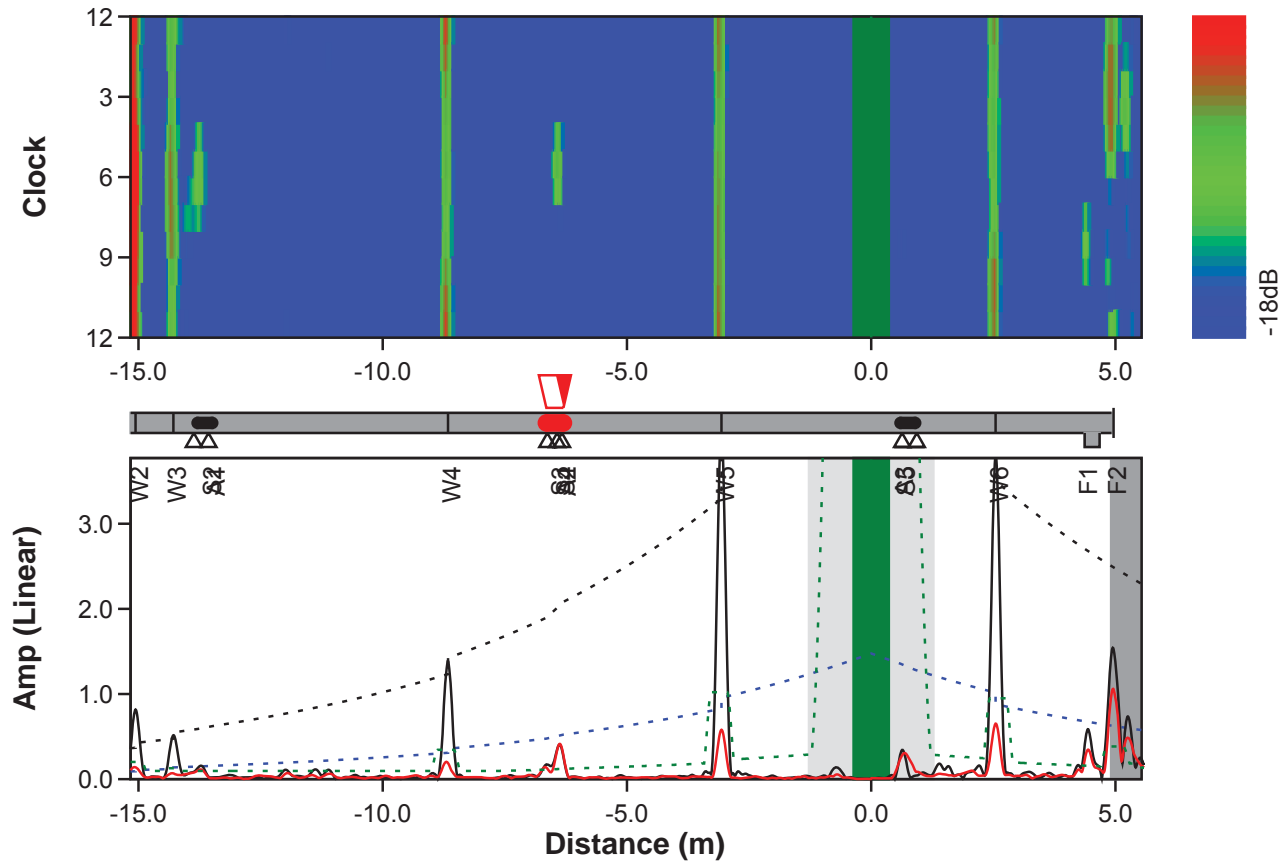


Insert weld patch



Test ID: G4-214#2214	Result: Major Concern
Pipe: 12" RFO (S9)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 7.4FR, T(0,1)
Location: Weld +2.54 m	Calibration: Automatic (1269.66 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6817'N, 144°41.1545'E
Tested: 17 Jun 2014 13:00	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 14" RFO-No.6 - Test Point No.: S9
 Positive direction with product flow.
 Found external corrosion under pipe support (refer class, note and location as table below).
 Location of signals measuring from center of ring.
 Thickness at ring position are (12 o'clock:6.30 mm), (3 o'clock:6.42 mm), (6 o'clock:6.07 mm), (9 o'clock:6.41 mm)





Test ID: G4-214#2214	Result: Major Concern
Pipe: 12" RFO (S9)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 7.4FR, T(0,1)
Location: Weld +2.54 m	Calibration: Automatic (1269.66 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6817'N, 144°41.1545'E
Tested: 17 Jun 2014 13:00	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
U1	-15.36	-	~		End	
W2	-15.05	40	0	80	Weld	
W3	-14.28	20	0	90	Weld	
S2	-13.56	-	0.3	25	Support	
A1	-13.49	1	0.3	30	Minor	Visually confirm external corrosion under pipe support. No access to confirm corrosion depth.
W4	-8.66	20	0	90	Weld	
S3	-6.43	-	0	0	Clamp	
S4	-6.33	-	0.3	0	Support	
A2	-6.3	4	0.35	0	Severe	Visually confirm external corrosion at 6H00 under pipe support with max. pit depth is 0.16" @ 3.8 mm. UT reading adjacent to pit is 6.16 mm. Remaining wall thickness is 2.36 mm (61.7% wall loss)
W5	-3.06	25	0	90	Weld	
A3	0.6	2	0.3	13	Minor	Visually confirm external corrosion under pipe support. No access to confirm corrosion depth.
S5	0.63	-	0.3	11	Support	
W6	2.54	20	0	80	Weld	Datum of screening
F1	4.37	-	0	40	Y	
F2	4.96	-	0	30	Flange	



Ring location



Positive direction



Negative direction



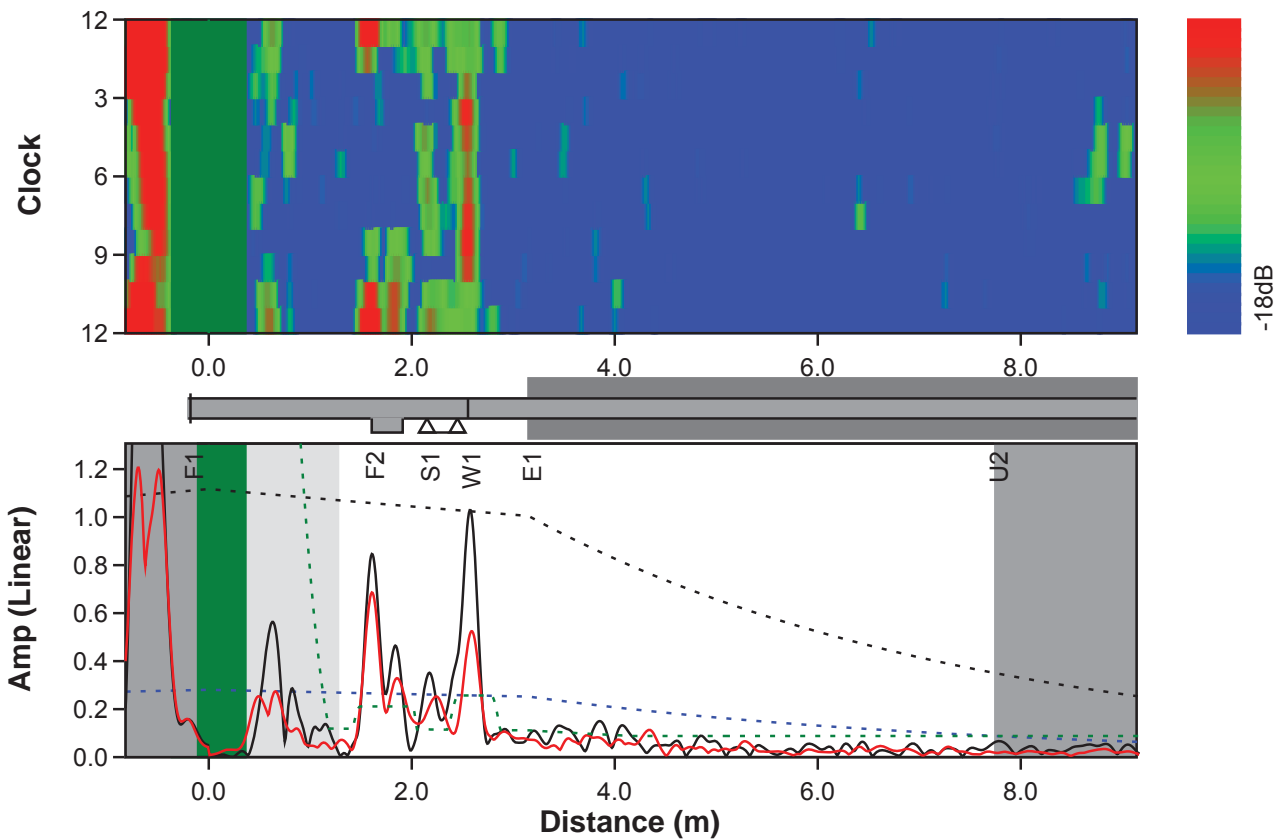
Corrosion on pipe support



Closed view of corrosion

Test ID: G4-214#2215	Result: OK
Pipe: 12" RFO (S10)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 8.8FR, T(0,1)
Location: Flange -0.18 m	Calibration: Automatic (1833.54 mV)
Size: 12 inch	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6835'N, 144°41.1558'E
Tested: 18 Jun 2014 08:00	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 12" RFO-No.6 - Test Point No.: S10
 Positive direction with product flow.
 No corrosion above the reporting level observed in the tested section of the pipe and found satisfactory.
 (refer class, note and location as table below).
 Location of signals measuring from center of ring.
 Thickness at ring position are (12 o'clock:6.30 mm), (3 o'clock:6.25 mm), (6 o'clock:6.31 mm), (9 o'clock:6.25 mm)





Test ID: G4-214#2215	Result: OK
Pipe: 12" RFO (S10)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 8.8FR, T(0,1)
Location: Flange -0.18 m	Calibration: Automatic (1833.54 mV)
Size: 12 inch	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6835'N, 144°41.1558'E
Tested: 18 Jun 2014 08:00	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
F1	-0.18	-	0	0	Flange	Datum of screening
F2	1.6	-	0	19	Y	
S1	2.15	-	0.3	30	Support	
W1	2.55	-	0	50	Weld	
E1	3.15	-	9.6	30	Earth	
U2	7.74	-	~		End	



Ring location



Positive direction



Negative direction

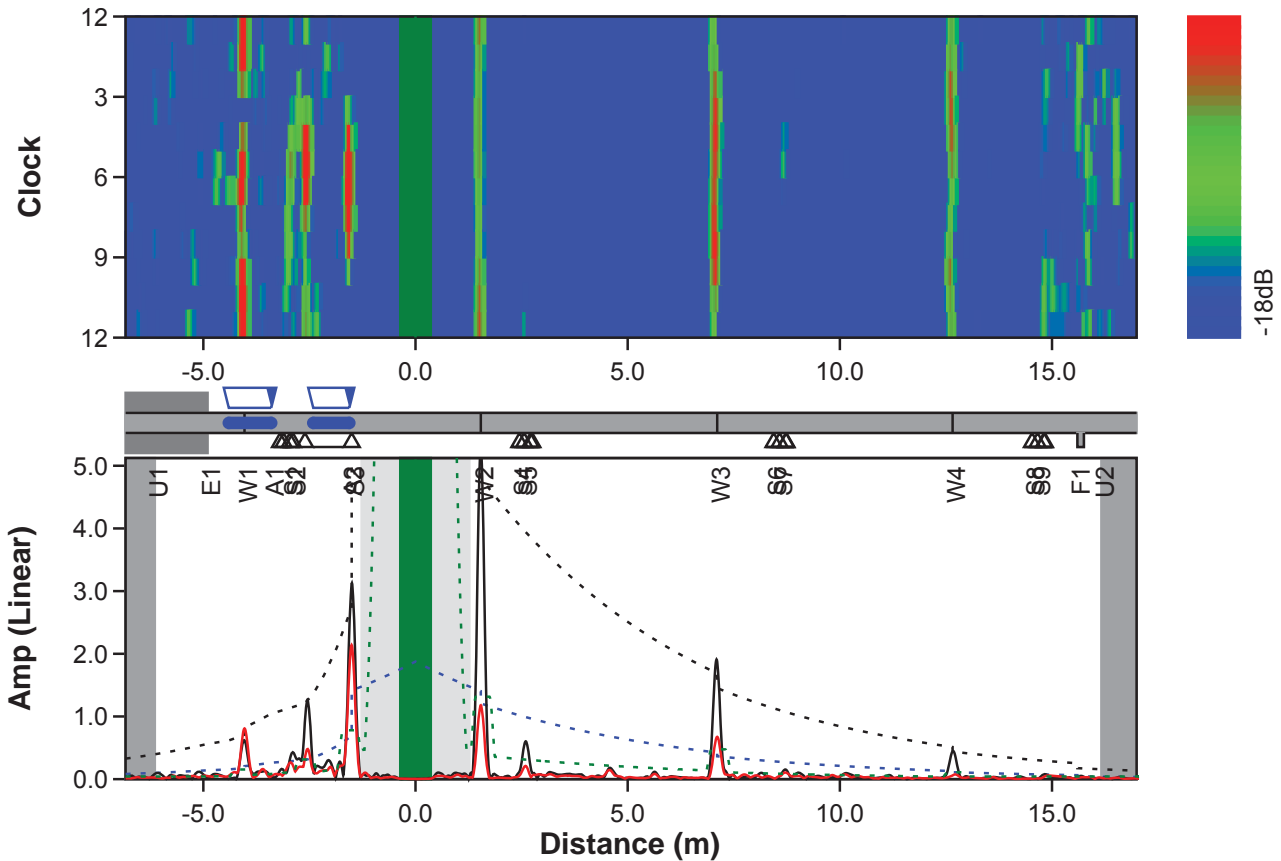


View of soil to air interface



Test ID: G4-214#2217	Result: Medium Concern
Pipe: 12" RFO (S11)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 7.8FR, T(0,1)
Location: Weld +1.53 m	Calibration: Automatic (1781.36 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6867'N, 144°41.1699'E
Tested: 18 Jun 2014 08:44	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 12" RFO-No.6 - Test Point No.: S11
Positive direction with product flow.
Found external corrosion at several corrosion (refer class, note and location as table below).
Location of signals measuring from center of ring.
Thickness at ring position are (12 o'clock:6.33 mm), (3 o'clock:6.35 mm), (6 o'clock:6.33 mm), (9 o'clock:6.33 mm)





Test ID: G4-214#2217	Result: Medium Concern
Pipe: 12" RFO (S11)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 7.8FR, T(0,1)
Location: Weld +1.53 m	Calibration: Automatic (1781.36 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6867'N, 144°41.1699'E
Tested: 18 Jun 2014 08:44	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
U1	-6.14	-	~		End	
E1	-4.9	-	~	0	Earth	underground
W1	-4.02	-	0	0	Weld	
A1	-3.4	2	1	15	Medium	Visually confirm external corrosion at 6H00 with max. pit depth is 0.12"@ 3.0 mm. UT reading adjacent to pit is 6.35 mm. Remaining wall thickness is 3.35 mm (47.2% wall loss)
S1	-2.96	-	0.15	40	Clamp	
S2	-2.89	-	0.3	40	Support	
A2	-1.56	25	0.85	30	Medium	Visually confirm external corrosion at 1 - 3H00 with max. pit depth is 0.12"@ 3.0 mm. UT reading adjacent to pit is 6.20 mm. Remaining wall thickness is 3.20 mm. (48.4% wall loss)
S3	-1.5	-	1.1	30	Saddle	Patch plate
W2	1.53	-	0	80	Weld	Datum of screening
S4	2.45	-	0.3	60	Support	
S5	2.56	-	0.15	70	Clamp	
W3	7.11	-	0	60	Weld	
S6	8.44	-	0.3	0	Support	
S7	8.58	-	0.15	30	Clamp	
W4	12.65	-	0	80	Weld	
S8	14.53	-	0.3	30	Support	
S9	14.66	-	0.15	60	Clamp	
F1	15.59	-	0	45	Branch	
U2	16.16	-	~		End	



Ring location



Positive direction

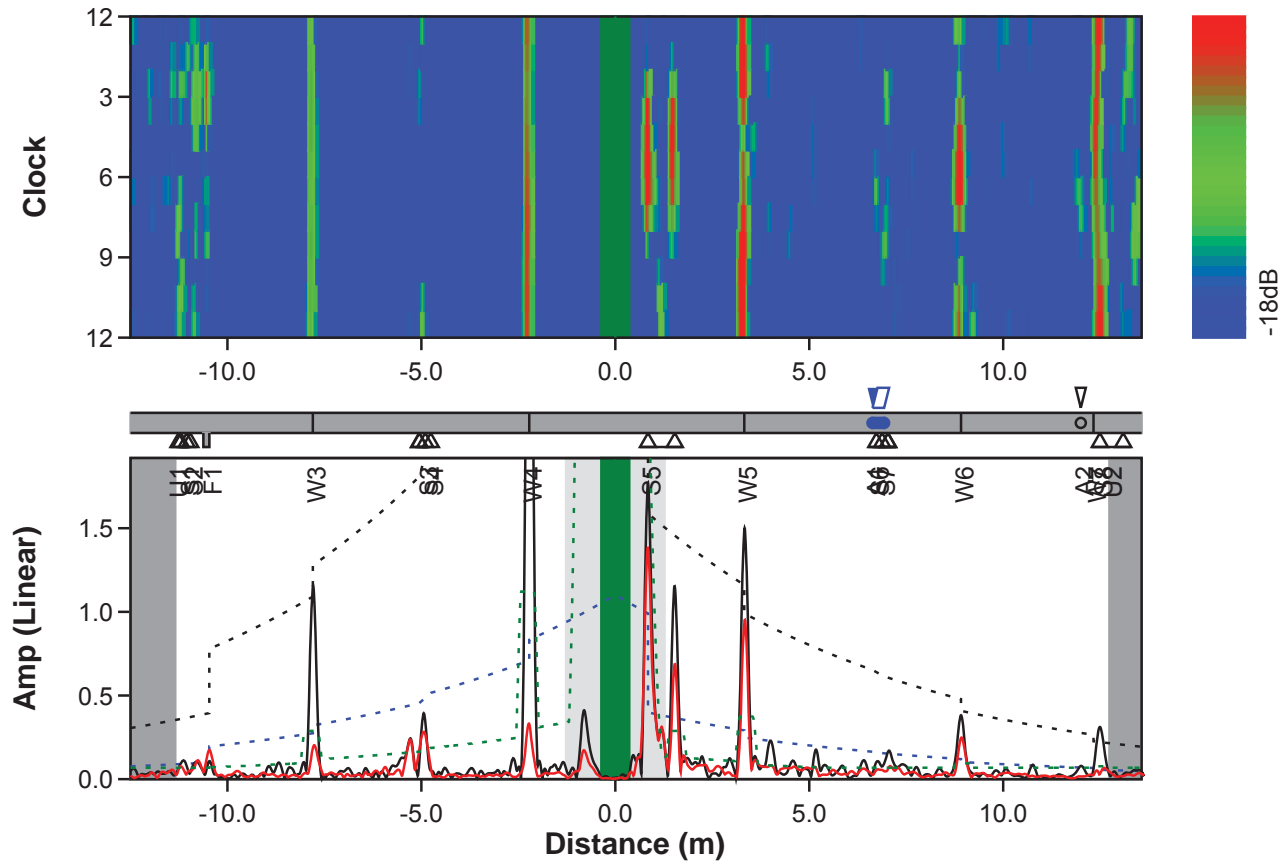


Negative direction



Test ID: G4-214#2218	Result: Medium Concern
Pipe: 12" RFO (S12)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 8.2FR, T(0,1)
Location: Weld -2.20 m	Calibration: Automatic (1698.75 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6955'N, 144°41.1801'E
Tested: 18 Jun 2014 12:34	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 14" RFO-No.6 - Test Point No.: S12
Positive direction with product flow.
Found external corrosion at pipe support (refer class, note and location as table below).
Location of signals measuring from center of ring.
Thickness at ring position are (12 o'clock:6.17 mm), (3 o'clock:6.13 mm), (6 o'clock:6.27 mm), (9 o'clock:6.71 mm)





Test ID: G4-214#2218	Result: Medium Concern
Pipe: 12" RFO (S12)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 8.2FR, T(0,1)
Location: Weld -2.20 m	Calibration: Automatic (1698.75 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.6955'N, 144°41.1801'E
Tested: 18 Jun 2014 12:34	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
U1	-11.34	-	~		End	
S1	-11.05	-	0.15	50	Clamp	
S2	-10.96	-	0.3	25	Support	
F1	-10.46	-	0	0	Branch	
W3	-7.79	-	0	80	Weld	
S3	-4.9	-	0.15	30	Clamp	
S4	-4.75	-	0.3	0	Support	
W4	-2.21	-	0	90	Weld	Datum of screening
S5	0.84	-	0.69	20	Saddle	Patch plate at bottom side
W5	3.32	-	0	35	Weld	
A1	6.63	3	0.3	45	Medium	Visually confirm external corrosion under pipe support (6H00) with max. pit depth is 0.10"@ 2.5 mm. UT reading adjacent to pit is 6.25 mm. Remaining wall thickness is 3.75 mm (40.0% wall loss)
S6	6.73	-	0.3	45	Support	
S7	6.88	-	0.15	45	Clamp	
W6	8.91	-	0	35	Weld	
A2	12	7	0	80	Anomaly	UT confirm no significant finding. Minimum UTreading is 5.70 mm.
W7	12.32	-	0	70	Weld	
S8	12.49	-	0.6	80	Saddle	
U2	12.73	-	~		End	



Ring location



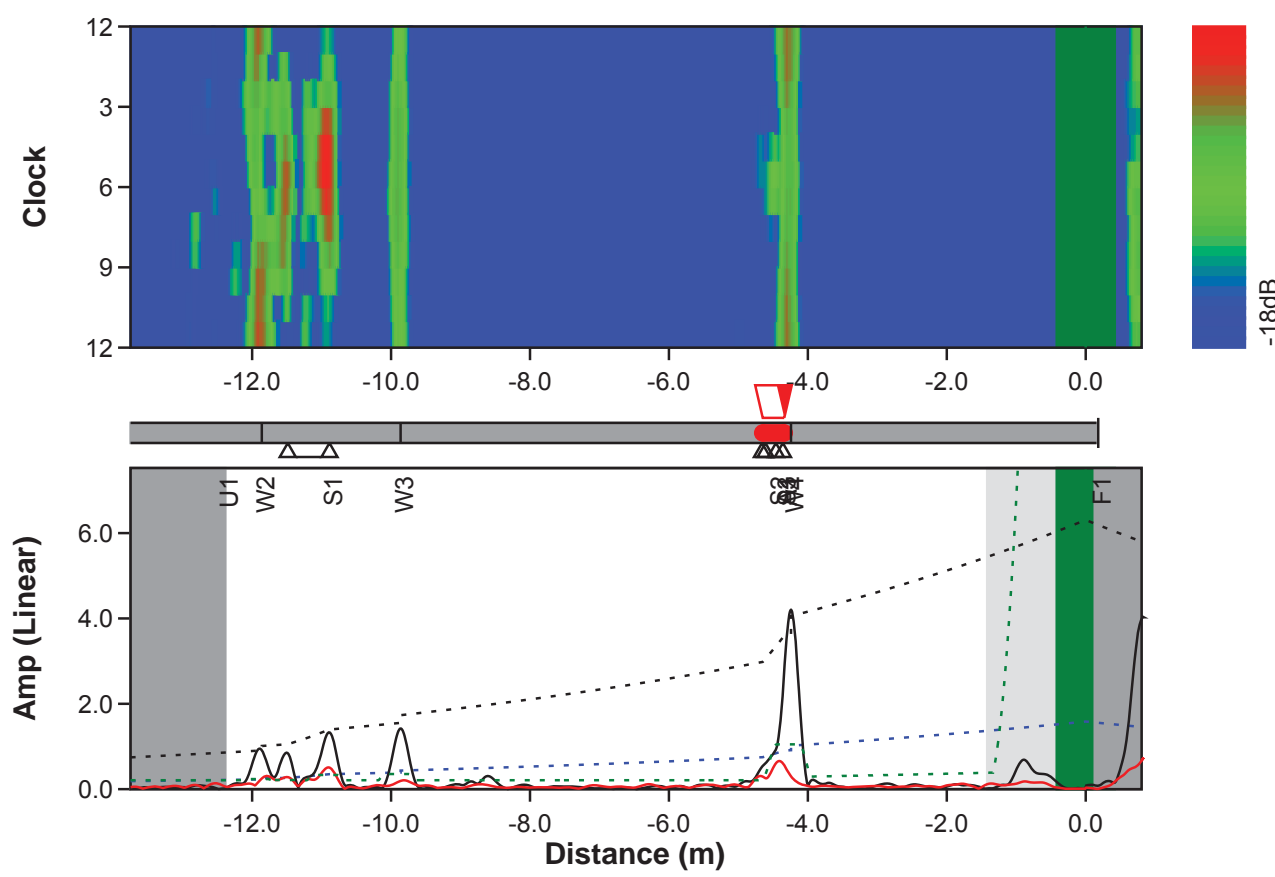
Positive direction



Negative direction

Test ID: G4-214#2219	Result: Major Concern
Pipe: 12" RFO (S13)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 5.0FR, T(0,1)
Location: Flange +0.18 m	Calibration: Automatic (1879.4 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7020'N, 144°41.1883'E
Tested: 18 Jun 2014 12:49	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 14" RFO-No.6 - Test Point No.: S13
 Positive direction with product flow.
 Found external corrosion at pipe support (refer class, note and location as table below).
 Location of signals measuring from center of ring.
 Thickness at ring position are (12 o'clock:6.20 mm), (3 o'clock:6.07 mm),
 (6 o'clock:6.13 mm), (9 o'clock:6.27 mm)





Test ID: G4-214#2219	Result: Major Concern
Pipe: 12" RFO (S13)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 5.0FR, T(0,1)
Location: Flange +0.18 m	Calibration: Automatic (1879.4 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7020'N, 144°41.1883'E
Tested: 18 Jun 2014 12:49	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
U1	-12.38	-	~		End	
W2	-11.86	-	0	70	Weld	
S1	-10.88	-	0.6	60	Saddle	
W3	-9.86	-	0	90	Weld	
S2	-4.46	-	0.15	50	Clamp	
S3	-4.36	-	0.3	80	Support	
A1	-4.34	25	0.31	80	Severe	Visually confirm external corrosion under pipe support (6H00) with max. pit depth is 0.15"@ 3.8 mm. UT reading adjacent to pit is 6.27 mm. Remaining wall thickness is 2.47 mm (60.6% wall loss)
W4	-4.24	-	0	90	Weld	
F1	0.18	-	0	80	Flange	Datum of screening



Ring location



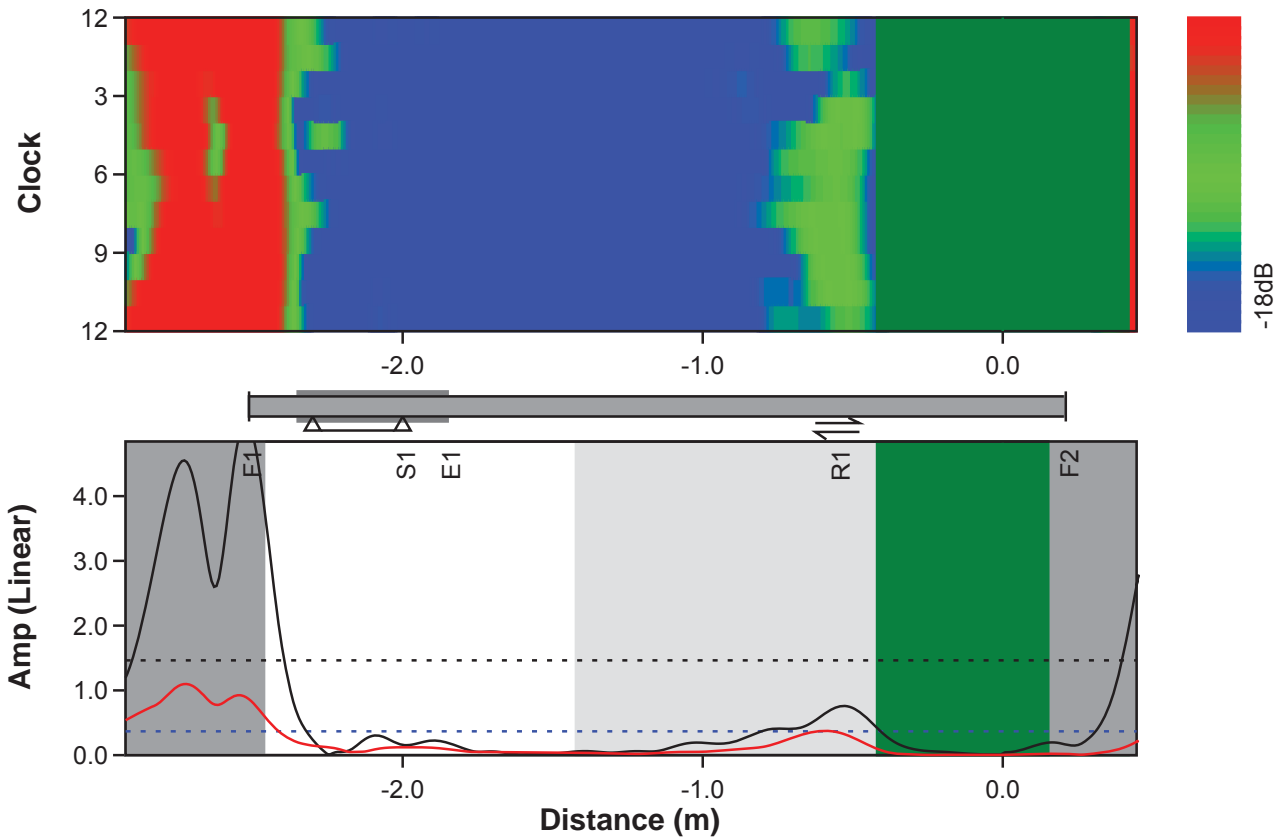
General view of positive direction



Negative direction

Test ID: G4-214#2221	Result: OK
Pipe: 12" RFO (S14)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 6.8FR, T(0,1)
Location: Flange +0.21 m	Calibration: Automatic (2549.62 mV)
Size: 12 inch (10.3mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7002'N, 144°41.1888'E
Tested: 18 Jun 2014 14:28	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 12" RFO-No.6 - Test Point No.: S14
 Positive direction with product flow.
 No corrosion above the reporting level observed in the tested section of the pipe and found satisfactory.
 (refer class, note and location as table below).
 Location of signals measuring from center of ring.
 Thickness at ring position are (12 o'clock:9.63 mm), (3 o'clock:8.97 mm), (6 o'clock:9.19 mm), (9 o'clock: 9.75 mm)





Test ID: G4-214#2221	Result: OK
Pipe: 12" RFO (S14)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 6.8FR, T(0,1)
Location: Flange +0.21 m	Calibration: Automatic (2549.62 mV)
Size: 12 inch (10.3mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7002'N, 144°41.1888'E
Tested: 18 Jun 2014 14:28	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
F1	-2.51	-	0	80	Flange	
S1	-2	-	0.3	60	Support	
E1	-1.85	-	0.5	50	Wrapping	
R1	-0.55	-	0	50	Trailing Echoes	False echo
F2	0.21	-	0	90	Flange	Datum of screening



Ring location



General view of positive direction



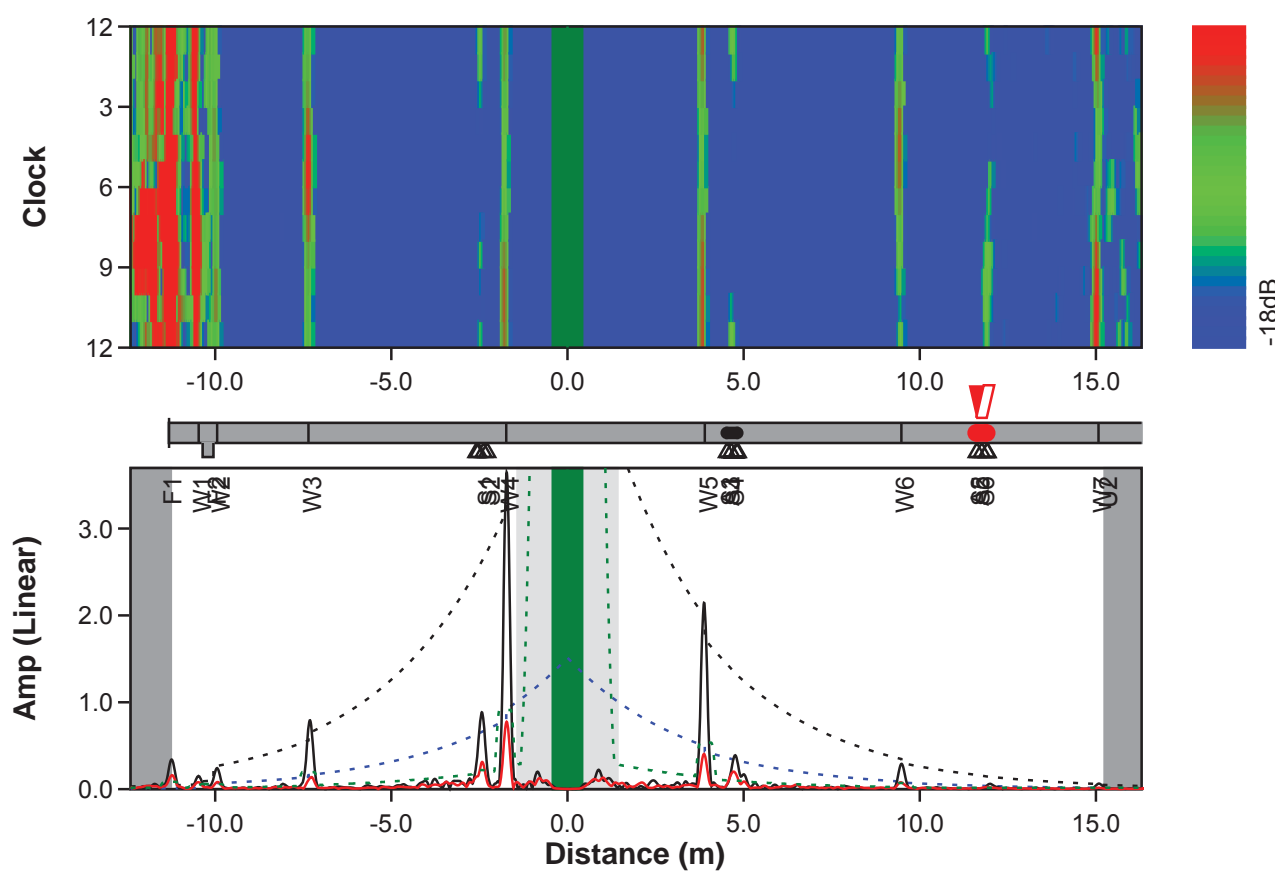
Tank no. 1935
Product: Fuel Oil No. 6
Shell Total Capacity : 267,000 bbls.
Reference Height : 48- 6 7/8"
Barrels per Foot: 5588 (approx.)
Date last calibrated 11-22-05 by SGS

Negative direction



Test ID: G4-214#2222	Result: Major Concern
Pipe: 12" RFO (S15)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 7.0FR, T(0,1)
Location: Weld -1.73 m	Calibration: Automatic (1798.1 mV)
Size: 12 inch	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7037'N, 144°41.1949'E
Tested: 19 Jun 2014 07:06	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 14" RFO-No.6 - Test Point No.: S15
Positive direction with product flow.
Found external corrosion at pipe support (refer class, note and location as table below).
Location of signals measuring from center of ring.
Thickness at ring position are (12 o'clock:6.24 mm), (3 o'clock:6.21 mm), (6 o'clock:6.54 mm), (9 o'clock:6.34 mm)





Test ID: G4-214#2222	Result: Major Concern
Pipe: 12" RFO (S15)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 7.0FR, T(0,1)
Location: Weld -1.73 m	Calibration: Automatic (1798.1 mV)
Size: 12 inch	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7037'N, 144°41.1949'E
Tested: 19 Jun 2014 07:06	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
F1	-11.3	-	0	50	Flange	
W1	-10.46	-	0	45	Weld	
F2	-10.05	-	0	70	Y	Branch
W2	-9.94	-	0	70	Weld	
W3	-7.35	25	0	80	Weld	
S1	-2.38	-	0.15	60	Clamp	
S2	-2.28	-	0.3	70	Support	
W4	-1.73	20	0	80	Weld	Datum of screening
W5	3.89	25	0	80	Weld	
A1	4.51	2	0.3	0	Minor	Visually confirm external corrosion under pipe support (6H00) with max. pit depth approximately 0.07" @ 1.3 mm. UT reading adjacent to pit is 6.29 mm. Remaining wall thickness approximately 4.99 mm (20.7% wall loss)
S3	4.53	-	0.3	0	Support	
S4	4.65	-	0.15	40	Clamp	
W6	9.47	-	0	70	Weld	
A2	11.6	2	0.3	1	Severe	Visually confirm external corrosion under pipe support (6H00) with max. pit depth approximately 0.17" @ 3.8 mm. UT reading adjacent to pit is 6.35 mm. Remaining wall thickness approximately 2.55 mm (59.8% wall loss)
S5	11.62	-	0.3	0	Support	
S6	11.76	-	0.15	0	Saddle	
W7	15.07	-	0	70	Weld	
U2	15.24	-	~		End	



Ring location



Positive direction



Negative direction



Corrosion under pipe support

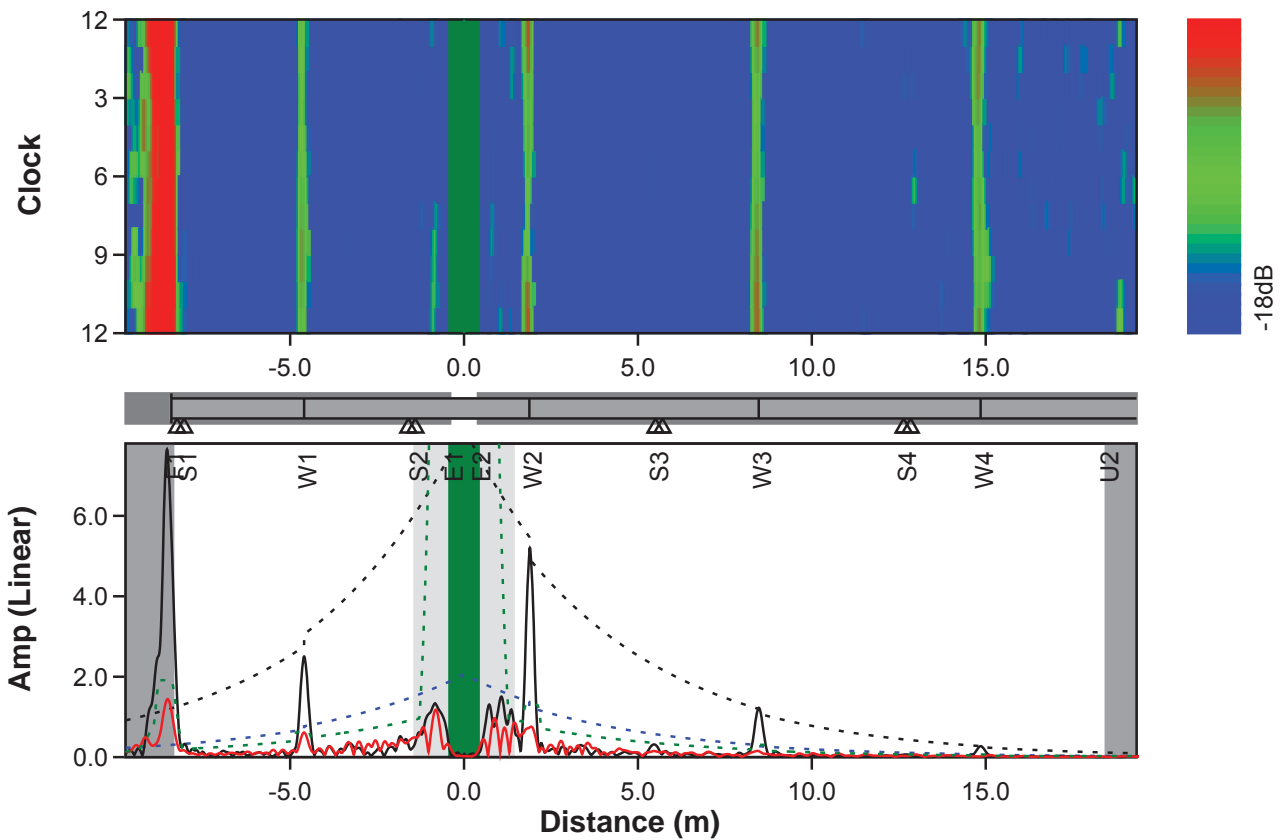


Closed view of corrosion



Test ID: G4-214#2223	Result: OK
Pipe: 12" RFO (S16)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 4.6FR, T(0,1)
Location: Weld +1.87 m	Calibration: Automatic (6996.62 mV)
Size: 12 inch (10.3mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7019'N, 144°41.1930'E
Tested: 19 Jun 2014 08:06	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 12" RFO-No.6 - Test Point No.: S16
Positive direction with product flow.
No corrosion above the reporting level observed in the tested section of the pipe and found satisfactory.
(refer class, note and location as table below).
Location of signals measuring from center of ring.
Thickness at ring position are (12 o'clock:9.83 mm), (3 o'clock:9.63 mm), (6 o'clock:9.48 mm), (9 o'clock: 9.85 mm)





Test ID: G4-214#2223	Result: OK
Pipe: 12" RFO (S16)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 4.6FR, T(0,1)
Location: Weld +1.87 m	Calibration: Automatic (6996.62 mV)
Size: 12 inch (10.3mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7019'N, 144°41.1930'E
Tested: 19 Jun 2014 08:06	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
F1	-8.41	-	0	80	Flange	
S1	-8.05	-	0.2	50	Support	
W1	-4.59	19	0	80	Weld	
E1	-0.4	-	~	30	Plastic	
S2	-1.4	-	0.2	10	Support	
E2	0.4	-	~	0	Plastic	
W2	1.87	20	0	90	Weld	Datum of screening
S3	5.5	-	0.2	50	Support	
W3	8.47	-	0	90	Weld	
S4	12.64	-	0.2	50	Support	
W4	14.85	-	0	90	Weld	
U2	18.45	-	~		End	



Ring location



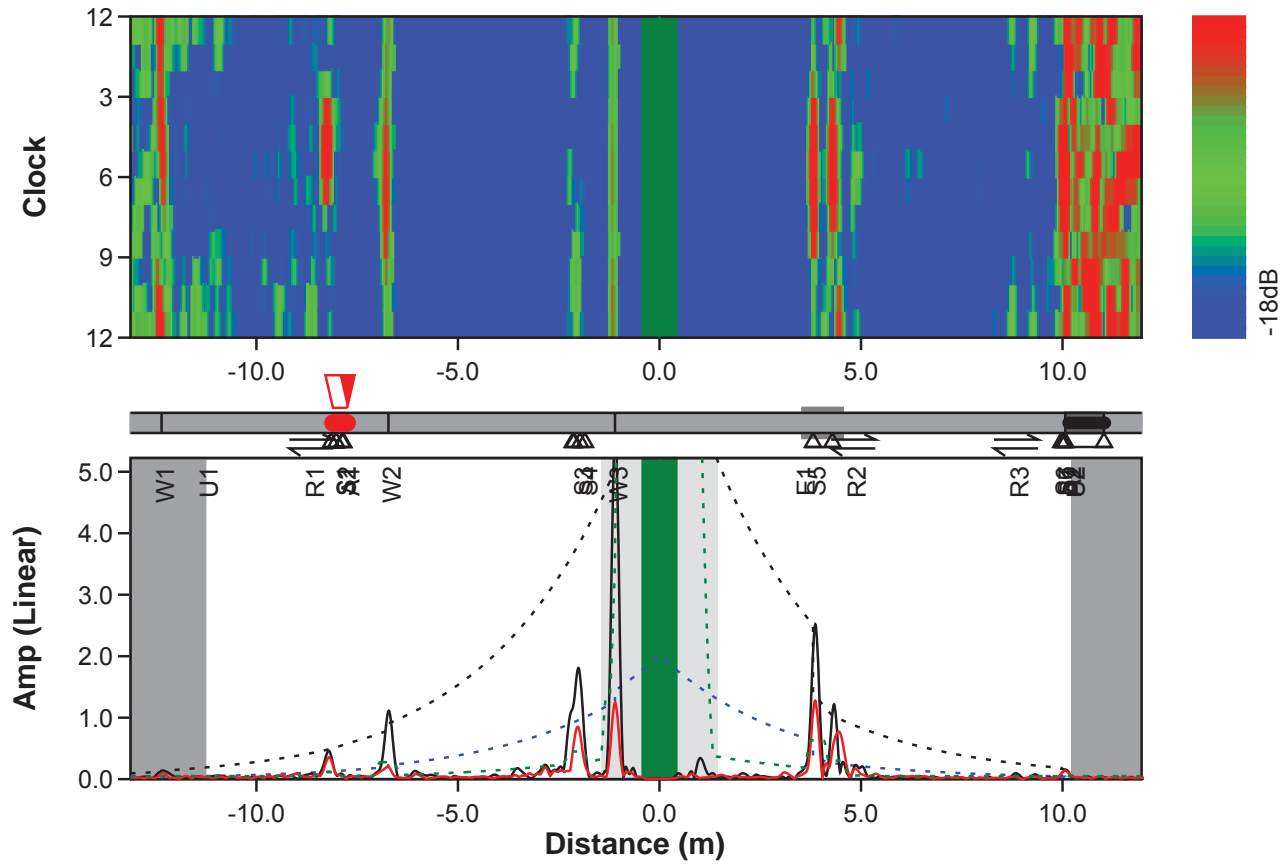
Positive direction



Negative direction

Test ID: G4-214#2224	Result: Major Concern
Pipe: 12" RFO (S17)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 6.6FR, T(0,1)
Location: Weld -1.10 m	Calibration: Automatic (1948.47 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7124'N, 144°41.2068'E
Tested: 19 Jun 2014 08:41	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

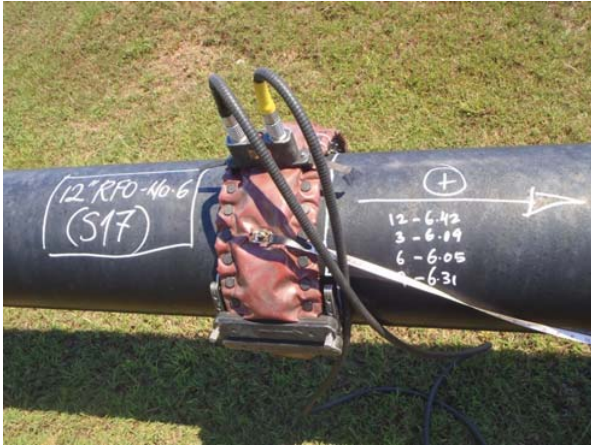
General Notes: 14" RFO-No.6 - Test Point No.: S17
 Positive direction with product flow.
 Found external corrosion at pipe support (refer class, note and location as table below).
 Location of signals measuring from center of ring.
 Thickness at ring position are (12 o'clock:6.42 mm), (3 o'clock:6.09 mm), (6 o'clock:6.05 mm), (9 o'clock:6.31 mm)





Test ID: G4-214#2224	Result: Major Concern
Pipe: 12" RFO (S17)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 6.6FR, T(0,1)
Location: Weld -1.10 m	Calibration: Automatic (1948.47 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7124'N, 144°41.2068'E
Tested: 19 Jun 2014 08:41	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
W1	-12.35	-	0	25	Weld	
U1	-11.27	-	~		End	
R1	-8.63	-	0	35	Reverb.	False echo
S1	-7.87	-	0.15	30	Clamp	
S2	-7.84	-	0.3	35	Support	
A1	-7.75	3	0.35	40	Severe	Visually confirm external corrosion under pipe support (6H00) with max. pit depth approximately 0.20" @ 5.0 mm. UT reading adjacent to pit is 6.18 mm. Remaining wall thickness approximately 1.18 mm(80.9%wall loss)
W2	-6.72	-	0	80	Weld	
S3	-1.97	-	0.15	50	Clamp	
S4	-1.85	-	0.3	60	Support	
W3	-1.1	20	0	80	Weld	Datum of screening
E1	3.54	-	1	50	Wrapping	
S5	3.81	-	0.48	50	Saddle	
R2	4.8	-	0	25	Trailing Echoes	False echo
R3	8.84	-	0	60	Reverb.	False echo
S6	9.96	-	0.1	1	Saddle	
S7	10.02	-	1	12	Support	
B1	10.06	-	0	12	1D Bend	
A2	10.15	60	0.9	16	Minor	Visually confirm general corrosion under pipe support.
U2	10.23	-	~		End	



Ring location



Positive direction



Negative direction



Corrosion under pipe support

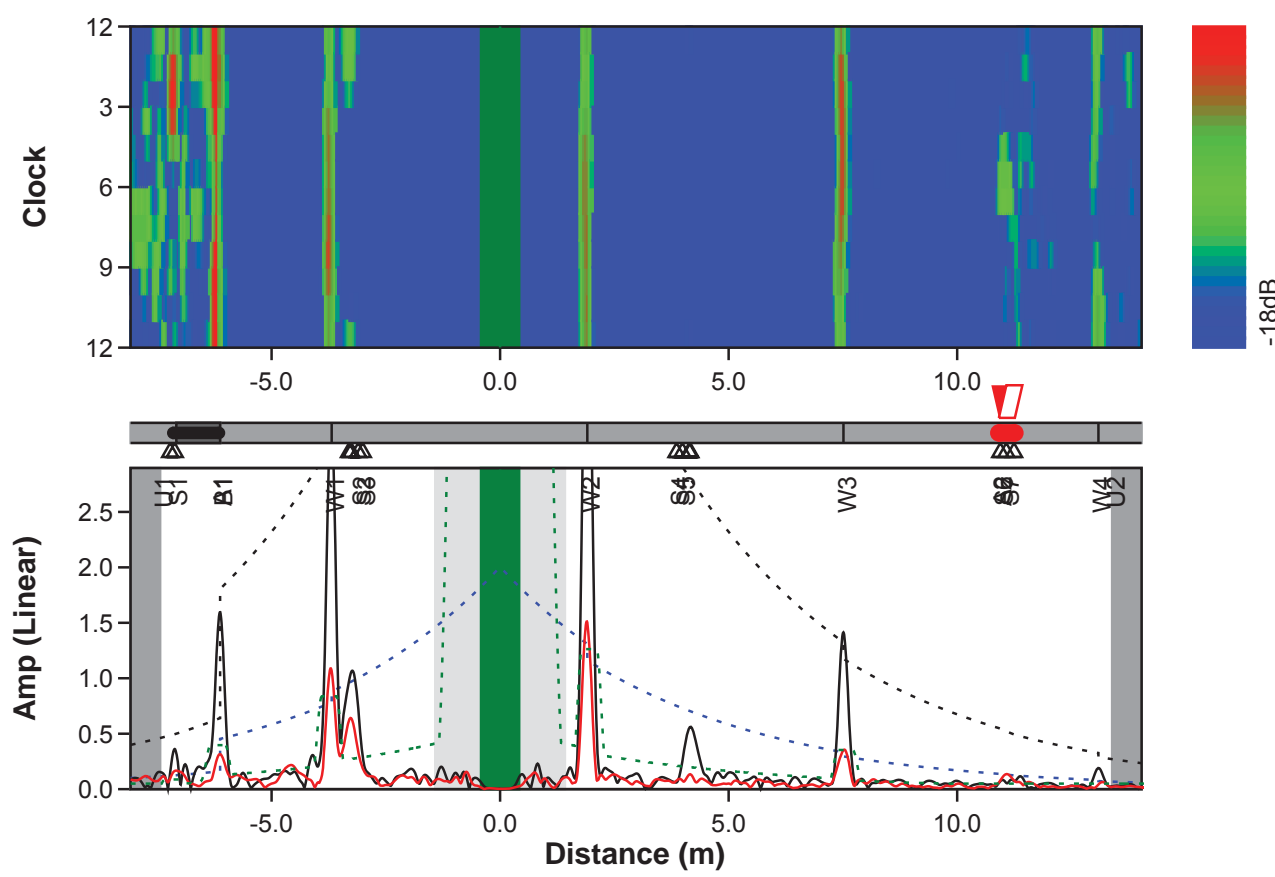


Closed view of corrosion under pipe support



Test ID: G4-214#2225	Result: Major Concern
Pipe: 12" RFO (S18)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 5.8FR, T(0,1)
Location: Weld +1.88 m	Calibration: Automatic (1876.65 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7110'N, 144°41.2091'E
Tested: 19 Jun 2014 11:46	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 14" RFO-No.6 - Test Point No.: S18
Positive direction with product flow.
Found external corrosion at pipe support (refer class, note and location as table below).
Location of signals measuring from center of ring.
Thickness at ring position are (12 o'clock:6.50 mm), (3 o'clock:6.03 mm), (6 o'clock:6.77 mm), (9 o'clock:5.93 mm)





Test ID: G4-214#2225	Result: Major Concern
Pipe: 12" RFO (S18)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 5.8FR, T(0,1)
Location: Weld +1.88 m	Calibration: Automatic (1876.65 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7110'N, 144°41.2091'E
Tested: 19 Jun 2014 11:46	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
U1	-7.43	-	~		End	
S1	-7.11	-	0.1	50	Saddle	Patch plate (0.1x0.1)m at bottom side
A1	-6.15	50	1	80	Minor	General corrosion under pipe support
B1	-6.12	-	0	80	1D Bend	
W1	-3.68	-	0	70	Weld	
S2	-3.1	-	0.15	50	Clamp	
S3	-3	-	0.3	50	Support	
W2	1.9	-	0	70	Weld	Datum of screening
S4	3.86	-	0.3	14	Support	
S5	3.98	-	0.15	80	Clamp	
W3	7.51	-	0	70	Weld	
A2	10.91	3	0.35	0	Severe	Visually confirm external corrosion under pipe support (6 - 9H00) with max. pit depth approximately 0.20"@ 5.0 mm. UT reading adjacent to pit is 6.15 mm. Remaining wall thickness approximately 1.15 mm (81.3%wall loss)
S6	10.94	-	0.3	0	Saddle	
S7	11.07	-	0	0	Clamp	
W4	13.09	-	0	70	Weld	
U2	13.39	-	~		End	



Ring location



Positive direction



Negative direction



Corrosion under pipe support

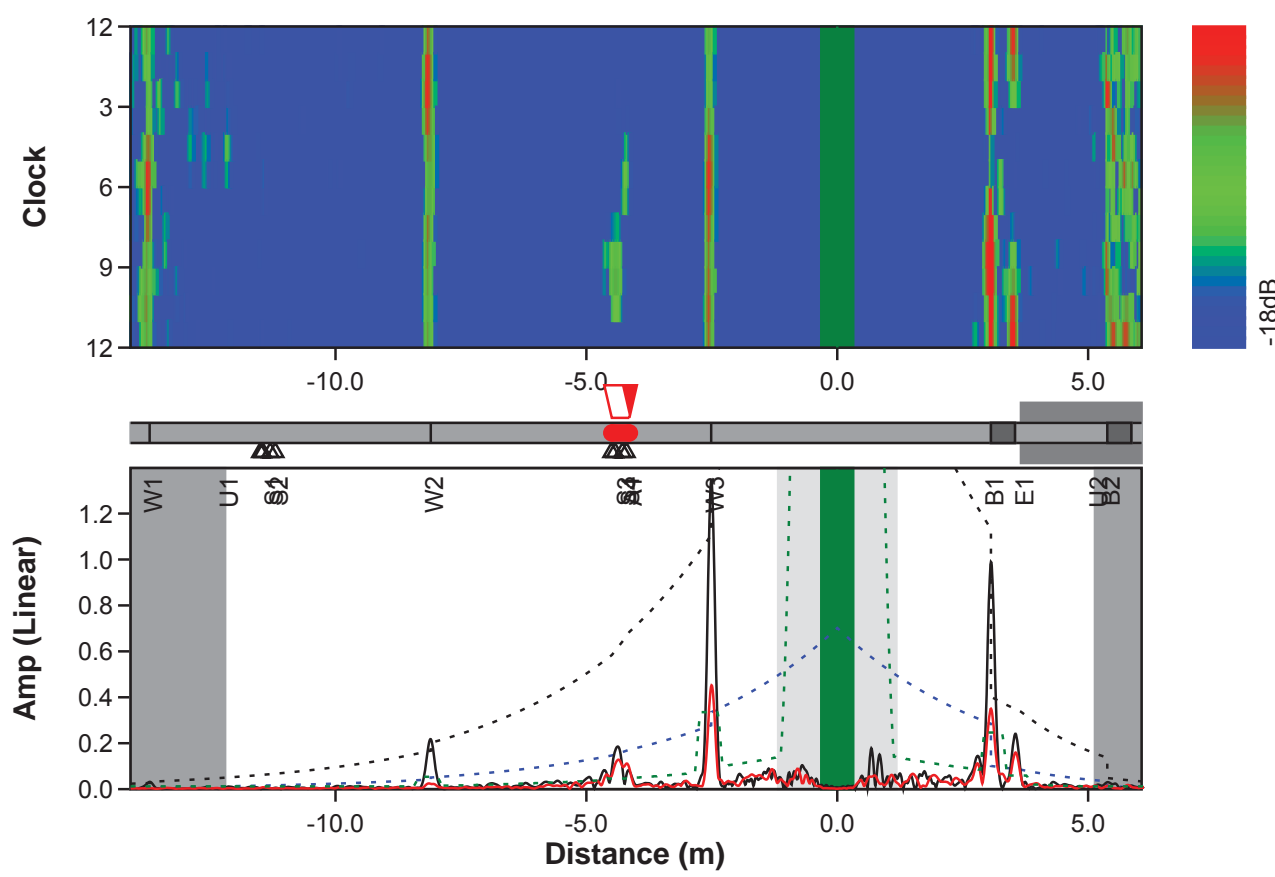


Closed view of corrosion



Test ID: G4-214#2227	Result: Major Concern
Pipe: 12" RFO (S19)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 9.6FR, T(0,1)
Location: Weld -2.49 m	Calibration: Automatic (1428.9 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7273'N, 144°41.2054'E
Tested: 19 Jun 2014 12:56	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 14" RFO-No.6 - Test Point No.: S19
Positive direction with product flow.
Found external corrosion at pipe support (refer class, note and location as table below).
Location of signals measuring from center of ring.
Thickness at ring position are (12 o'clock:5.87 mm), (3 o'clock:5.79 mm), (6 o'clock:6.27 mm), (9 o'clock:5.95 mm)





Test ID: G4-214#2227	Result: Major Concern
Pipe: 12" RFO (S19)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 9.6FR, T(0,1)
Location: Weld -2.49 m	Calibration: Automatic (1428.9 mV)
Size: 12 inch (6.35mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7273'N, 144°41.2054'E
Tested: 19 Jun 2014 12:56	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
W1	-13.7	-	0	90	Weld	
U1	-12.19	-	~		End	
S1	-11.3	-	0.15	0	Clamp	
S2	-11.2	-	0.3	35	Support	
W2	-8.1	-	0	90	Weld	
S3	-4.28	-	0.15	30	Clamp	
S4	-4.2	-	0.3	0	Support	
A1	-4.14	3	0.35	0	Severe	Visually confirm external corrosion under pipe support (6 - 9H00) with max. pit depth approximately 0.20" @ 5.0 mm. UT reading adjacent to pit is 6.15 mm. Remaining wall thickness approximately 1.15 mm. (81.3% wall loss)
W3	-2.51	-	0	70	Weld	Datum of screening
B1	3.06	-	0	60	45 deg Bend	
E1	3.66	-	~	30	Earth	
U2	5.13	-	~		End	
B2	5.38	-	0	50	45 deg Bend	



Ring location



Positive direction



Negative direction



Corrosion under pipe support

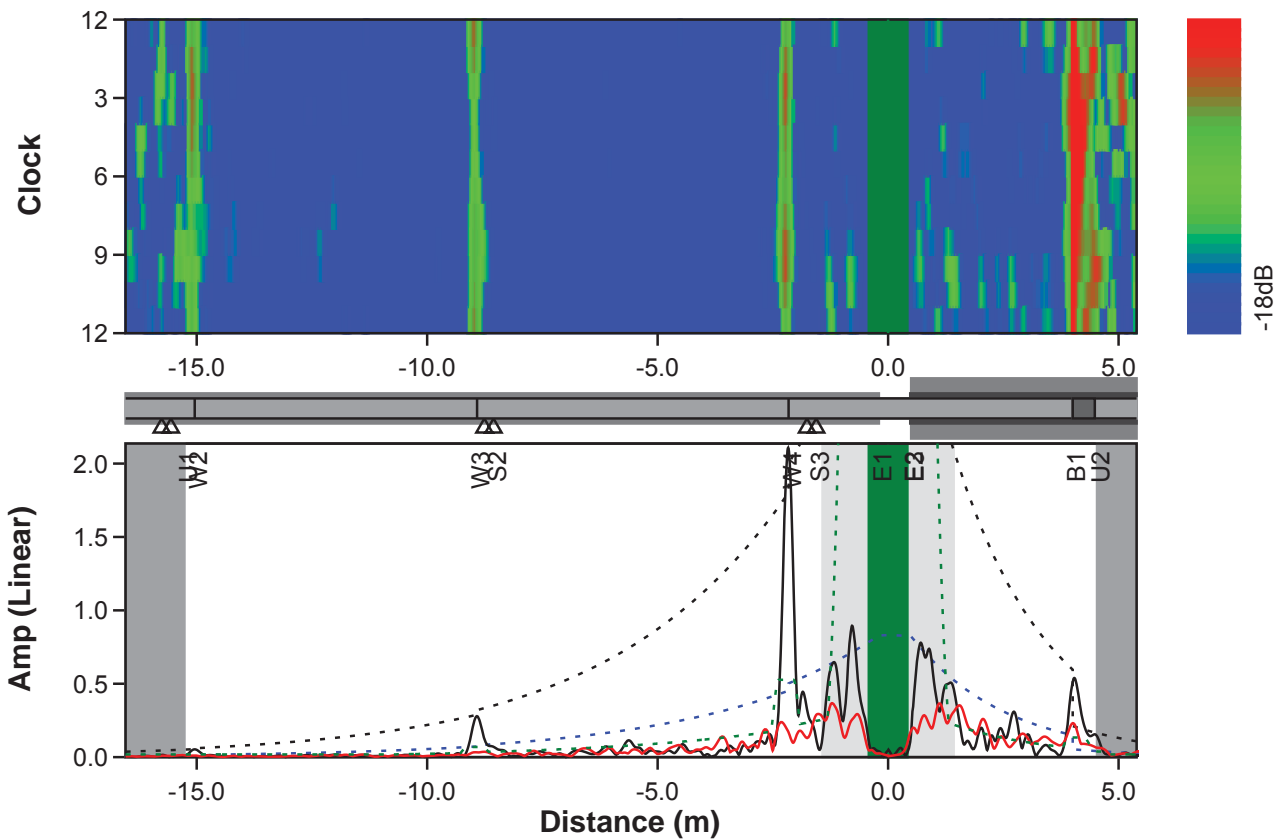


Closed view of corrosion



Test ID: G4-214#2228	Result: OK
Pipe: 12" RFO (S20)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 4.6FR, T(0,1)
Location: Weld -2.00 m	Calibration: Automatic (3606.38 mV)
Size: 12 inch (10.3mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7289'N, 144°41.2056'E
Tested: 19 Jun 2014 13:33	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 12" RFO-No.6 - Test Point No.: S20
Positive direction with product flow.
No corrosion above the reporting level observed in the tested section of the pipe and found satisfactory.
(refer class, note and location as table below).
Location of signals measuring from center of ring.
Thickness at ring position are (12 o'clock:10.28 mm), (3 o'clock:9.84 mm), (6 o'clock:10.35 mm), (9 o'clock: 10.47 mm)





Test ID: G4-214#2228	Result: OK
Pipe: 12" RFO (S20)	Ring: R2B12(1507)
Site: Inside Terminal	Config: 4.6FR, T(0,1)
Location: Weld -2.00 m	Calibration: Automatic (3606.38 mV)
Size: 12 inch (10.3mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7289'N, 144°41.2056'E
Tested: 19 Jun 2014 13:33	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
U1	-15.26	-	~		End	
W2	-15.04	-	0	80	Weld	
W3	-8.91	-	0	90	Weld	
S2	-8.56	-	0.2	70	Support	
W4	-2.15	25	0	90	Weld	Datum of screening
S3	-1.56	-	0.2	0	Support	
E1	-0.2	-	~	45	Plastic	Wrapping
E2	0.48	-	~	35	Plastic	Wrapping
E3	0.5	-	~	50	Earth	Underground
B1	4	-	0	60	45 deg Bend	
U2	4.53	-	~		End	



Ring location place at soil to air section



Positive direction towards pump area

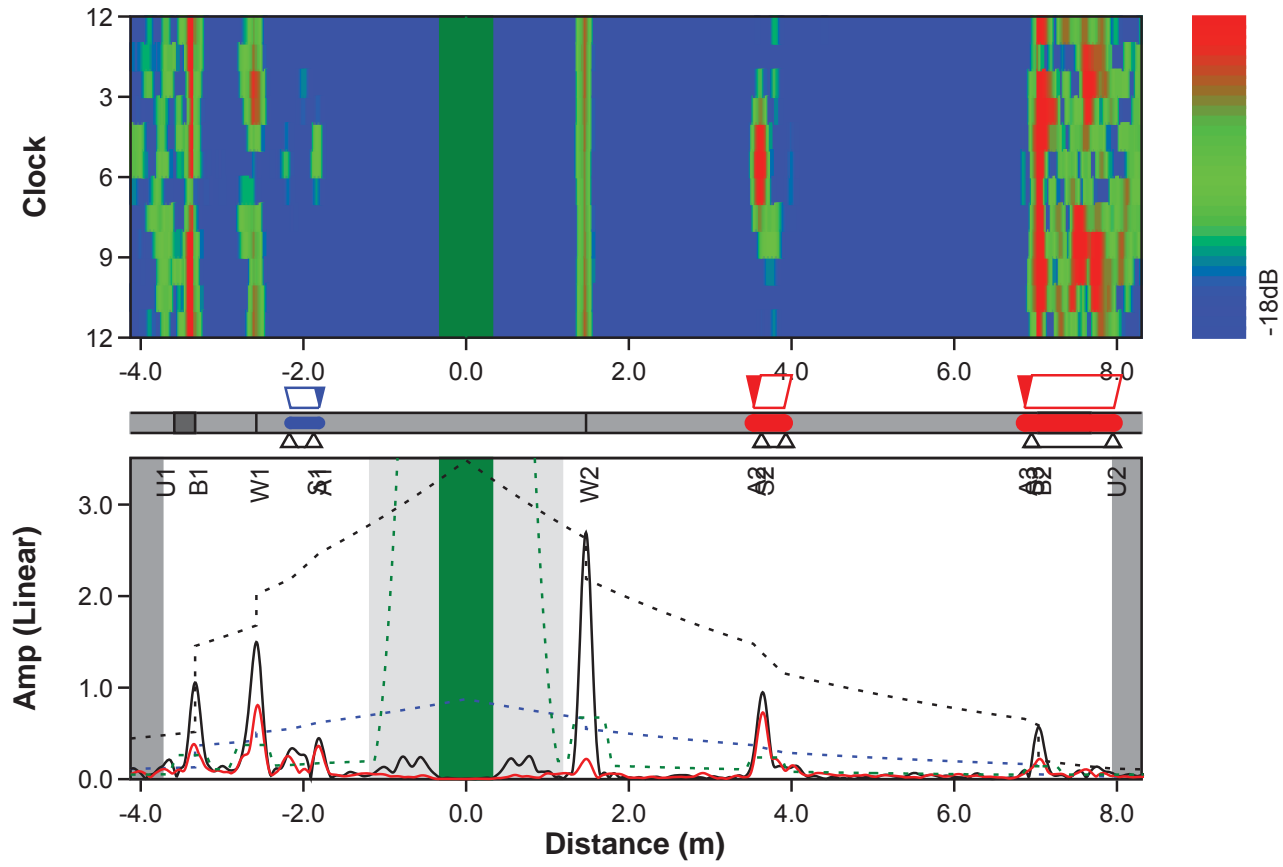


Negative direction

3.4 8"RESIDUAL FUEL OIL (RFO)

Test ID: G4-214#2230	Result: Major Concern
Pipe: 8" RFO (S1)	Ring: R2B08(1499)
Site: Inside Terminal	Config: 6.0FR, T(0,1)
Location: Weld +1.47 m	Calibration: Automatic (1066.57 mV)
Size: 8 inch (7.05mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7268'N, 144°41.2073'E
Tested: 20 Jun 2014 08:22	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

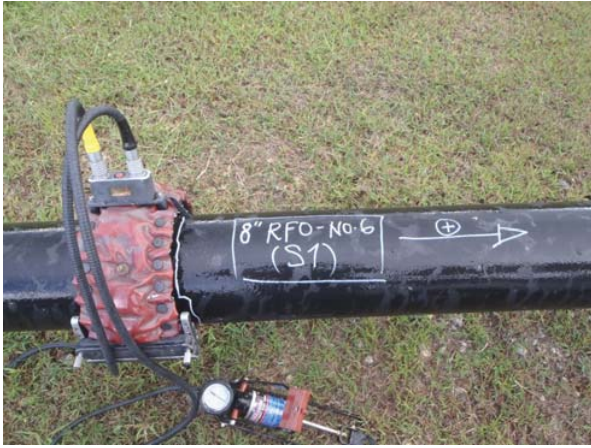
General Notes: 8" RFO-No.6 - Test Point No.: S1
 Positive direction with product flow.
 Found external corrosion at pipe support (refer class, note and location as table below).
 Location of signals measuring from center of ring.
 Thickness at ring position are (12 o'clock:7.29 mm), (3 o'clock:7.06 mm),
 (6 o'clock:7.07 mm), (9 o'clock:7.01 mm)





Test ID: G4-214#2230	Result: Major Concern
Pipe: 8" RFO (S1)	Ring: R2B08(1499)
Site: Inside Terminal	Config: 6.0FR, T(0,1)
Location: Weld +1.47 m	Calibration: Automatic (1066.57 mV)
Size: 8 inch (7.05mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7268'N, 144°41.2073'E
Tested: 20 Jun 2014 08:22	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
U1	-3.73	-	~		End	
B1	-3.33	-	0	60	45 deg Bend	
W1	-2.57	-	0	45	Weld	
S1	-1.87	-	0.3	19	Support	
A1	-1.8	4	0.35	19	Medium	Visually confirm external corrosion under pipe support (6H00) with max. pit depth approximately 0.13"@ 3.3 mm. UT reading adjacent to pit is 7.25 mm. Remaining wall thickness approximately 3.95 mm (45.5% wall loss)
W2	1.47	-	0	90	Weld	Datum of screening
A2	3.53	11	0.38	25	Severe	Visually confirm external corrosion under pipe support (6H00) with max. pit depth approximately 0.20"@ 5.0 mm. UT reading adjacent to pit is 7.09 mm. Remaining wall thickness approximately 2.09 mm (70.5% wall loss)
S2	3.63	-	0.3	25	Support	
A3	6.86	3	1.1	0	Severe	Visually confirm external corrosion under pipe support (3-6H00) with max. pit depth approximately 0.22" @ 5.5 mm. UT reading adjacent to pit is 6.96 mm. Remaining wall thickness approximately 1.46 mm (79.0% wall loss)
S3	6.95	-	1	60	Support	
B2	7.03	-	0	60	1D Bend	
U2	7.95	-	~		End	



Ring location



Positive direction



Negative direction



Corrosion under pipe support

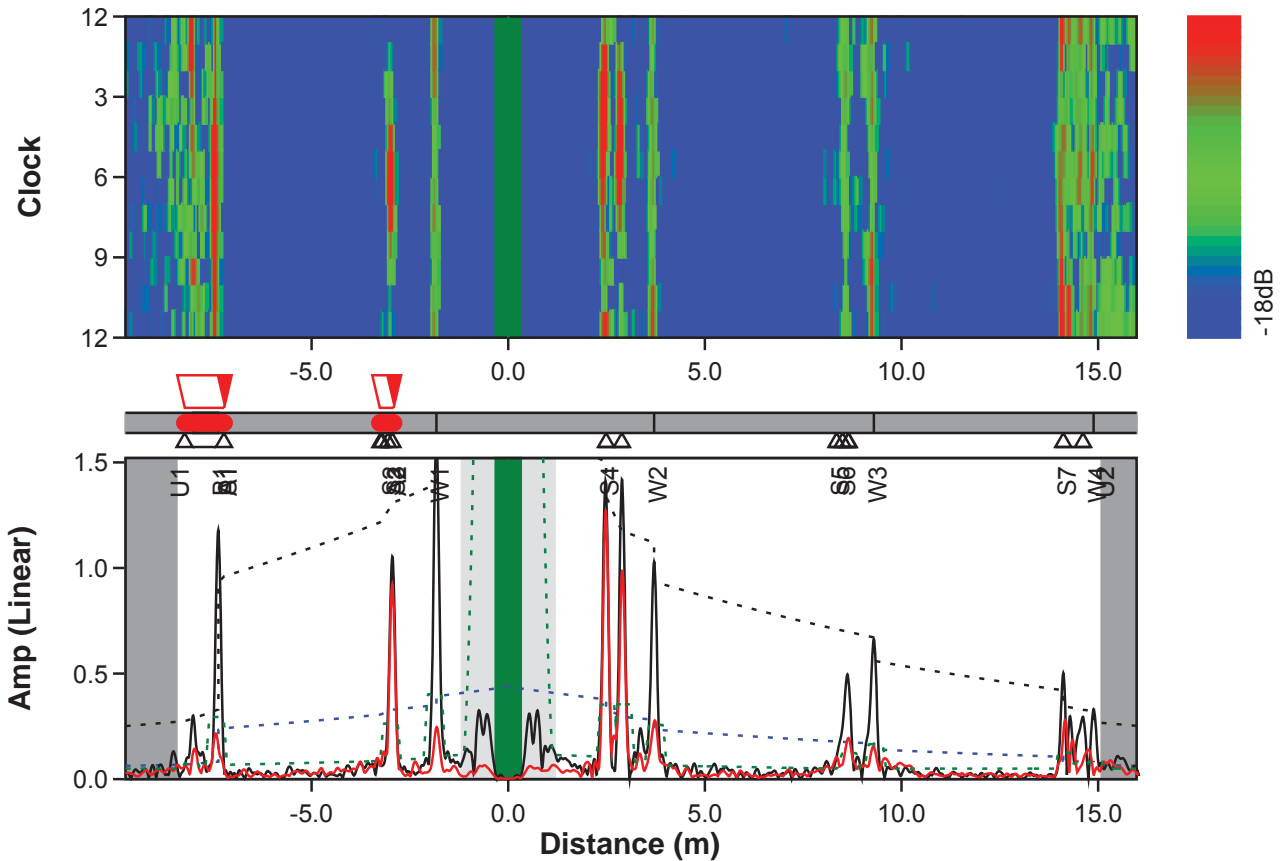


Close view of corrosion



Test ID: G4-214#2232	Result: Major Concern
Pipe: 8" RFO (S2)	Ring: R2B08(1499)
Site: Inside Terminal	Config: 5.8FR, T(0,1)
Location: Weld -1.82 m	Calibration: Automatic (1553.01 mV)
Size: 8 inch	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7273'N, 144°41.2170'E
Tested: 20 Jun 2014 08:46	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 8" RFO-No.6 - Test Point No.: S2
Positive direction with product flow.
Found external corrosion at pipe support (refer class, note and location as table below).
Location of signals measuring from center of ring.
Thickness at ring position are (12 o'clock:7.32 mm), (3 o'clock:7.00 mm), (6 o'clock:7.00 mm), (9 o'clock:6.98 mm)





Test ID: G4-214#2232	Result: Major Concern
Pipe: 8" RFO (S2)	Ring: R2B08(1499)
Site: Inside Terminal	Config: 5.8FR, T(0,1)
Location: Weld -1.82 m	Calibration: Automatic (1553.01 mV)
Size: 8 inch	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7273'N, 144°41.2170'E
Tested: 20 Jun 2014 08:46	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
U1	-8.43	-	~		End	
B1	-7.37	-	0	80	1D Bend	
S1	-7.23	-	1	80	Support	
A1	-7.22	11	1	80	Severe	Visually confirm external corrosion under pipe support (3-6H00) with max. pit depth approximately 0.22"@ 5.5 mm. UT reading adjacent to pit is 6.96 mm. Remaining wall thickness approximately 1.46 mm (79.0% wall loss)
S2	-3.06	-	0.15	12	Clamp	
S3	-2.94	-	0.3	13	Support	
A2	-2.91	18	0.35	13	Severe	Visually confirm external corrosion under pipe support (6H00) with max. pit depth approximately 0.20"@ 5.0 mm. UT reading adjacent to pit is 7.08 mm. Remaining wall thickness approximately 2.08 mm (70.6% wall loss)
W1	-1.82	-	0	80	Weld	Datum of screening
S4	2.48	-	0.4	10	Saddle	Patch plate at bottom side
W2	3.71	-	0	70	Weld	
S5	8.35	-	0.3	35	Support	
S6	8.5	-	0.15	70	Clamp	
W3	9.29	-	0	80	Weld	
S7	14.11	-	0.5	45	Saddle	Patch plate at bottom side
W4	14.88	-	0	70	Weld	
U2	15.08	-	~		End	



Ring location



Positive direction



Negative direction



Corrosion under pipe support

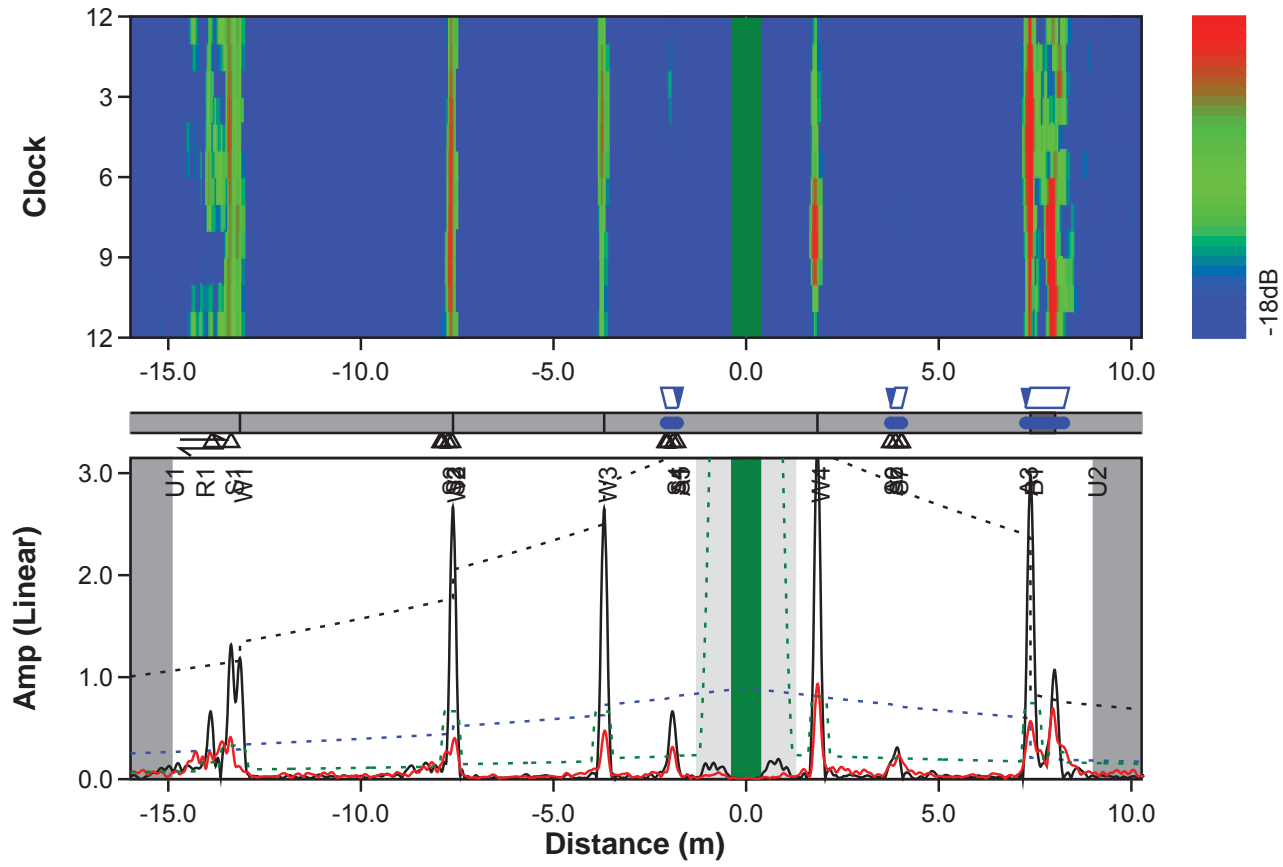


Closed view of corrosion



Test ID: G4-214#2234	Result: Medium Concern
Pipe: 8" RFO (S3)	Ring: R2B08(1499)
Site: Inside Terminal	Config: 4.0FR, T(0,1)
Location: Weld +1.82 m	Calibration: Automatic (1391.05 mV)
Size: 8 inch	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7365'N, 144°41.2330'E
Tested: 20 Jun 2014 09:05	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 8" RFO-No.6 - Test Point No.: S3
Positive direction with product flow.
Found external corrosion at pipe support (refer class, note and location as table below).
Location of signals measuring from center of ring.
Thickness at ring position are (12 o'clock:7.02 mm), (3 o'clock:6.94 mm), (6 o'clock:6.99 mm), (9 o'clock:6.95 mm)





Test ID: G4-214#2234	Result: Medium Concern
Pipe: 8" RFO (S3)	Ring: R2B08(1499)
Site: Inside Terminal	Config: 4.0FR, T(0,1)
Location: Weld +1.82 m	Calibration: Automatic (1391.05 mV)
Size: 8 inch	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7365'N, 144°41.2330'E
Tested: 20 Jun 2014 09:05	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
U1	-14.91	-	~		End	
R1	-14.12	-	0	0	False Echo	Reverberation signals
S1	-13.36	-	0.5	70	Saddle	Patch plate at bottom side
W1	-13.13	-	0	90	Weld	
S2	-7.73	-	0.15	90	Clamp	
S3	-7.63	-	0.3	90	Support	
W2	-7.6	-	0	80	Weld	
W3	-3.68	-	0	80	Weld	
S4	-1.89	-	0.15	50	Clamp	
S5	-1.79	-	0.3	50	Support	
A1	-1.77	3	0.3	60	Medium	Visually confirm external corrosion under pipe support (3 - 6H00) with max. pit depth approximately 0.08"@ 2.0 mm. UT reading adjacent to pit is 7.21 mm. Remaining wall thickness approximately 5.21 mm (27.7% wall loss)
W4	1.85	-	0	70	Weld	Datum of screening
S6	3.74	-	0.3	25	Support	
A2	3.74	2	0.3	25	Medium	Visually confirm external corrosion under pipe support (6H00) with max. pit depth approximately 0.07"@ 1.8 mm. UT reading adjacent to pit is 7.35 mm. Remaining wall thickness approximately 5.55 mm (24.5% wall loss)
S7	3.88	-	0.15	25	Support	
A3	7.24	19	1	80	Medium	Visually confirm external corrosion under pipe support (6 - 9H00) with max. pit depth approximately 0.13"@ 3.3 mm. UT reading adjacent to pit is 7.35 mm. Remaining wall thickness approximately 4.05 mm (44.9% wall loss)



Test ID: G4-214#2234	Result: Medium Concern
Pipe: 8" RFO (S3)	Ring: R2B08(1499)
Site: Inside Terminal	Config: 4.0FR, T(0,1)
Location: Weld +1.82 m	Calibration: Automatic (1391.05 mV)
Size: 8 inch	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7365'N, 144°41.2330'E
Tested: 20 Jun 2014 09:05	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
B1	7.38	-	0	80	1D Bend	
U2	9.02	-	~		End	



Ring location



Positive direction



Negative direction



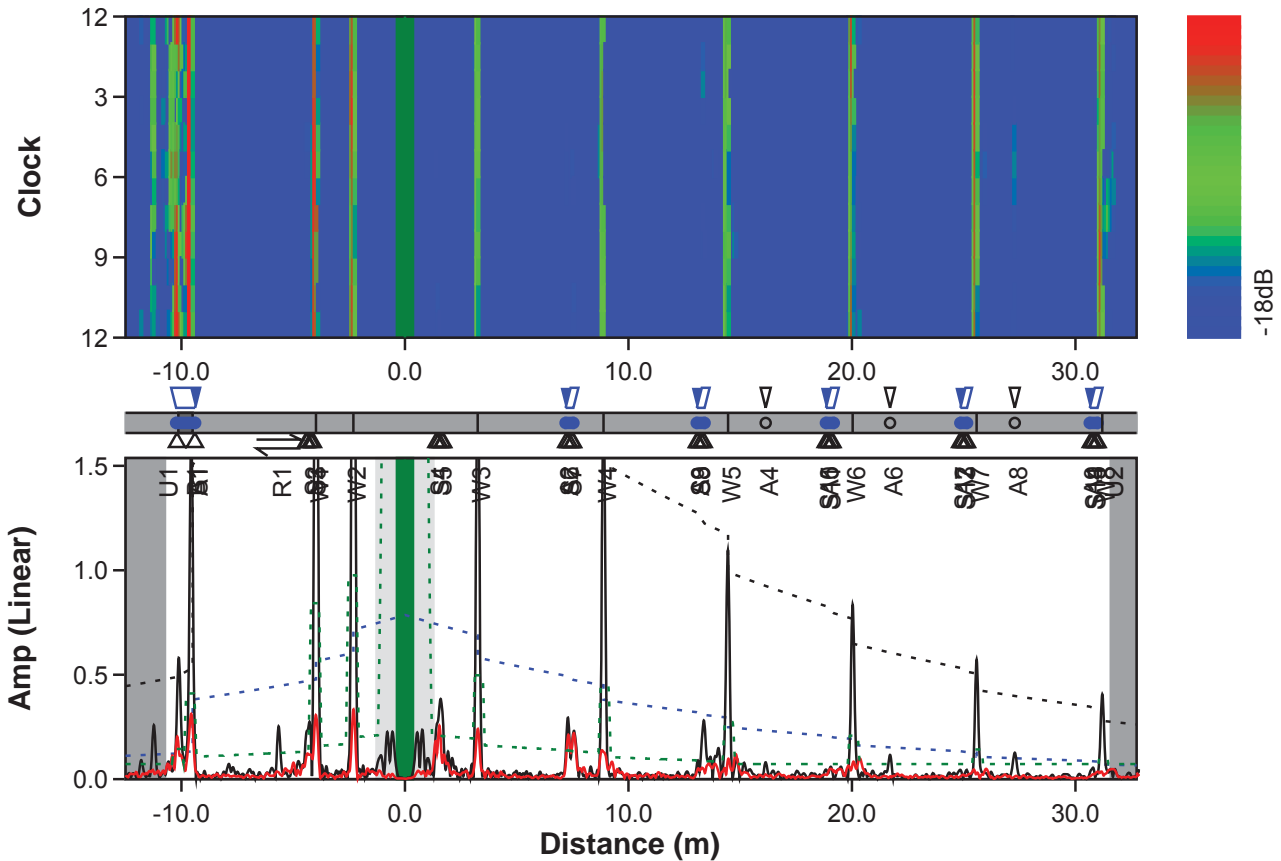
Corrosion under pipe support



Closed view of corrosion

Test ID: G4-214#2237	Result: Medium Concern
Pipe: 8" RFO (S4)	Ring: R2B08(1499)
Site: Inside Terminal	Config: 5.2FR, T(0,1)
Location: Weld -2.30 m	Calibration: Automatic (1213.96 mV)
Size: 8 inch (7.05mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7336'N, 144°41.2378'E
Tested: 20 Jun 2014 13:50	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

General Notes: 8" RFO-No.6 - Test Point No.: S4
 Positive direction with product flow.
 Found external corrosion at pipe support (refer class, note and location as table below).
 Location of signals measuring from center of ring.
 Thickness at ring position are (12 o'clock:7.02 mm), (3 o'clock:6.91 mm),
 (6 o'clock:7.05 mm), (9 o'clock: 7.12 mm)





Test ID: G4-214#2237	Result: Medium Concern
Pipe: 8" RFO (S4)	Ring: R2B08(1499)
Site: Inside Terminal	Config: 5.2FR, T(0,1)
Location: Weld -2.30 m	Calibration: Automatic (1213.96 mV)
Size: 8 inch (7.05mm)	Version: 3.103, Wavemaker G4-214
	GPS: 13°27.7336'N, 144°41.2378'E
Tested: 20 Jun 2014 13:50	Client: Vital Energy
Tested by: Khairul Anuar Husain [SGS]	Procedure: WI-TM-065/Ver.00/27.04.2011
	DACs: Call=6%, Weld=23%

Feature	Location	ECL	Length	Extent	Class	Notes
U1	-10.73	-	~		End	
B1	-9.5	-	0	80	1D Bend	
S1	-9.4	-	0.8	70	Support	Pedestal support
A1	-9.38	8	0.85	70	Medium	Visually confirm external corrosion under pipe support (6 - 9H00) with max. pit depth approximately 0.13"@ 3.3 mm. UT reading adjacent to pit is 7.35 mm. Remaining wall thickness approximately 4.05 mm (44.9% wall loss)
R1	-5.65	-	0	90	False Echo	Phantom effect (UT confirm no significant finding)
S2	-4.22	-	0.15	60	Clamp	U-blot type
S3	-4.12	-	0.3	90	Support	Pedestal support
W1	-3.98	-	0	90	Weld	
W2	-2.3	-	0	90	Weld	Datum of screening
S4	1.4	-	0.3	35	Support	Pedestal support
S5	1.52	-	0.15	35	Clamp	U-blot type
W3	3.25	-	0	90	Weld	
A2	7.18	3	0.35	35	Medium	Visually confirm external corrosion under pipe support (6H00) with max. pit depth approximately 0.08"@ 2.0 mm. UT reading adjacent to pit is 7.06 mm. Remaining wall thickness approximately 5.06 mm (28.3% wall loss)
S6	7.22	-	0.3	35	Support	Pedestal support
S7	7.34	-	0.15	30	Clamp	U-blot type
W4	8.88	-	0	90	Weld	
A3	13.05	2	0.35	45	Medium	Visually confirm external corrosion under pipe support (6H00) with max. pit depth approximately 0.07"@ 1.80 mm. UT reading adjacent to pit is 7.00 mm. Remaining wall thickness approximately 5.20 mm (25.7% wall loss)