



**PRESSURE VESSEL
VISUAL INSPECTION
REPORT**

Report #: **123844-DB-08**
Inspect Date: 07/16/2010
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Insp. Co. Job #: 123844

Criticality Designation:

Green

Insp. Comp: Matrix_Inspection District: Slave Lake Field: North Britnell
Location: 06-26-082-20 W4 Unit / Skid #: Pad # 24 Polymer LSD: 06-26-082-20 W4
Jurisdiction #: A0510882 Equip Tag #: N/A Serial #: 3497-1
CRN #: R5736.2 Nat'l Bd #: N/A Year Built: 2004
Manufacturer: MOSS FABRICATION LTD. Equipment Description: FILTER
Status: In Service - Equip. Type: Vessel: Filter Service: Sweet
MAWP Shell: 720 Psi @ 130 °F Volume: Code Stamp: ☒ Y ☐ N
MAWP Tube: @ Height/Length: 40 in. Insulated: ☐ Y ☒ N
MDMT: -20 °F RT: RT-2 Size/Diameter.: 34 in. O.D. PWHT: ☐ Y ☒ N
Support Legs Vessel on Original CNRL Inventory List: ☐ Y ☒ N Manway: ☒ Y ☐ N
C.A.: N/A Coated: No Clad: No J.E.: N/A Remote Access: ☐ -

Component	Material	Nominal Thk	Diameter	OD/ID	Tube Side	Shell Side
1 Main - Shell	NOT STATED		34.000	OD	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2 Top - Head	NOT STATED		34.000	OD	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 Bottom - Head	NOT STATED		34.000	OD	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 -					<input type="checkbox"/>	<input type="checkbox"/>
5 -					<input type="checkbox"/>	<input type="checkbox"/>

Static Data: Confirmed ☒ Changed (See Comments) ☐

Comments:

Nameplate attached and legible.
Adequate information stated.

PSV Static Data

PSV -1 Tag #: N/A Serial #: N/A CRN: N/A
Model #: N/A Capacity: N/A Set Pressure: N/A
Manufacturer: N/A Service Company: N/A
Inlet Size & Type: - Last Service Date: N/A
Outlet Size & Type: - Block Valve: N/A -
Carseal Intact: Code Stamp:
Shell Side / Tube Side: Out for Service During Insp.: Location of PSV:

PSV -2 Tag #: N/A Serial #: N/A CRN: N/A
Model #: N/A Capacity: N/A Set Pressure: N/A
Manufacturer: N/A Service Company: N/A
Inlet Size & Type: - Last Service Date: N/A
Outlet Size & Type: - Block Valve: N/A -
Carseal Intact: Code Stamp:
Shell Side / Tube Side: Out for Service During Insp.: Location of PSV:

PSV Comments

NO ACCESS TO PSV. INSULATED.



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External Inspection Results – VE External Inspection Performed

Item	N/A	Condition	Comment (Check Status Bar or Press F1 for Help)	NCR	Action Item Integrity	Action Item Maintenance
Nameplate	<input type="checkbox"/>	Accept	Name plate attached and legible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Foundation and Supports	<input type="checkbox"/>	Accept	Foundation, and supports good condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anchor Bolts	<input type="checkbox"/>	Accept	Anchor bolts in good condition, and tight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grounding	<input type="checkbox"/>	Accept	Ground wire clean and tightly attached to skid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation Condition	<input checked="" type="checkbox"/>		Not applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PSV	<input checked="" type="checkbox"/>		No access to PSV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shell Heads & Nozzles	<input type="checkbox"/>	Accept	In good condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metal Surfaces (Paint)	<input type="checkbox"/>	Accept	Paint in good condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aux Equipment	<input checked="" type="checkbox"/>		Not applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cathodic Protection	<input checked="" type="checkbox"/>		Not applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alignment	<input type="checkbox"/>	Accept	Alignment is good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flange Connections	<input type="checkbox"/>	Accept	Flanges are tight, bolts good condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pressure Gauge	<input type="checkbox"/>	Accept	Pressuregauge clean and functional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temperature Gauge	<input checked="" type="checkbox"/>		Not applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sight Glass	<input checked="" type="checkbox"/>		Not applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ladder / Platform	<input checked="" type="checkbox"/>		Not applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leaks	<input type="checkbox"/>	No	No evidence of leakage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Piping from Vessel	<input type="checkbox"/>	Accept	Piping in good condition, well supported, no evidence of leakage			
Previous UT Survey	<input type="checkbox"/>	No	No previous inspection	UT Company:		

External Visual Observations

Davot arm is in good condition and functional
 Pressure gauge functional.
 Overall good condition Piping well supported and clean
 No evidence of product leakage
 *No access to PSV
 Paint in good condition
 Anchor bolts in good condition, and tight
 Foundation, and supports good condition
 Flanges are tight, bolts good condition
 Piping in good condition, well supported, no evidence of leakage

Recommendations:

No problems noted



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Internal Inspection Results – VI N/A (Not Applicable)

Item	N/A	Condition	Comment (Check Status Bar or Press F1 for Help)	NCR	Action Item Integrity	Action Item Maintenance
Shell	<input checked="" type="checkbox"/>		No Internal Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heads	<input checked="" type="checkbox"/>		No Internal Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manway	<input checked="" type="checkbox"/>		No Internal Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gasket Surfaces	<input checked="" type="checkbox"/>		No Internal Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Welds	<input checked="" type="checkbox"/>		No Internal Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Refractory	<input checked="" type="checkbox"/>		No Internal Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heating Coils	<input checked="" type="checkbox"/>		No Internal Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demister Pad	<input checked="" type="checkbox"/>		No Internal Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vane Pack	<input checked="" type="checkbox"/>		No Internal Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Baffles	<input checked="" type="checkbox"/>		No Internal Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trays	<input checked="" type="checkbox"/>		No Internal Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Filter	<input checked="" type="checkbox"/>		No Internal Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internal Coating	<input checked="" type="checkbox"/>		No Internal Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tubesheet	<input checked="" type="checkbox"/>		No Internal Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tube Bundle	<input checked="" type="checkbox"/>		No Internal Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Internal Visual Observations

No Internal Inspection Carried Out

Recommendations:

No Internal Inspection Carried Out



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Firetube Static Data N/A (Not Applicable)

Diameter: Not Applicable Nom Thickness: Not Applicable Bend: Not Applicable
Length: Not Applicable Firetube Description: Not Applicable
Firetube NDE UT ☐ Report#: Not Applicable ET ☐ Report#: Not Applicable
Performed: MT ☐ Report#: Not Applicable RT ☐ Report#: Not Applicable
PT ☐ Report#: Not Applicable Other ☐ Report#: Not Applicable

Firetube Inspection Results

Item	N/A	Condition	Comment (Check Status Bar or Press F1 for Help)	NCR	Action Item Integrity	Action Item Maintenance
Burner	<input checked="" type="checkbox"/>		No Firetube Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stack	<input checked="" type="checkbox"/>		No Firetube Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flange (Throat)	<input checked="" type="checkbox"/>		No Firetube Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tube Sheet	<input checked="" type="checkbox"/>		No Firetube Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hot Side	<input checked="" type="checkbox"/>		No Firetube Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Miter	<input checked="" type="checkbox"/>		No Firetube Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Return Bend	<input checked="" type="checkbox"/>		No Firetube Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supports	<input checked="" type="checkbox"/>		No Firetube Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Butt Welds	<input checked="" type="checkbox"/>		No Firetube Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fillet Welds	<input checked="" type="checkbox"/>		No Firetube Inspection Carried Out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Firetube Visual Observations

No Firetube Inspection Carried Out

Recommendations:

No Firetube Inspection Carried Out



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Vessel NDE and Final Summary:

UT	<input checked="" type="checkbox"/>	Report#:	ET	<input type="checkbox"/>	Report#:
NDE Performed: MT	<input type="checkbox"/>	Report#:	RT	<input type="checkbox"/>	Report#:
PT	<input type="checkbox"/>	Report#:	Other	<input type="checkbox"/>	Report#:

Maxi-Trak Observations Summary (Summarize inspection results Max 255 Characters):

Vessel is in good external condition.

Maxi-Trak Recommendations Summary (Summarize Recommendations Max 255 Characters):

This vessel and the components associated with it are in good external condition. No access to psv. Continue to reinspect at regular intervals.

Actions Corrected at Time of Inspection: (If actions were corrected at the time of Inspection – note the corrected actions here.)

Not applicable

Additional Visual Observations

Vessel is in good condition externally.

Any other safety concerns or observations from associated equipment: (for example associated piping, buildings, pumps etc...)

Minor fouling on top from removal of old filter.



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Thickness and Remaining Life Evaluation “ **Must be Completed** ”

MUST BE COMPLETED AND RESOLVED WITH CNRL IMMEDIATELY UPON DISCOVERY OF LOW WALL THICKNESS AREAS

Step 1: Was any thickness measurement location found to be less than (Nominal WT – Corrosion Allowance)?: **No**

If YES, proceed to Step 2; if NO, proceed to “Crack Evaluation” and “CNRL Criticality Designation”.

Step 2: Which component(s) were found below (Nominal WT – Corrosion Allowance)?

Components found below Nom - CA:

Components
N/A - N/A
N/A - N/A
N/A - N/A
N/A - N/A
N/A - N/A

Perform Steps 3 – 8 for each component with actual thickness less than (Nominal WT – Corrosion Allowance).

Step 3: Describe Location and Extent of Corrosion:

Components	Location and Extent of Corrosion
N/A - N/A	Not Applicable for this Inspection
N/A - N/A	Not Applicable for this Inspection
N/A - N/A	Not Applicable for this Inspection
N/A - N/A	Not Applicable for this Inspection
N/A - N/A	Not Applicable for this Inspection

Notes:

Not Applicable for this Inspection

Step 4:

- For shells and nozzles, calculate minimum required thickness (T-min) as per ASME Section VIII UG-27.
- For heads, calculate minimum required thickness (T-min) as per ASME Section VIII UG-32.

Components	T-Min
N/A - N/A	N/A
N/A - N/A	N/A
N/A - N/A	N/A
N/A - N/A	N/A
N/A - N/A	N/A



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Thickness and Remaining Life Evaluation (Continued)

Step 5: Is any measured thickness less than calculated minimum required thickness (T-min)? **N/A**

*If YES, complete Step 6
If NO, proceed to Step 7..*

Step 6: Is nature and extent of pitting acceptable as per API 510? **N/A**

Step 7: Calculate Remaining Life as per API 510. How? (Find last reading; use nominal thickness if nothing available). Short Term Corrosion Rates and Long Term Corrosion Rates.

Components	Remaining Life (Yrs)
N/A - N/A	N/A
N/A - N/A	N/A
N/A - N/A	N/A
N/A - N/A	N/A
N/A - N/A	N/A

Step 8: Contact CNRL Integrity Coordinator to discuss above results.

- Name of CNRL contact: Not Applicable for this Inspection
- Date and time of conversation: Not Applicable for this Inspection

Summary/results of conversation:
Not Applicable for this Inspection

Crack Evaluation by Magnetic Particle or Alternative Inspection “Must be Completed”

MUST BE COMPLETED AND RESOLVED WITH CNRL IMMEDIATELY UPON DISCOVERY OF CRACK-LIKE INDICATIONS

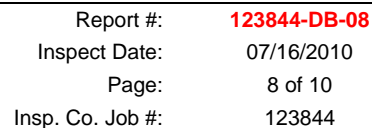
Were any indications found to suggest the vessel contained cracks? **No**

If NO, proceed to “CNRL Criticality Designation”.

If YES, Contact CNRL Integrity Coordinator to discuss results.

- Name of CNRL contact: Not Applicable for this Inspection
- Date and time of conversation: Not Applicable for this Inspection

Summary/results of conversation:
Not Applicable for this Inspection



Criticality Designation							Green		
Vehicle #:	321	Kms:				Inspector (Name):	DENNIS BOWLBY	PESL:	
Time In:	00:00	Time Out:	00:00	Hrs		Inspector (Signature):		API:	34104
Time In:	00:00	Time Out:	00:00	Hrs		CNRL Coordinator (Name):			
Personnel:						CNRL Coordinator (Signature):			
Billing Info:	:					CNRL Chief Inspector (Signature):	(I am in full agreement with report contents)		
							(I am in full agreement with report contents)		

Equipment Photographs:



101_2156



101_2162



101_2163