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**Thermographic inspection of:
V21110 HP1**

At:

**TI Job No:
TI_16442**

9 March 2013

**Inspection Specific Information**

Client Name	
C/O Client Name	-
Site Address	
Contact Person	
Telephone Number	+
E-mail Address	
Assigned Thermographer	Jason Michel

Inspection Overview

This investigation is employing the use of thermographics and infra-red in order to assess the levels of sediment deposits within the process vessels indicated. The object is to provide initial sediment level assessment and to provide baseline thermograms for comparative future inspections so that levels can be monitored and trended accordingly. The baseline thermograms can then be used as a reference point against subsequent images from periodic inspections. This will allow the sediment levels to be monitored along with specific temperature readings of the vessels.

The table shown at the end of each InfraRed analysis page shows estimated percentage levels of sediment in relation to the diameter of the separator and a direct comparison can be made between inspections to see the increases or decreases quickly and accurately

Theory

Deposited sediment will be visible to infra-red due to the insulating effect it has on the surface temperature of the process vessels. This means that areas of material deposit will appear with a lower temperature than areas which do not suffer from deposits as the heat from the separators/degasser will have to travel through more material, in this case sand. These lower temperature signatures can be attributed to internal deposits within so long as the external surface area is clean and not affecting the thermograms. The separators/vessels have a continuous outer shell material which means emissivity will remain constant.

The measurement level is taken from the base of the separator to the centre of the yellow line which is suspected of being a foam level whilst the underlying sediment level is suspected of lying just beneath this.

NB: The distance box shows measurements in CM but it is marked M

Inspection methods

Initial visual inspection of the site took place in order to familiarize with any irregularities or access problems. The vessels occupy an area in an elevated position which has 360° accessibility making image capture relatively straight forward. There was no insulation present on any of the vessels inspected so removal was not necessary. Images were then captured of all vessels comprehensively recording all lower sections of the vessels and any other areas which may benefit from temperature analysis.

Statement

The suggestions and opinions in this report are interpretations of the thermograms by the thermographer at the time of inspection. These are not definitive comments and do not claim to be absolutes. It is recommended that these interpretations be used in conjunction with other NDT inspection methods to determine the overall condition of the asset. Conclusions are not the responsibility of the thermographer as these should be drawn by the appropriate integrity personnel collating all NDT inspection data.

Thermographic Inspection Specification:

1. IR camera: Flir ThermaCAM P640
2. Software: Reporter 8.3
3. Thermographer: ITC Level II
4. Extech Instruments for humidity/wind speed etc
5. Leico laser distance measurements



Inspection Parameters

Date
9 March 2013

Inspection Parameters				
	Insp. 1	Insp. 2	Insp. 3	Insp. 4
Inspection Commencing	16.30	17.30	21.00	17.30
Weather	Dry	Dry	Dry	Dry
Wind Speed	5kts	22kts	6kts	3kts
Ambient Temperature	22°C	27°C	22°C	15°C
Humidity	63%	67%	84%	63%
Vessel Operating Temperature	55°C	52°C	52°C	52°C
	Inspection 5	Inspection 6	Inspection 7	Inspection 8
Inspection Commencing	15.30	16.00	16.00	12.00
Weather	Dry	Dry	Dry	Dry
Wind Speed	10kts	22kts	5kts	2kts
Ambient Temperature	11°C	14°C	10°C	9
Humidity	69%	76	72%	70%
Vessel Operating Temperature	52°C	52°C	54°C	53°C
	Inspection 9	Inspection 10	Inspection 11	Inspection 12
Inspection Commencing	15.30	15.00	15.00	15.00
Weather	Dry	Dry	Dry	Dry
Wind Speed	10kts	4kts	6kts	7kts
Ambient Temperature	11°C	21°C	35°C	10°C
Humidity	69%	72%	89%	66%
Vessel Operating Temperature	52°C	51°C	53°C	47°C
	Inspection 13	Inspection 14	Inspection 15	Inspection 16
Inspection Commencing	1930	16.00	09.00	07.00
Weather	Dry	Dry	Dry	Dry
Wind Speed	16kts	12kts	5kts	3kts
Ambient Temperature	7°C	21°C	27°C	11°C
Humidity	79%	78%	63%	60%
Vessel Operating Temperature	50°C	47°C	47°C	44°C
	Insp. 17	Insp. 18	Insp. 19	Insp. 20
Inspection Commencing	07.30	19:30	14:00	13:30
Weather	Wet	Wet	Dry	Dry
Wind Speed	17kts	6kts	17kts	4kts
Ambient Temperature	5°C	4 °C	22°C	25°C
Humidity	81%	75 %	82%	67%
Vessel Operating Temperature	36°C	35 °C	36°C	43°C
	Insp. 21	Insp. 22	Insp. 23	Insp. 24
Inspection Commencing	15:00	16:00		
Weather	Dry	Dry		
Wind Speed	19kts	22kts		
Ambient Temperature	12°C	7°C	°C	°C
Humidity	67%	60%	%	%
Vessel Operating Temperature	43°C	45°C	°C	°C



Executive Summary – V21110 HP1

Inspection 1 – 11/06/08

This initial inspection is designed to capture the first thermograms which will be used as a baseline and reference point for each subsequent inspection. Trending between inspections can then take place in order to monitor the sediment levels within along with various temperature measurements.

Inspection 2 – 23/07/08

The sediment level appears unchanged around most of the separator however the West elevation between the saddles shows a small increase of an estimated 7-8cm. The East and dome areas do not replicate this change so image variations between inspections must be accounted for. The next inspections should help to determine the rate of level increase.

Inspection 3 – 13/09/08

The levels appear to be largely unchanged indicating that the distance measurement differentials found between the 1st and 2nd inspections are most likely due to variations in image capture and not down to any significant sediment increases.

Inspection 4 – 27/11/08

Levels appear largely unchanged with any small fluctuations suspected of being caused by the sediment moving around to a slight degree within or simply from the small image variations between inspections

Inspection 5 – 21/02/09

Levels appear largely unchanged with any small fluctuations suspected of being caused by the sediment moving around to a slight degree within or simply from the small image variations between inspections although there does appear to be a very slight reduction in the inlet end and along the central areas to the weir plate.

Inspection 6 – 02/05/09

Steady sediment level from inlet to weir. No significant changes.

Inspection 7 – 04/11/09

Overall the level appears to have decreased from inlet to weir by between 5-10cm.

Inspection 8 – 20/01/10

There does not seem to be any additional sediment in the separator. The level as a whole has reduced and this could be that the existing sediment is settling down further.

Inspection 9 – 02/03/10

Marginal increase towards the Weir by less than an estimated 5-10cm.

Inspection 10 – 12/05/10

Unchanged

Inspection 11 – 11/08/10

Levels showing no significant changes.

Inspection 12 – 27/11/10

There is a small increase of between 5-10cm between the two inspections. A small volume of sand is being produced

Inspection 13 – 08/03/11

There is a small increase of sand across the whole vessel.

Inspection 14 – 01/06/11

There appears to be a small decrease of around 6cm+.#The level is consistently low.

Inspection 15 – 15/09/11

There is a small increase of sand across the whole vessel.

Inspection 16 – 13/12/11

There appears to be no significant changes with in the vessel

Inspection 17 – 28/01/12

Small increased in sediment across entire vessel

Inspection 18 – 08/03/12

Increase on the eastern inlet with slight overall increase across the length of the vessel.

Inspection 19 – 01/06/12

No overall increase in sediment volume – leveling out over full length of vessel.

Inspection 20 – 21/09/12

Small decrease in sediment depth across entire length of vessel.

Inspection 21 – 10/12/12

No significant change in sediment with in vessel

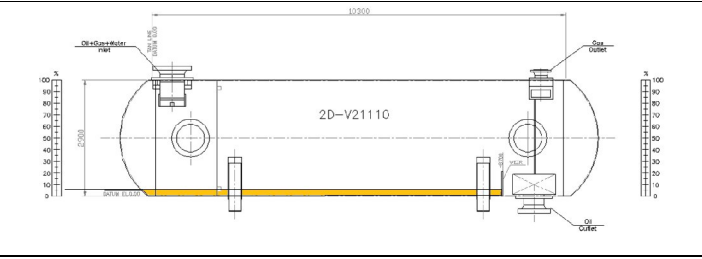
Inspection 22 – 08/12/13

Slight increase in sediment, no significant changes.

Inspection 1 Sediment Level – 11/06/08					Inspection 2 Sediment Level – 23/07/08				
Meters	Inlet	Centre	Weir	Outlet	Meters	Inlet	Centre	Weir	Outlet
	0.3	0.3	0.3	0		0.3	0.3	0.3	0
Inspection 3 Sediment Level – 13/09/08					Inspection 4 Sediment Level – 27/11/08				
Meters	Inlet	Centre	Weir	Outlet	Meters	Inlet	Centre	Weir	Outlet
	0.3	0.3	0.3	0		0.3	0.3	0.3	0

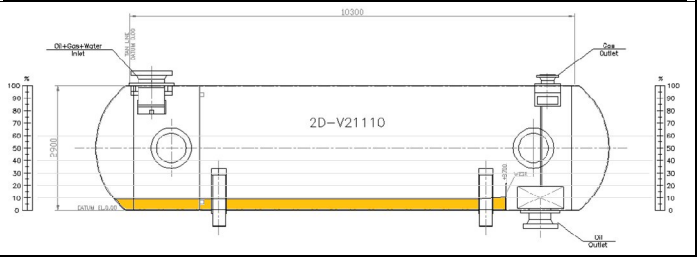
Inspection 5 Sediment Level – 21/02/09

	Inlet	Centre	Weir	Outlet
Meters	0.1	0.2	0.2	0
Suspected sediment level (cm)				
West Elevation				
Suspected sediment level (cm)				



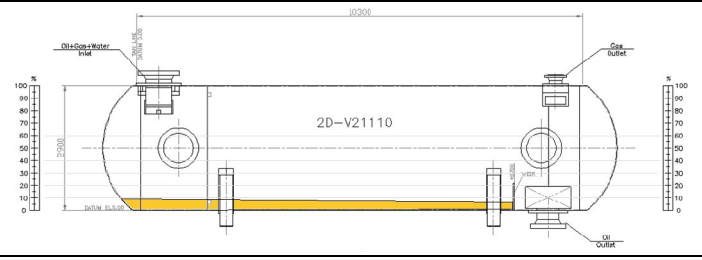
Inspection 6 Sediment Level -03/05/09

East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	28	26	27	26	28
West Elevation					
Suspected sediment level (cm)	31	30	29	27	32



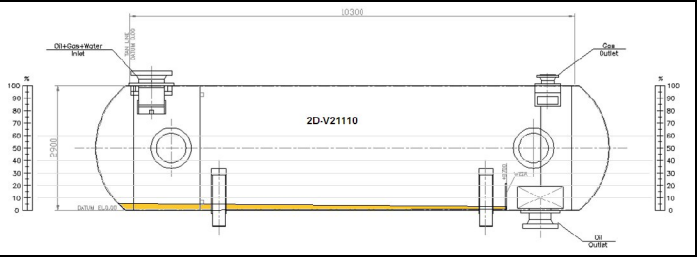
Inspection 7 Sediment Level – 04/11/09

East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	21	24	19	22	21
West Elevation					
Suspected sediment level (cm)	18	23	20	20	19



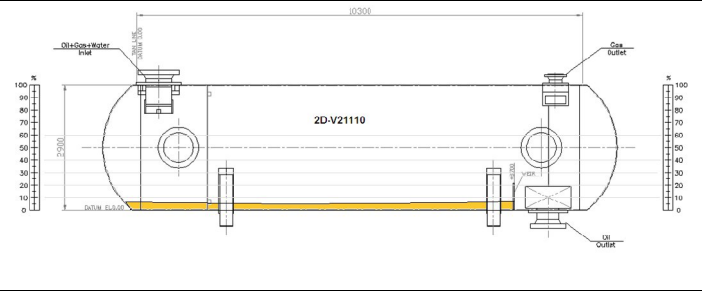
Inspection 8 Sediment Level – 20/01/10

East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	17	16	14	14	9
West Elevation					
Suspected sediment level (cm)	15	13	9	11	8



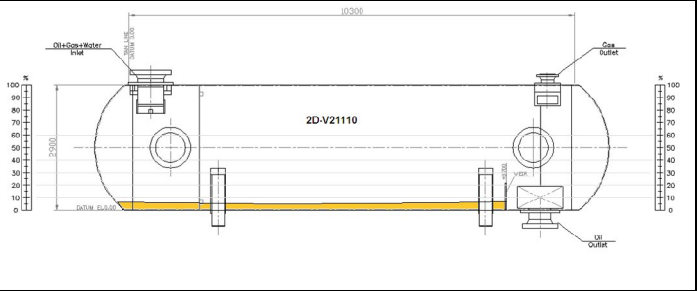
Inspection 9 Sediment Level – 02/03/10

East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	18	15	15	18	19
West Elevation					
Suspected sediment level (cm)	18	15	15	18	19



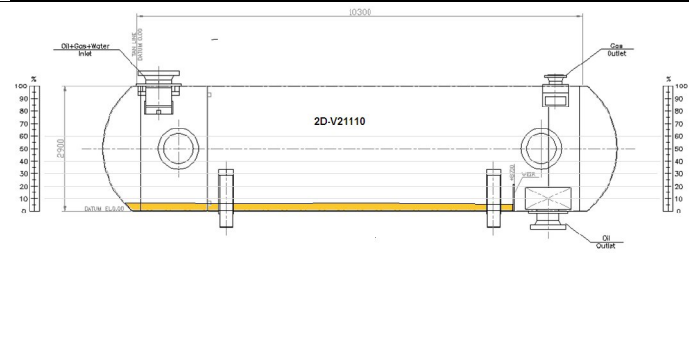
Inspection 10 Sediment Level – 12/05/10

East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	18-21	15-18	21-18	16-18	18
West Elevation					
Suspected sediment level (cm)	17	17-18	17	14-15	14



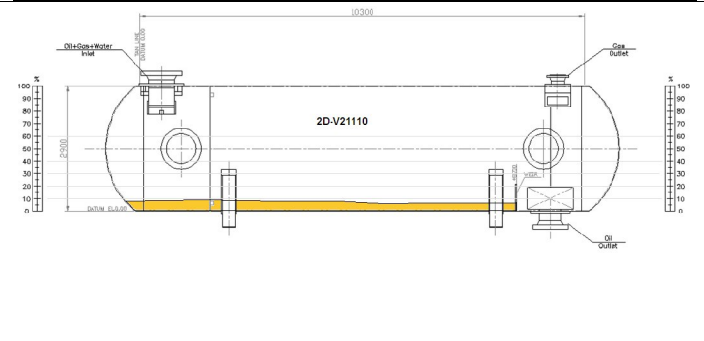
Inspection 11 Sediment Level – 11/08/10

East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	19	14	18	18	14
West Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	14	13	13-16	21	14



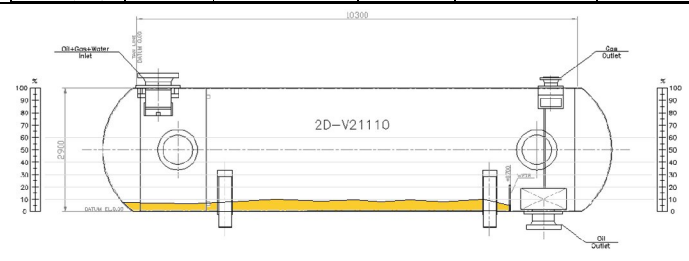
Inspection 12 Sediment Level - 27/11/10

East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	22-25	24-22	20	20-24	20
West Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	22-20	20	19-17	17-19	14



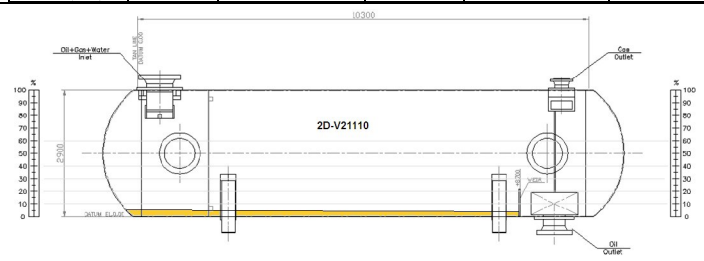
Inspection 13 Sediment Level – 08/03/11

East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	23-20	26-29	29-23	25-23	18
West Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	23-20	21-22	23-25	22-21	22



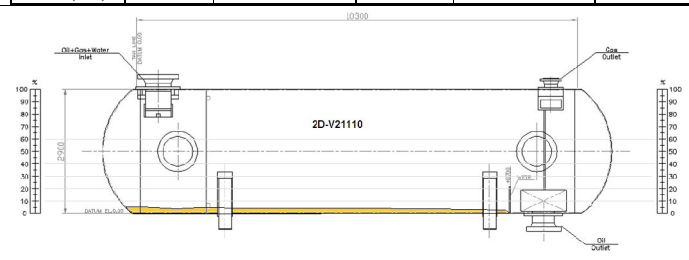
Inspection 14 Sediment Level – 01/06/11

East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	18-8-17	17-17-15	17-15-19	15-14-12	12
West Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	17-15-14	11-10-11	11-11-13	14-10-16	16



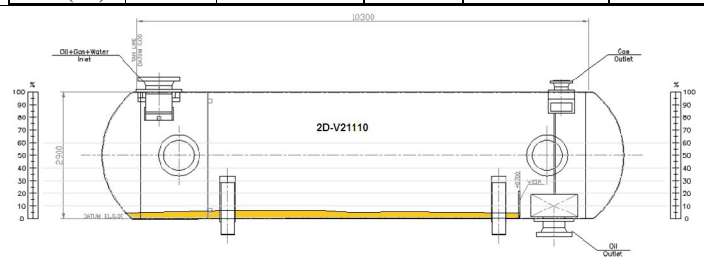
Inspection 15 Sediment Level – 15/09/11

East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	14-10-10	13-10-10	10-11	9	9
West Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	14-14-13	11-11-12	12-13-12	12-12-14	11

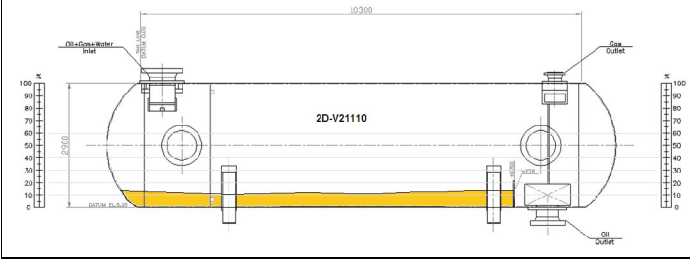


Inspection 16 Sediment Level – 13/12/11

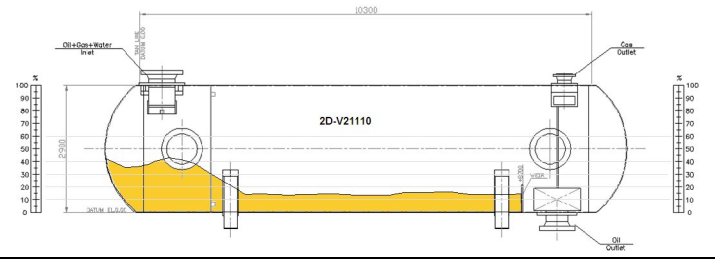
East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	15-19-22	22-22	20-21	20-24	18
West Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	21-21-19	21-19-20	16-16-22	18-16-16	16



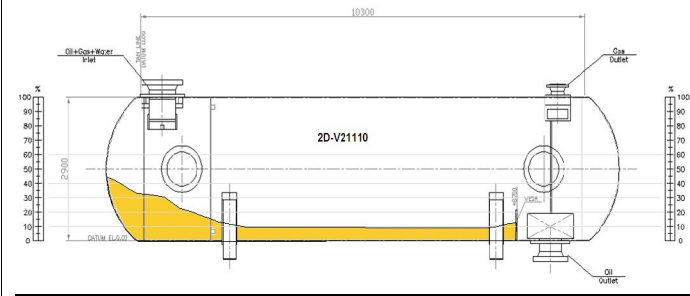
Inspection 17 Sediment Level – 15/09/11					
East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	48-49-48	45-49	47-38	39-43	12
West Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	30-33-34	35-36-38	32-33-35	35-34-39	42



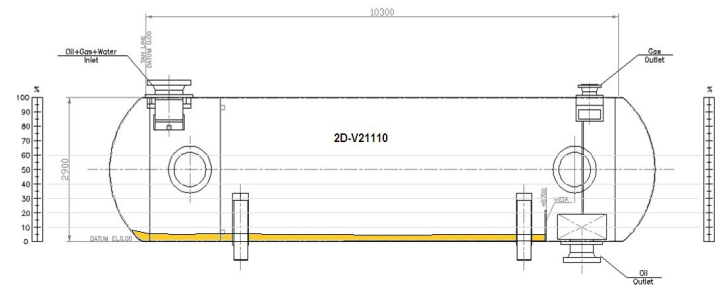
Inspection 18 Sediment Level – 08/03/12					
East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	126-92-28	43-36-38	28-31-29	24-24-24	41
West Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	118-105-115	45-41-45	48-48-48	48-46	46



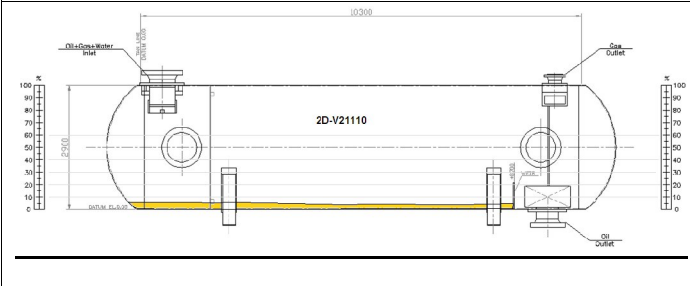
Inspection 19 Sediment Level – 01/06/12					
East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	0	22 - 25 - 28	27 - 28 - 28	25 - 28 - 28	0
West Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	0	130 - 91 - 64	32 - 37 - 35	30 - 29 - 23	43



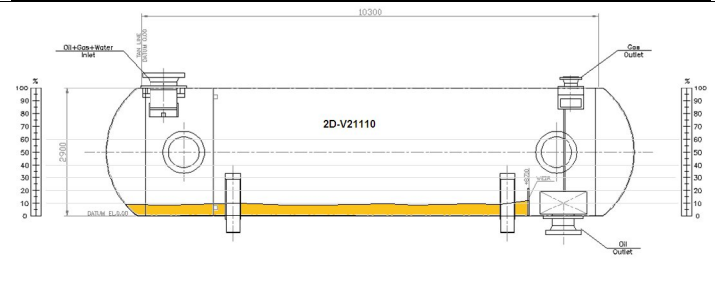
Inspection 20 Sediment Level – 21/09/12					
East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	0	13 - 13 - 14	15 - 17 - 19	14 - 14 - 14	0
West Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	0	14 - 14 - 15	16 - 17 - 17	16 - 17 - 17	0



Inspection 21 Sediment Level – 10/12/12					
East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	25-18-16	17-18	18-19	24-25	11
West Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	6-5-6	5-4-4	18-12-10	13-12-12	16



Inspection 22 Sediment Level – 08/03/13					
East Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	27-26-22	25-25	27-19	19-19	21
West Elevation	Inlet	Inlet saddle - Centre	Centre	Outlet saddle - Centre	Weir
Suspected sediment level (cm)	27-24-26	30-26-27	27-26-30	25-27-25	37

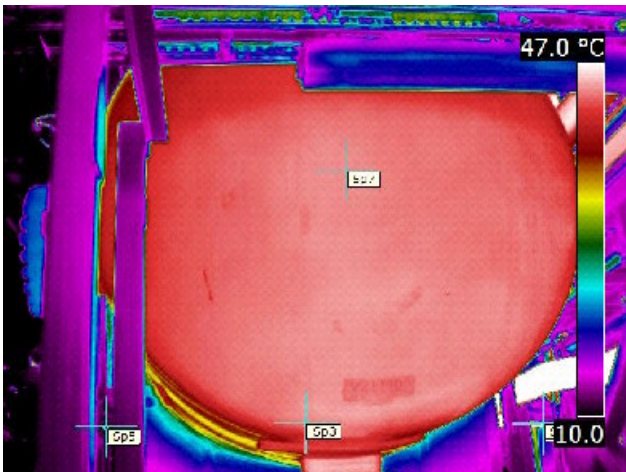




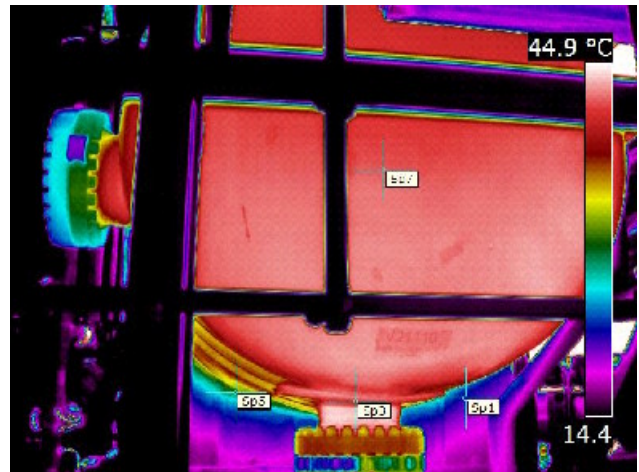
DC_1500.jpg

EQUIPMENT LOCATION:

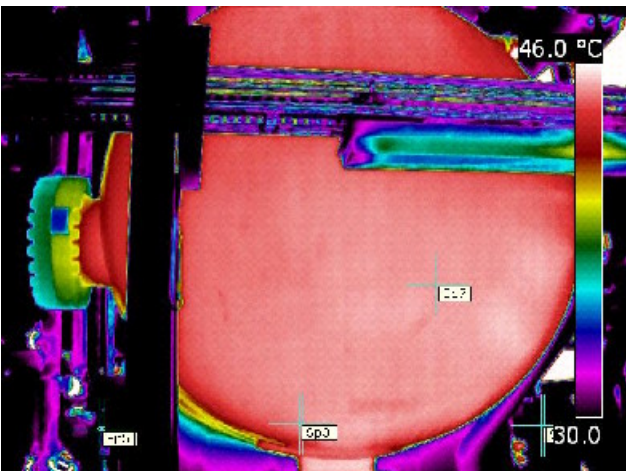
V21110 HP1 \ SOUTH \ OUTLET DOME



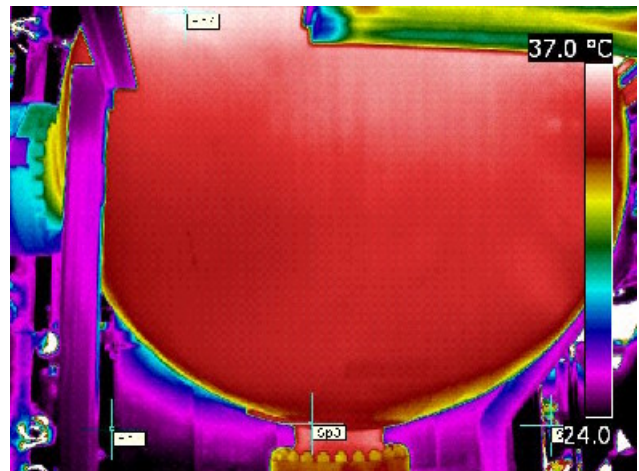
Inspection #: 1877 03/09/2013 IR_1372.jpg



Inspection #: 1861 12/12/2012 IR_1135.JPG



Inspection #: 1850 22/09/2012 IR_12909.jpg



Inspection #: 1839 02/06/2012 IR_1499.jpg

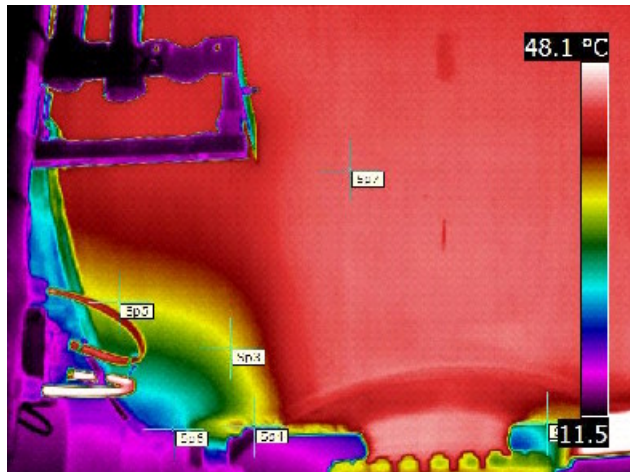
Inspection History (last 4 inspections) :

Inspection No	Date Inspected	Sp1-Sp2	Sp3-Sp4	Sp5-Sp6	Sand Level %		
1744	28/01/2012	0 cm	0 cm	0 cm	Sp1-2 % = 0	Sp3-4 % = 0	Sp5-6 % = 0
1777	08/03/2012	0 cm	0 cm	0 cm	Sp1-2 % = 0	Sp3-4 % = 0	Sp5-6 % = 0
1839	02/06/2012	0 cm	0 cm	0 cm	Sp1-2 % = 0	Sp3-4 % = 0	Sp5-6 % = 0
1850	22/09/2012	0 cm	0 cm	0 cm	Sp1-2 % = 1	Sp3-4 % = 1	Sp5-6 % = 1
1861	10/12/2012	0 cm	0 cm	0 cm	Sp1-2 % = 0	Sp3-4 % = 0	Sp5-6 % = 0
1877	09/03/2013	0 cm	0 cm	0 cm	Sp1-2 % = 0	Sp3-4 % = 0	Sp5-6 % = 0

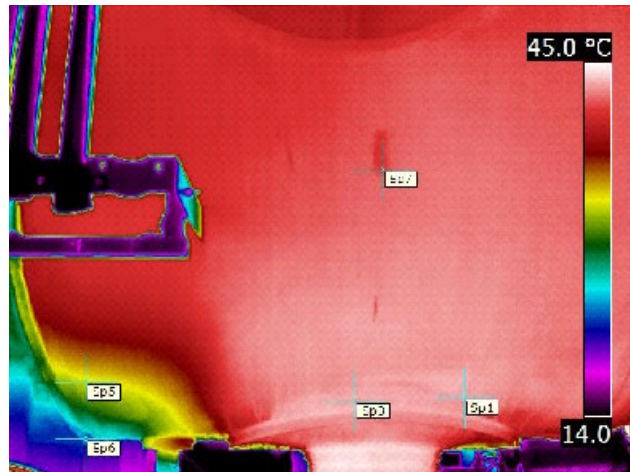


DC_1502.jpg

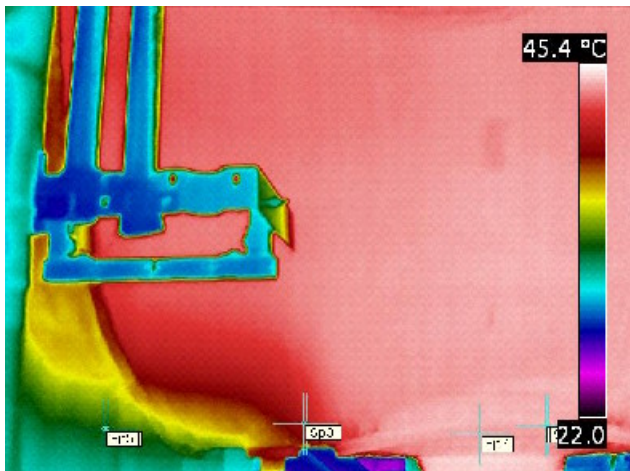
EQUIPMENT LOCATION:
V21110 HP1 \ WEST \ OUTLET DOME - SADDLE



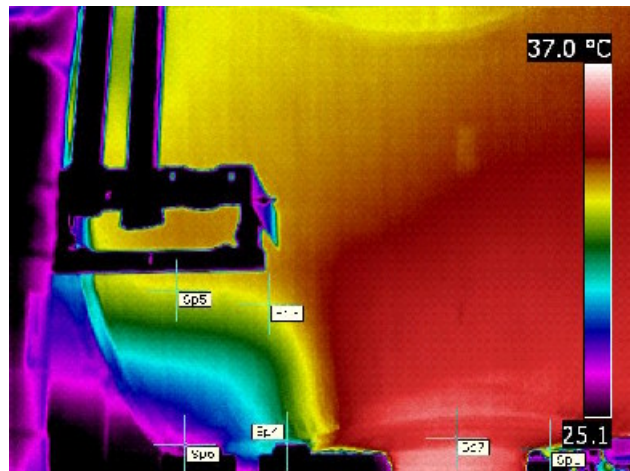
Inspection #: 1877 03/09/2013 IR_1373.jpg



Inspection #: 1861 12/12/2012 IR_1136.JPG



Inspection #: 1850 22/09/2012 IR_12910.jpg



Inspection #: 1839 02/06/2012 IR_1501.jpg

Inspection History (last 4 inspections) :

Inspection No	Date Inspected	Sp1-Sp2	Sp3-Sp4	Sp5-Sp6	Sand Level %		
1744	28/01/2012	0 cm	0 cm	42 cm	Sp1-2 % = 0	Sp3-4 % = 0	Sp5-6 % = 14
1777	08/03/2012	0 cm	1 cm	41 cm	Sp1-2 % = 0	Sp3-4 % = 0	Sp5-6 % = 14
1839	02/06/2012	0 cm	34 cm	38 cm	Sp1-2 % = 0	Sp3-4 % = 12	Sp5-6 % = 13
1850	22/09/2012	0 cm	0 cm	0 cm	Sp1-2 % = 0	Sp3-4 % = 0	Sp5-6 % = 0
1861	10/12/2012	0 cm	0 cm	16 cm	Sp1-2 % = 0	Sp3-4 % = 0	Sp5-6 % = 6
1877	09/03/2013	0 cm	22 cm	37 cm	Sp1-2 % = 0	Sp3-4 % = 8	Sp5-6 % = 13



Sediment Level Trend Report

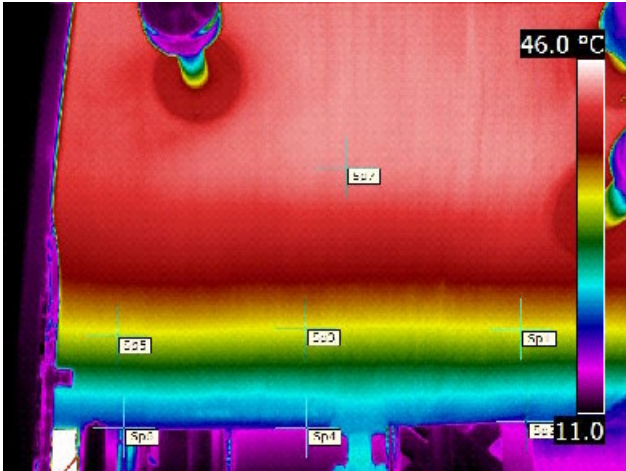
Report Date: 09/03/2013



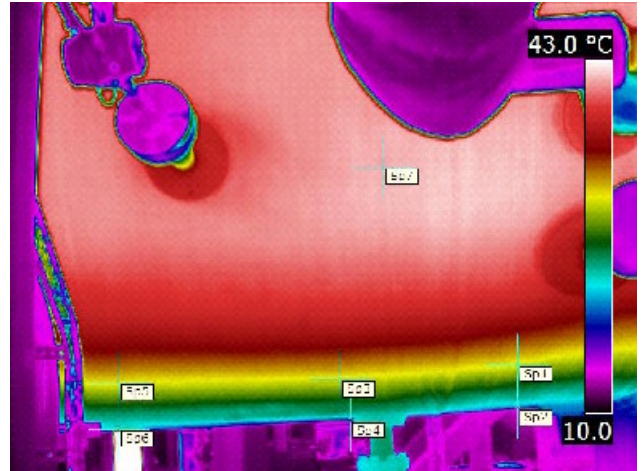
DC_1504.jpg

EQUIPMENT LOCATION:

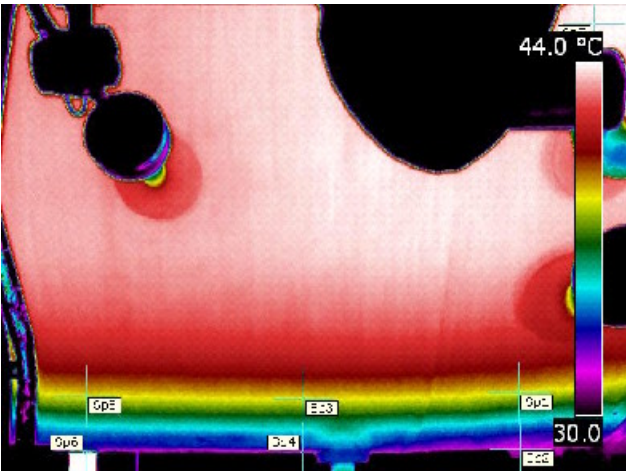
V21110 HP1 \ WEST \ OUTLET SADDLE - CENTER



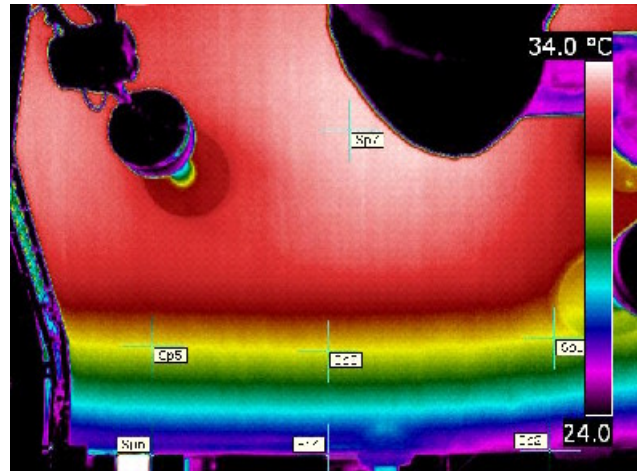
Inspection #: 1877 03/09/2013 IR_1374.jpg



Inspection #: 1861 12/12/2012 IR_1137.JPG



Inspection #: 1850 22/09/2012 IR_12911.jpg



Inspection #: 1839 02/06/2012 IR_1503.jpg

Inspection History (last 4 inspections) :

Inspection No	Date Inspected	Sp1-Sp2	Sp3-Sp4	Sp5-Sp6	Sand Level %		
1744	28/01/2012	39 cm	34 cm	35 cm	Sp1-2 % = 14	Sp3-4 % = 12	Sp5-6 % = 12
1777	08/03/2012	24 cm	24 cm	24 cm	Sp1-2 % = 8	Sp3-4 % = 8	Sp5-6 % = 8
1839	02/06/2012	28 cm	26 cm	27 cm	Sp1-2 % = 10	Sp3-4 % = 9	Sp5-6 % = 9
1850	22/09/2012	14 cm	13 cm	14 cm	Sp1-2 % = 5	Sp3-4 % = 5	Sp5-6 % = 5
1861	10/12/2012	12 cm	12 cm	13 cm	Sp1-2 % = 4	Sp3-4 % = 4	Sp5-6 % = 4
1877	09/03/2013	25 cm	27 cm	25 cm	Sp1-2 % = 9	Sp3-4 % = 9	Sp5-6 % = 8



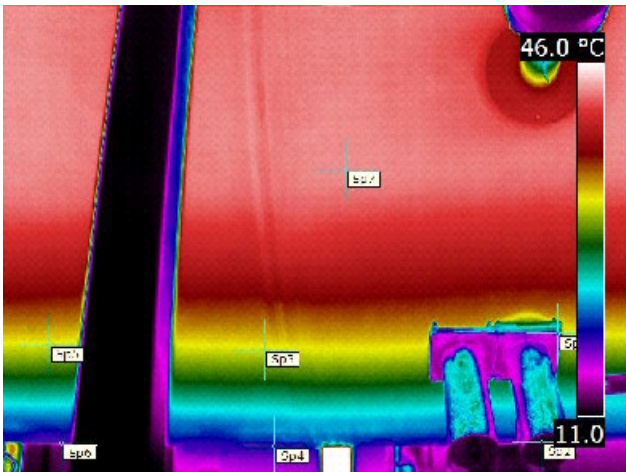
Sediment Level Trend Report

Report Date: 09/03/2013

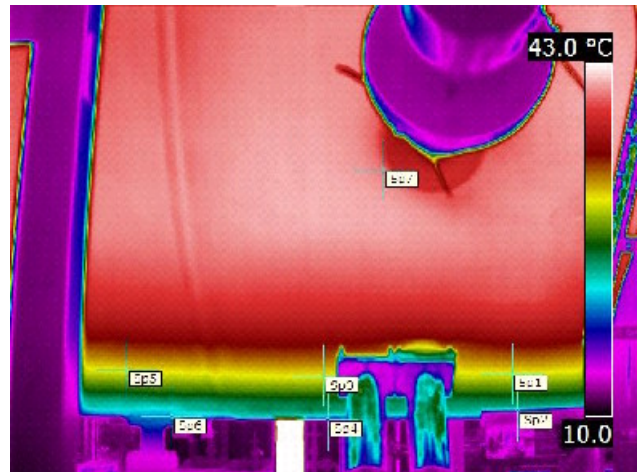


DC_1506.jpg

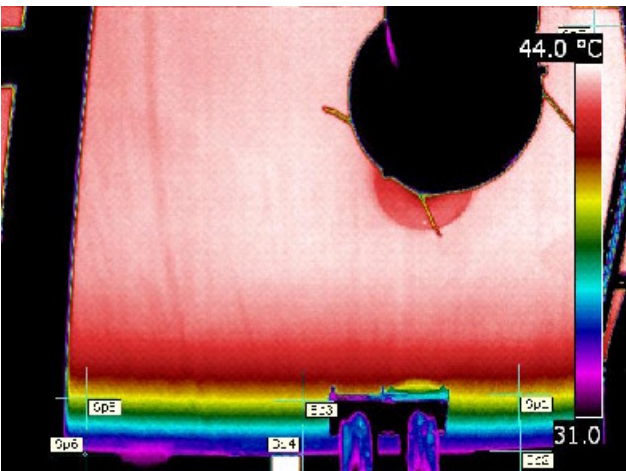
EQUIPMENT LOCATION:
V21110 HP1 \ WEST \ CENTER



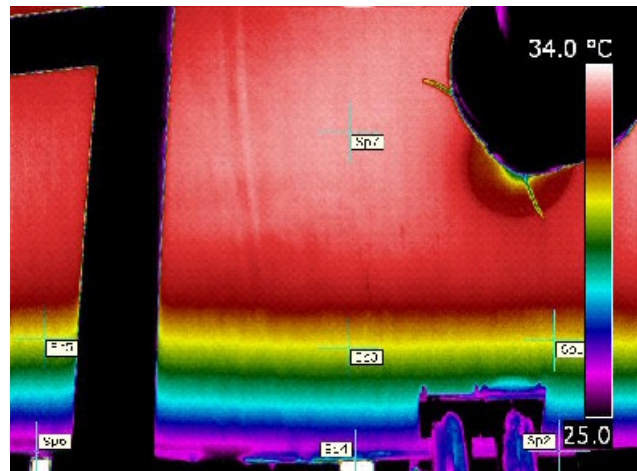
Inspection #: 1877 03/09/2013 IR_1375.jpg



Inspection #: 1861 12/12/2012 IR_1138.JPG



Inspection #: 1850 22/09/2012 IR_12912.jpg



Inspection #: 1839 02/06/2012 IR_1505.jpg

Inspection History (last 4 inspections) :

Inspection No	Date Inspected	Sp1-Sp2	Sp3-Sp4	Sp5-Sp6	Sand Level %		
1744	28/01/2012	35 cm	33 cm	32 cm	Sp1-2 % = 12	Sp3-4 % = 11	Sp5-6 % = 11
1777	08/03/2012	28 cm	31 cm	29 cm	Sp1-2 % = 10	Sp3-4 % = 11	Sp5-6 % = 10
1839	02/06/2012	27 cm	28 cm	28 cm	Sp1-2 % = 9	Sp3-4 % = 10	Sp5-6 % = 10
1850	22/09/2012	14 cm	14 cm	14 cm	Sp1-2 % = 5	Sp3-4 % = 5	Sp5-6 % = 5
1861	10/12/2012	10 cm	12 cm	18 cm	Sp1-2 % = 4	Sp3-4 % = 4	Sp5-6 % = 6
1877	09/03/2013	30 cm	26 cm	27 cm	Sp1-2 % = 10	Sp3-4 % = 9	Sp5-6 % = 9



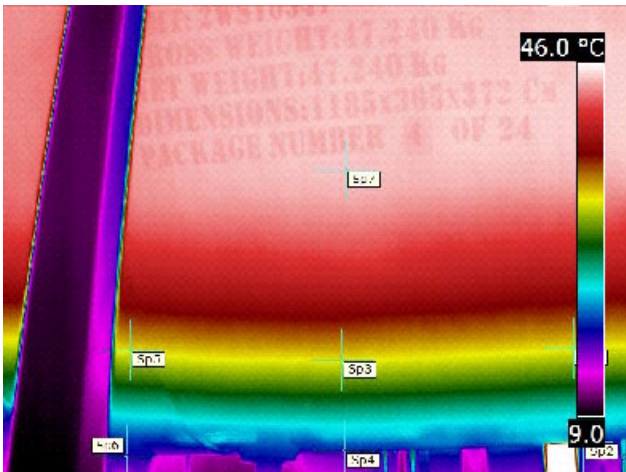
Sediment Level Trend Report

Report Date: 09/03/2013

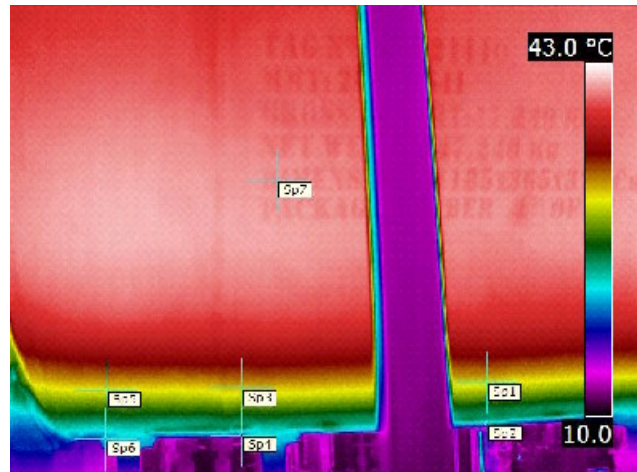


DC_1508.jpg

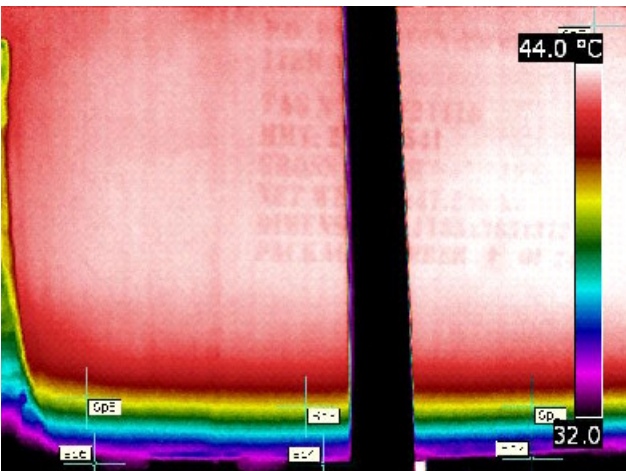
EQUIPMENT LOCATION:
V21110 HP1 \ WEST \ CENTER - INLET SADDLE



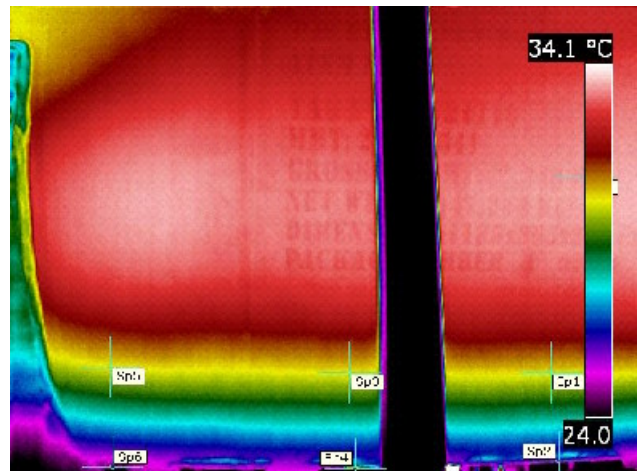
Inspection #: 1877 03/09/2013 IR_1376.jpg



Inspection #: 1861 12/12/2012 IR_1139.JPG



Inspection #: 1850 22/09/2012 IR_12913.jpg



Inspection #: 1839 02/06/2012 IR_1507.jpg

Inspection History (last 4 inspections) :

Inspection No	Date Inspected	Sp1-Sp2	Sp3-Sp4	Sp5-Sp6	Sand Level %		
1744	28/01/2012	35 cm	36 cm	38 cm	Sp1-2 % = 12	Sp3-4 % = 13	Sp5-6 % = 13
1777	08/03/2012	35 cm	36 cm	43 cm	Sp1-2 % = 12	Sp3-4 % = 12	Sp5-6 % = 15
1839	02/06/2012	25 cm	27 cm	28 cm	Sp1-2 % = 9	Sp3-4 % = 9	Sp5-6 % = 10
1850	22/09/2012	15 cm	17 cm	19 cm	Sp1-2 % = 5	Sp3-4 % = 6	Sp5-6 % = 6
1861	10/12/2012	11 cm	13 cm	13 cm	Sp1-2 % = 4	Sp3-4 % = 4	Sp5-6 % = 5
1877	09/03/2013	27 cm	26 cm	30 cm	Sp1-2 % = 9	Sp3-4 % = 9	Sp5-6 % = 10



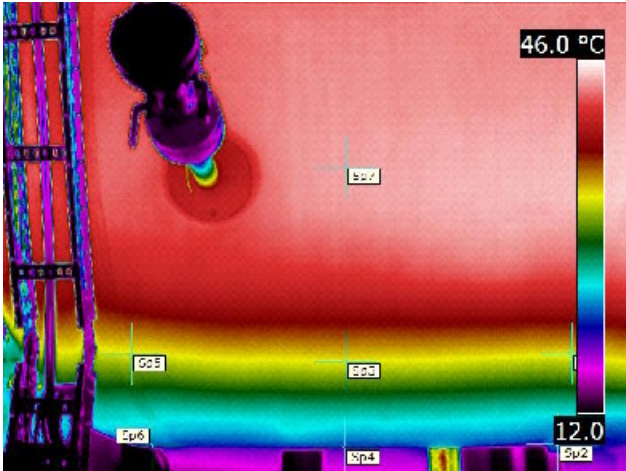
Sediment Level Trend Report

Report Date: 09/03/2013

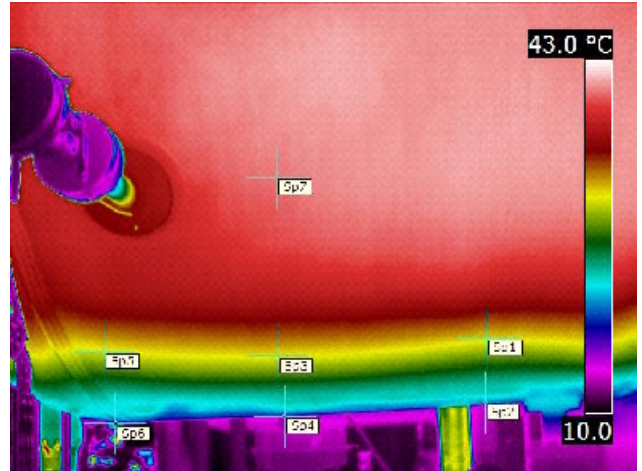


DC_1510.jpg

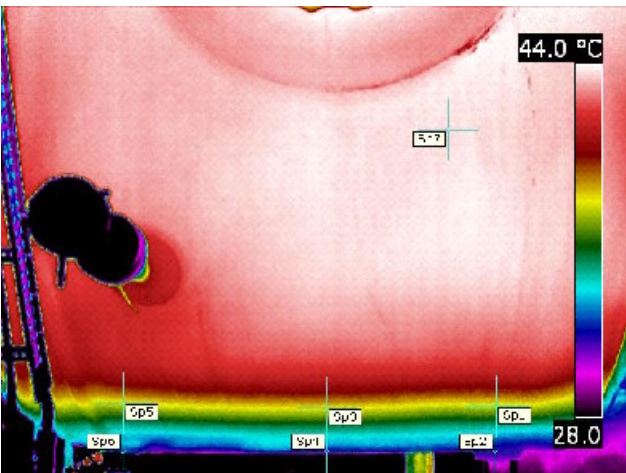
EQUIPMENT LOCATION:
V21110 HP1 \ WEST \ INLET SADDLE - DOME



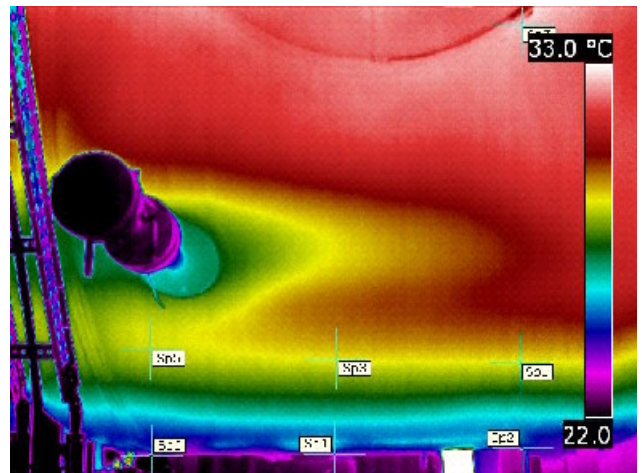
Inspection #: 1877 03/09/2013 IR_1377.jpg



Inspection #: 1861 12/12/2012 IR_1140.JPG



Inspection #: 1850 22/09/2012 IR_12914.jpg



Inspection #: 1839 02/06/2012 IR_1509.jpg

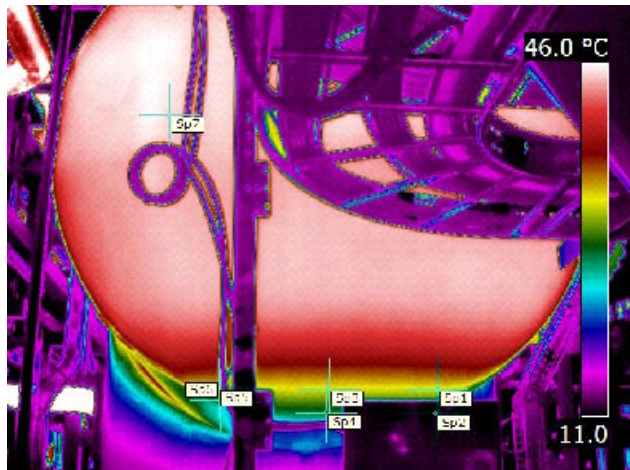
Inspection History (last 4 inspections) :

Inspection No	Date Inspected	Sp1-Sp2	Sp3-Sp4	Sp5-Sp6	Sand Level %		
1744	28/01/2012	30 cm	33 cm	34 cm	Sp1-2 % = 10	Sp3-4 % = 11	Sp5-6 % = 12
1777	08/03/2012	28 cm	31 cm	92 cm	Sp1-2 % = 10	Sp3-4 % = 11	Sp5-6 % = 32
1839	02/06/2012	22 cm	25 cm	28 cm	Sp1-2 % = 8	Sp3-4 % = 8	Sp5-6 % = 10
1850	22/09/2012	13 cm	13 cm	14 cm	Sp1-2 % = 5	Sp3-4 % = 4	Sp5-6 % = 5
1861	10/12/2012	16 cm	15 cm	18 cm	Sp1-2 % = 6	Sp3-4 % = 5	Sp5-6 % = 6
1877	09/03/2013	26 cm	24 cm	27 cm	Sp1-2 % = 9	Sp3-4 % = 8	Sp5-6 % = 9

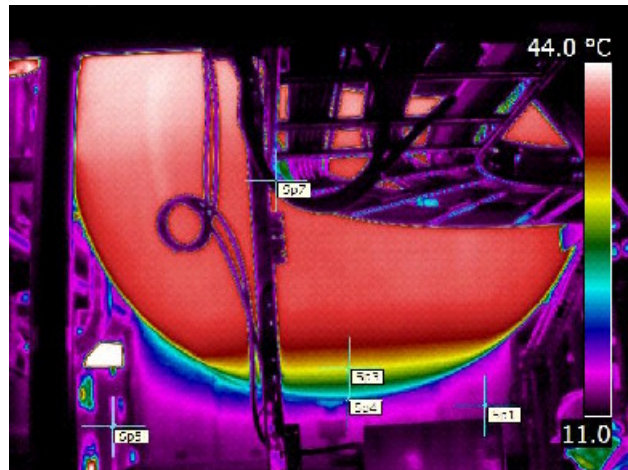


DC_1512.jpg

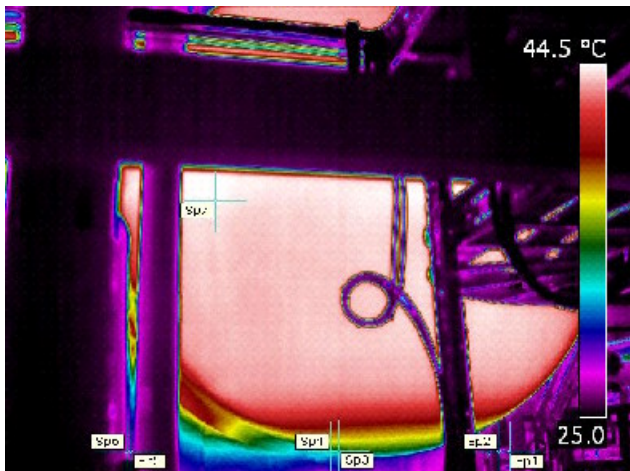
EQUIPMENT LOCATION:
V21110 HP1 \ NORTH \ INLET DOME



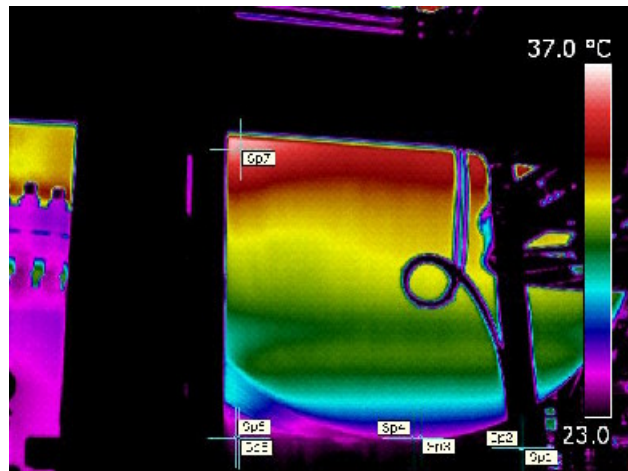
Inspection #: 1877 03/09/2013 IR_1378.jpg



Inspection #: 1861 12/12/2012 IR_1141.JPG



Inspection #: 1850 22/09/2012 IR_12915.jpg



Inspection #: 1839 02/06/2012 IR_1511.jpg

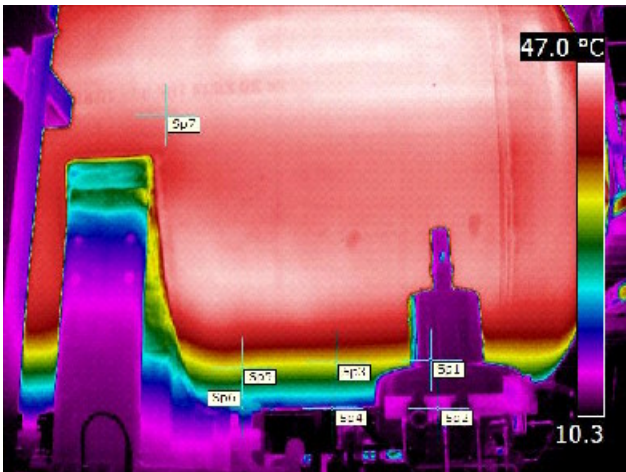
Inspection History (last 4 inspections) :

Inspection No	Date Inspected	Sp1-Sp2	Sp3-Sp4	Sp5-Sp6	Sand Level %		
1744	28/01/2012	25 cm	25 cm	24 cm	Sp1-2 % = 9	Sp3-4 % = 9	Sp5-6 % = 8
1777	09/03/2012	116 cm	126 cm	120 cm	Sp1-2 % = 40	Sp3-4 % = 44	Sp5-6 % = 42
1839	02/06/2012	0 cm	0 cm	0 cm	Sp1-2 % = 0	Sp3-4 % = 1	Sp5-6 % = 1
1850	22/09/2012	0 cm	0 cm	0 cm	Sp1-2 % = 2	Sp3-4 % = 1	Sp5-6 % = 1
1861	10/12/2012	1 cm	15 cm	1 cm	Sp1-2 % = 0	Sp3-4 % = 5	Sp5-6 % = 0
1877	09/03/2013	11 cm	11 cm	6 cm	Sp1-2 % = 4	Sp3-4 % = 4	Sp5-6 % = 2

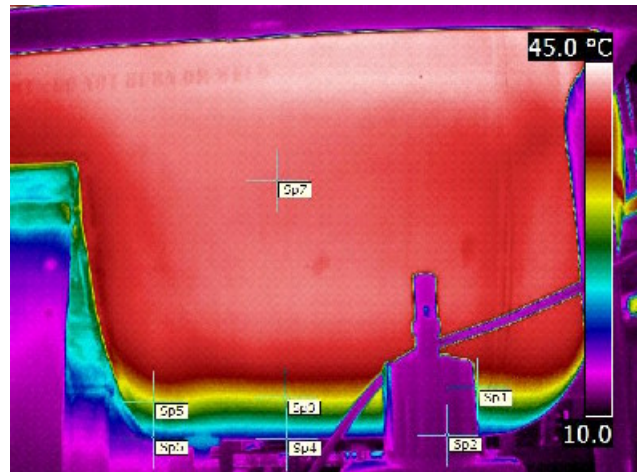


DC_1514.jpg

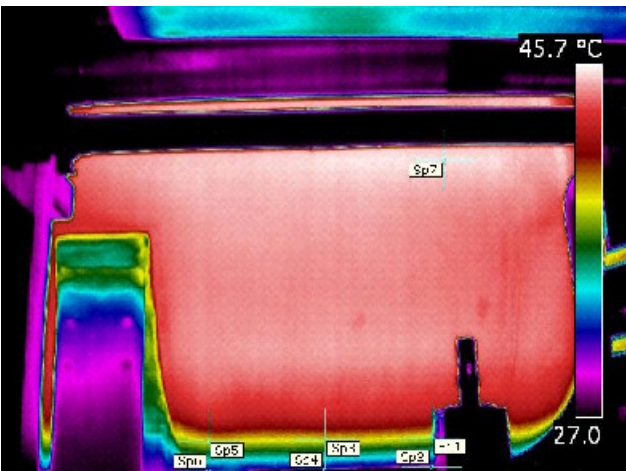
EQUIPMENT LOCATION:
V21110 HP1 \ EAST \ INLET DOME - SADDLE



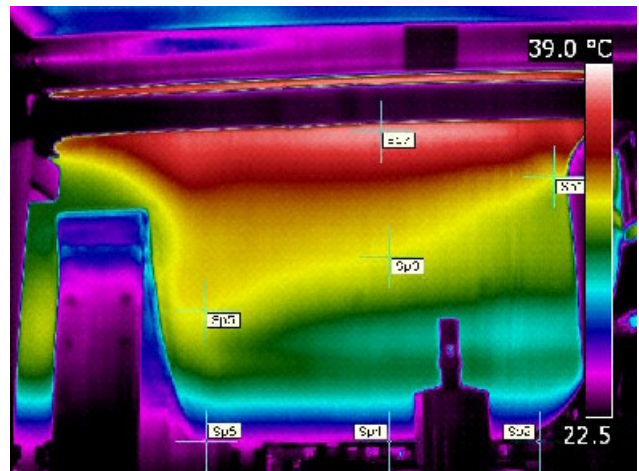
Inspection #: 1877 03/09/2013 IR_1379.jpg



Inspection #: 1861 12/12/2012 IR_1142.JPG



Inspection #: 1850 22/09/2012 IR_12916.jpg



Inspection #: 1839 02/06/2012 IR_1513.jpg

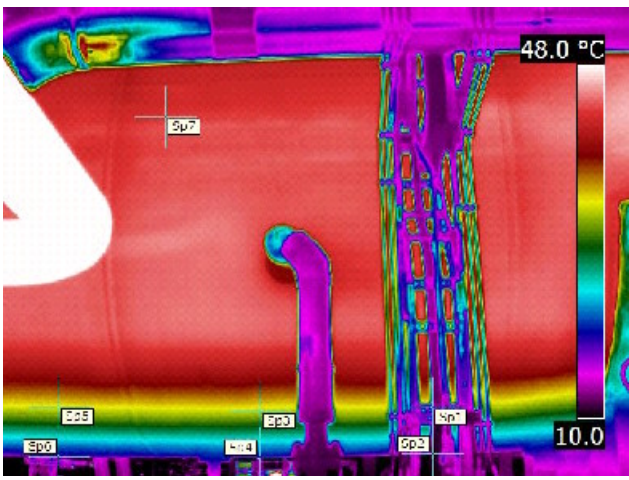
Inspection History (last 4 inspections) :

Inspection No	Date Inspected	Sp1-Sp2	Sp3-Sp4	Sp5-Sp6	Sand Level %		
1744	28/01/2012	48 cm	49 cm	48 cm	Sp1-2 % = 17	Sp3-4 % = 17	Sp5-6 % = 17
1777	09/03/2012	118 cm	105 cm	115 cm	Sp1-2 % = 41	Sp3-4 % = 36	Sp5-6 % = 40
1839	02/06/2012	130 cm	91 cm	64 cm	Sp1-2 % = 45	Sp3-4 % = 31	Sp5-6 % = 22
1850	22/09/2012	14 cm	15 cm	15 cm	Sp1-2 % = 5	Sp3-4 % = 5	Sp5-6 % = 5
1861	10/12/2012	25 cm	18 cm	16 cm	Sp1-2 % = 9	Sp3-4 % = 6	Sp5-6 % = 6
1877	09/03/2013	27 cm	26 cm	22 cm	Sp1-2 % = 9	Sp3-4 % = 9	Sp5-6 % = 8

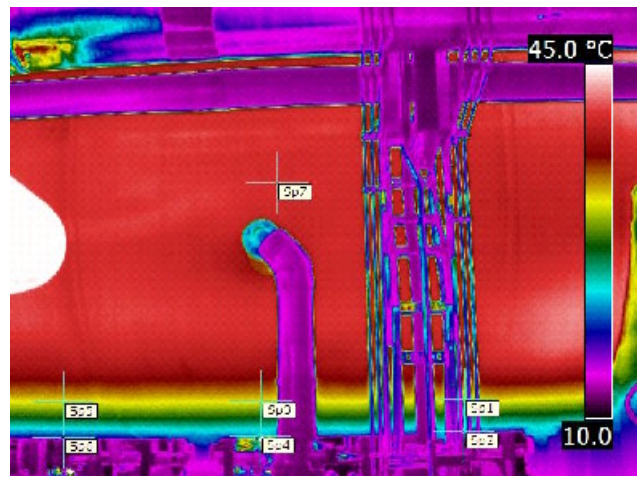


DC_1516.jpg

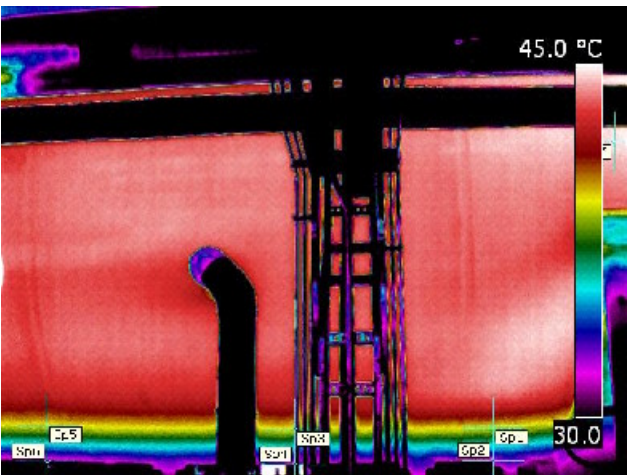
EQUIPMENT LOCATION:
V21110 HP1 \ EAST \ INLET SADDLE - CENTER



Inspection #: 1877 03/09/2013 IR_1380.jpg



Inspection #: 1861 12/12/2012 IR_1143.JPG



Inspection #: 1850 22/09/2012 IR_12917.jpg



Inspection #: 1839 02/06/2012 IR_1515.jpg

Inspection History (last 4 inspections) :

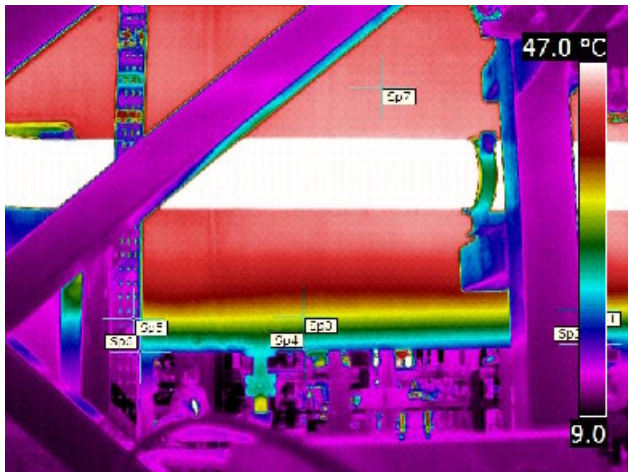
Inspection No	Date Inspected	Sp1-Sp2	Sp3-Sp4	Sp5-Sp6	Sand Level %		
1744	28/01/2012	45 cm	49 cm	47 cm	Sp1-2 % = 15	Sp3-4 % = 17	Sp5-6 % = 16
1777	08/03/2012	45 cm	41 cm	39 cm	Sp1-2 % = 15	Sp3-4 % = 14	Sp5-6 % = 14
1839	02/06/2012	32 cm	37 cm	35 cm	Sp1-2 % = 11	Sp3-4 % = 13	Sp5-6 % = 12
1850	22/09/2012	16 cm	17 cm	17 cm	Sp1-2 % = 6	Sp3-4 % = 6	Sp5-6 % = 6
1861	10/12/2012	17 cm	18 cm	18 cm	Sp1-2 % = 6	Sp3-4 % = 6	Sp5-6 % = 6
1877	09/03/2013	25 cm	25 cm	27 cm	Sp1-2 % = 9	Sp3-4 % = 9	Sp5-6 % = 9



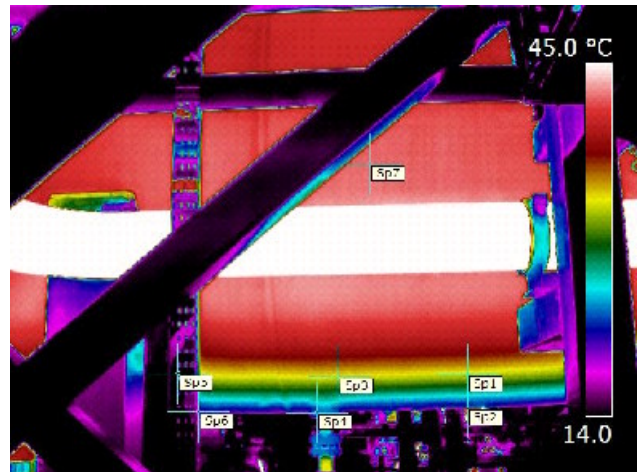
DC_1518.jpg

EQUIPMENT LOCATION:

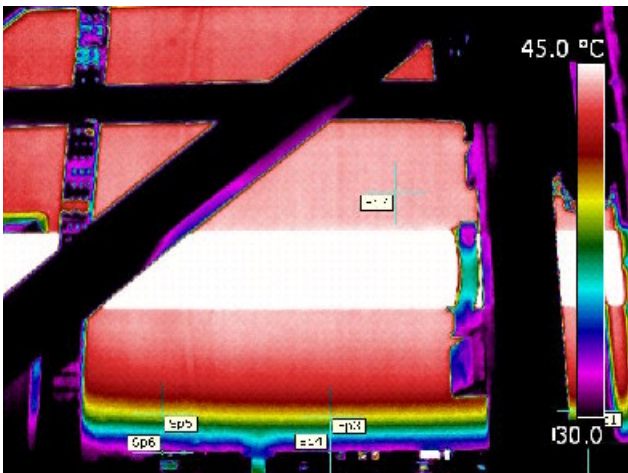
V21110 HP1 \ EAST \ CENTER - OUTLET SADDLE



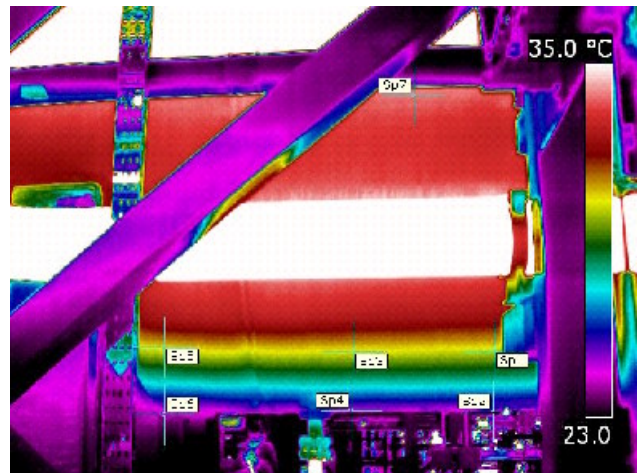
Inspection #: 1877 03/09/2013 IR_1381.jpg



Inspection #: 1861 12/12/2012 IR_1144.JPG



Inspection #: 1850 22/09/2012 IR_12918.jpg



Inspection #: 1839 02/06/2012 IR_1517.jpg

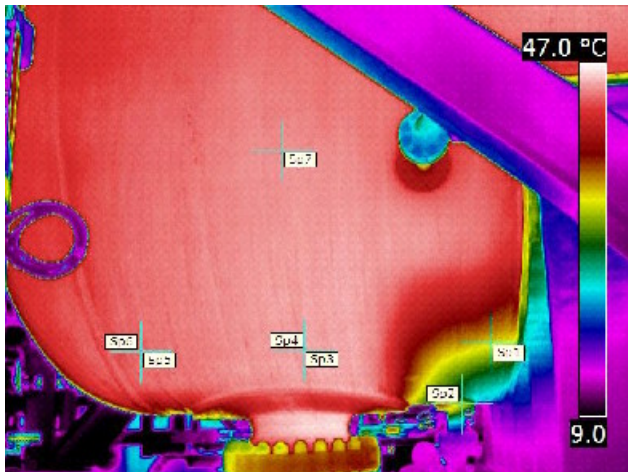
Inspection History (last 4 inspections) :

Inspection No	Date Inspected	Sp1-Sp2	Sp3-Sp4	Sp5-Sp6	Sand Level %		
1744	28/01/2012	38 cm	39 cm	43 cm	Sp1-2 % = 13	Sp3-4 % = 13	Sp5-6 % = 15
1777	08/03/2012	48 cm	48 cm	48 cm	Sp1-2 % = 17	Sp3-4 % = 17	Sp5-6 % = 16
1839	02/06/2012	30 cm	29 cm	23 cm	Sp1-2 % = 10	Sp3-4 % = 10	Sp5-6 % = 11
1850	22/09/2012	16 cm	17 cm	18 cm	Sp1-2 % = 6	Sp3-4 % = 6	Sp5-6 % = 6
1861	10/12/2012	19 cm	24 cm	25 cm	Sp1-2 % = 7	Sp3-4 % = 8	Sp5-6 % = 9
1877	09/03/2013	19 cm	19 cm	19 cm	Sp1-2 % = 7	Sp3-4 % = 6	Sp5-6 % = 7

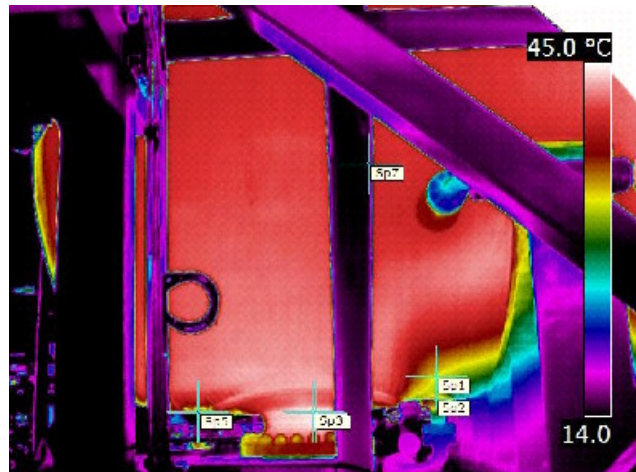


DC_1520.jpg

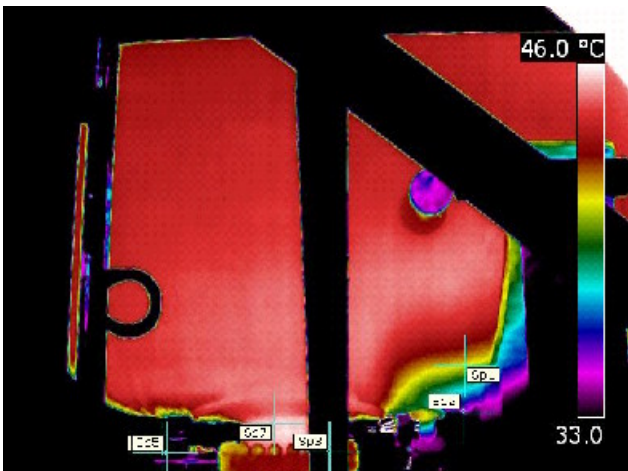
EQUIPMENT LOCATION:
V21110 HP1 \ EAST \ OUTLET SADDLE - DOME



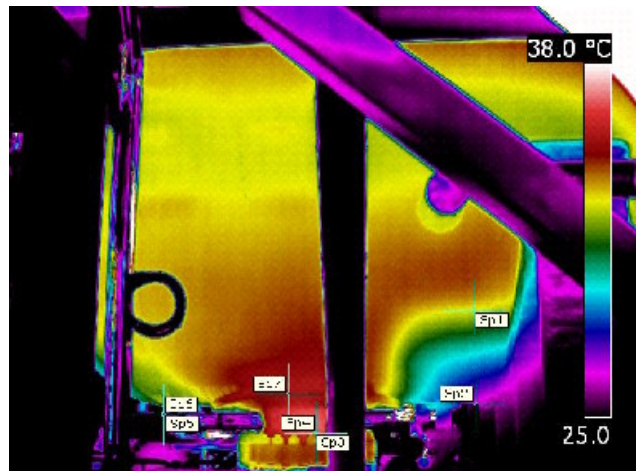
Inspection #: 1877 03/09/2013 IR_1382.jpg



Inspection #: 1861 12/12/2012 IR_1145.JPG



Inspection #: 1850 22/09/2012 IR_12919.jpg



Inspection #: 1839 02/06/2012 IR_1519.jpg

Inspection History (last 4 inspections) :

Inspection No	Date Inspected	Sp1-Sp2	Sp3-Sp4	Sp5-Sp6	Sand Level %		
1744	28/01/2012	12 cm	0 cm	0 cm	Sp1-2 % = 12	Sp3-4 % = 0	Sp5-6 % = 0
1777	08/03/2012	46 cm	1 cm	2 cm	Sp1-2 % = 16	Sp3-4 % = 0	Sp5-6 % = 1
1839	02/06/2012	43 cm	0 cm	0 cm	Sp1-2 % = 15	Sp3-4 % = 0	Sp5-6 % = 0
1850	22/09/2012	21 cm	0 cm	0 cm	Sp1-2 % = 7	Sp3-4 % = 0	Sp5-6 % = 1
1861	10/12/2012	11 cm	2 cm	1 cm	Sp1-2 % = 4	Sp3-4 % = 1	Sp5-6 % = 0
1877	09/03/2013	21 cm	0 cm	0 cm	Sp1-2 % = 7	Sp3-4 % = 0	Sp5-6 % = 0