

PRESSURE VESSEL & COLUMN INSPECTION REPORT

SAP#	62065570	Date:	April 26, 2022	LSD	01-30-044-26 w 3	Report #	IR220426GENa
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VESSEL STATIC DATA

Plant:	MANITOU	Op Unit:	SWS	Work Order:	60894919
Prov. Insp.#	SK 19702 NB -	CRN	A1952.3	Equip. Tag#	V-101
Description:	FREE WATER KNOCKOUT	Serial #:	91-1275	Year Built:	1991
Manufacturer:	IP CONSTRUCTORS LTD	Vessel Class:	TREATERS		
MAWP:	517 Kpa @ 50 °C	MDMT:	-29 °C		
Shell Material:	SA-516-70	Thickness:	9.5 mm	Corr. Allowance:	1.6 mm
Head Material:	SA-516-70	Thickness:	10.6 / 16.0 mm	Corr. Allowance:	1.6 mm
Nozzle Material:	SA-106B	Thickness:	12.7 / 7.6 mm	Corr. Allowance:	mm
Code:	ASME VIII (U)	RT	2	PWHT:	No
Internal Access:	Yes	Type:	Manway	Internal Coating:	Yes
Painted:	Yes	Insulated:	Yes	Location:	Outside Portion
Product Description:	Crude Oil / Water / Gas	Sweet	Operating Pressure:	- Kpa @ - °C	

62065110

PSV DATA

SAP# Number:	N/A	Bar Code:	-	Inlet Size	mm	88.9	Type:	ANSI 150
Serial Number:	CE-35511-A14	Outlet Size	mm	114.3	Type:	ANSI 150		
Manufacturer:	FARRIS	Service Date:	m/d/y	N/A				
Model:	26LA10L-120/S6	Service Company:	N/A	ID#	N/A			
Set Pressure	Kpa	517	Capacity	USGPM	713	Location:	TOP OF FWKO	

INSPECTION SUMMARY

External:

A visual external inspection performed to the applicable standards did not identify any concerns with the pressure boundary of this equipment, there were no significant deficiencies noted.

This equipment was idle at the time of inspection.

A thorough inspection to verify the equipment's integrity was done by VE and UT.

The nameplate is intact and legible.

The PSV service tag is missing.

No NCR's were issued at this time.

This item of pressure equipment may be considered "Fit for Continued Service".

Internal:

There was no internal inspection or NDE performed at this time, the scope of work was for an external inspection only.

NDE:

UT was performed to confirm remaining thicknesses.

The readings are within acceptable limits.

See the UT results below.

RECOMMENDATIONS

The PSV should be retagged if it was serviced recently or it should be sent away for servicing.

The damaged insulation cladding should be repaired.

The cladding penetrations require some sealant.

NONCONFORMANCES / INSPECTION DEFICIENCIES

INSPECTION PLANNING

Inspection Strategy	Availability	Inspection Interval	5 yrs
Inspection Date	04/2022	Date of Last Inspection	Date of Next Inspection
			04/2027

REPORT CERTIFICATION

The signatures below certify that inspections/tests have been completed in accordance with the identified inspection strategy and that the specified equipment is considered fit for service until the date of next inspection.

VE Inspected by / Certification #	Silvertip - Guy Normand - API 510 23041, ISPIV 0084, T-SASK 82419, API 653 25278, UT1, CGSB MT2 13310	Date	April 26, 2022
VI Inspected by / Certification #		Date	
Reviewed and Approved by	Luke Newport	Date	Jan 9, 2023
Criticality Assessment Rerun		Inspection Planning Rerun	
Optional Rule Group Confirmed		Assessed Next Inspection Date	

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DETAILED INSPECTION VISUAL EXTERNAL

ID	Description	Condition	Location	NCR / IDR	Comments
V1	General Other (Explain)	Good			This equipment was found to be acceptable for continued service. Any deficiencies are noted below. The nameplate is intact and legible.
V2	General Corrosion	Good			There is no corrosion present in the areas that were visibly accessible.
V3	General Leaks	Good			No leaks were noted.
V4	Vibration	N/A			
V5	Dissimilar Flange Rating	Good			There are no dissimilar flange ratings noted.
V6	Ladder/Stairway	N/A			
V7	Heads	Good			The east head is in good mechanical condition. An accurate representation of the west head, is not possible due to insulation and cladding.
V8	Guy Wires	N/A			
V9	Electrical Ground	Good			The equipment is grounded through the skid package.
V10	Painted Inactive Corrosion	N/A			
V11	Coating/Painting	Good			The paint is in fair condition.
V12	Expansion Joint or Bellows	N/A			
V13	Gauge/Site Glass	Good			The gauges are legible and appear to be functioning properly.
V14	Shell	Good			The shell is partially covered with insulation. The remainder is in good mechanical condition.
V15	Jacket	N/A			
V21	Support Other (Explain)	N/A			
V22	Foundation	N/A			
V23	Anchor Bolts	Good			The anchor bolts are tight, secure and of adequate length.
V24	Saddle/Skirt	N/A			
V25	Davit	N/A			
V26	Fireproofing	N/A			The Davit arm is in good mechanical condition.
V31	Connections Other (Explain)	Good			All piping connections to the vessel are secure.
V32	Small Branches	Good			The instrumentation tubing is acceptable, no signs of leakage noted.
V33	Nozzles	Good			The nozzles are straight with no mechanical deficiencies noted.
V34	Manways	Good			The manway is in good mechanical condition.
V35	Reinforcing Pads	Good			The re-pads are secure and the weep holes are clear of product or debris.
V36	Inadequate Thread Engagement	Good			All threaded piping and instrumentation connections are secure and of adequate depth / engagement.
V37	Bolting	Good			The studs / nuts are secure and of adequate thread engagement.
V38	Flanges	Good			The flanges are intact with no defects noted.
V39	Leak Clamps	N/A			
V41	Insulation Other (Explain)	Fair			The insulation and cladding are in fair condition.
V42	Damage	Fair			The cladding has some minor damage around the PSV.
V43	Penetrations	Fair			The penetrations are not sealed allowing water to penetrate the insulation.
V44	Insulation Jacket	Fair			The insulation cladding has some minor damage noted.
V45	Banding	Fair			The insulation banding is in good condition.
V46	Seals/Joints	Fair			The seals / joints are missing sealant.
V51	Relief Devices Other (Explain)	Fair			The PSV is missing the service tag.
V52	Relief Devices Corrosion	Good			No corrosion noted.
V53	Relief Devices Leaks	Good			No leaks were present.
V54	Restricted Inlet/Outlet	Good			The inlet and outlet are satisfactory to code requirements.
V55	Manual Operation Lever	N/A			

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DETAILED INSPECTION VISUAL INTERNAL

ID	Description	Condition	Location	NCR / IDR	Comments
V1	General Other (Explain)				
V2	Corrosion (depth, length, width)				
V3	Erosion				
V4	Distortion				
V5	Blisters				
V6	Deposits				
V7	Heads				
V8	Welds				
V9	Nozzles				
V10	Shell				
V11	Gasket Surfaces				
V21	Internals Other(Explain)				
V22	Demister				
V23	Baffle/Weir				
V24	Sparger				
V25	Thermowells				
V26	Metallic Linings				
V27	Nonmetallic Linings				
V28	Trays				
V29	Tray Rings				
V30	Other: Welded Attachments				

Magnetic Particle Equipment records

Procedure #	Description			
Manufacturer	Model	Serial #	Current Type	Mag Part Type
Lighting	Material + Grade	Thickness	Cal Block SN	Cal Due Date

Liquid Penetrant Equipment records

Procedure #	Description			
Penetrant	Solvent	Developer	Cleaner	Lighting
				Material Grade + Thickness

DETAILED INSPECTION OTHER TECHNIQUES

ID	Location	Observation/Measurement	Acceptance Criteria	NCR / IDR	Comments
1					
2					
3					
4					
5					

Ultrasonic Equipment records

Procedure #	1-001	Description	Corrosion Survey Procedure		
Test Unit	Instrument Mfr	Model #	Serial #	Cal Due Date	
UT - 001	General Electric	DMS 2	010H1N	March 29, 2023	
Probe	Frequency	Probe SN	Probe Diameter	Couplant	
FH2E	7.5 MHz	SCA0390	0.380"	Sonotest	
Cal Block	Cal Block Size	Cal Block SN	Cal Block Material		
Krautkramer	0.100" – 0.500"	V31891	Carbon Steel		

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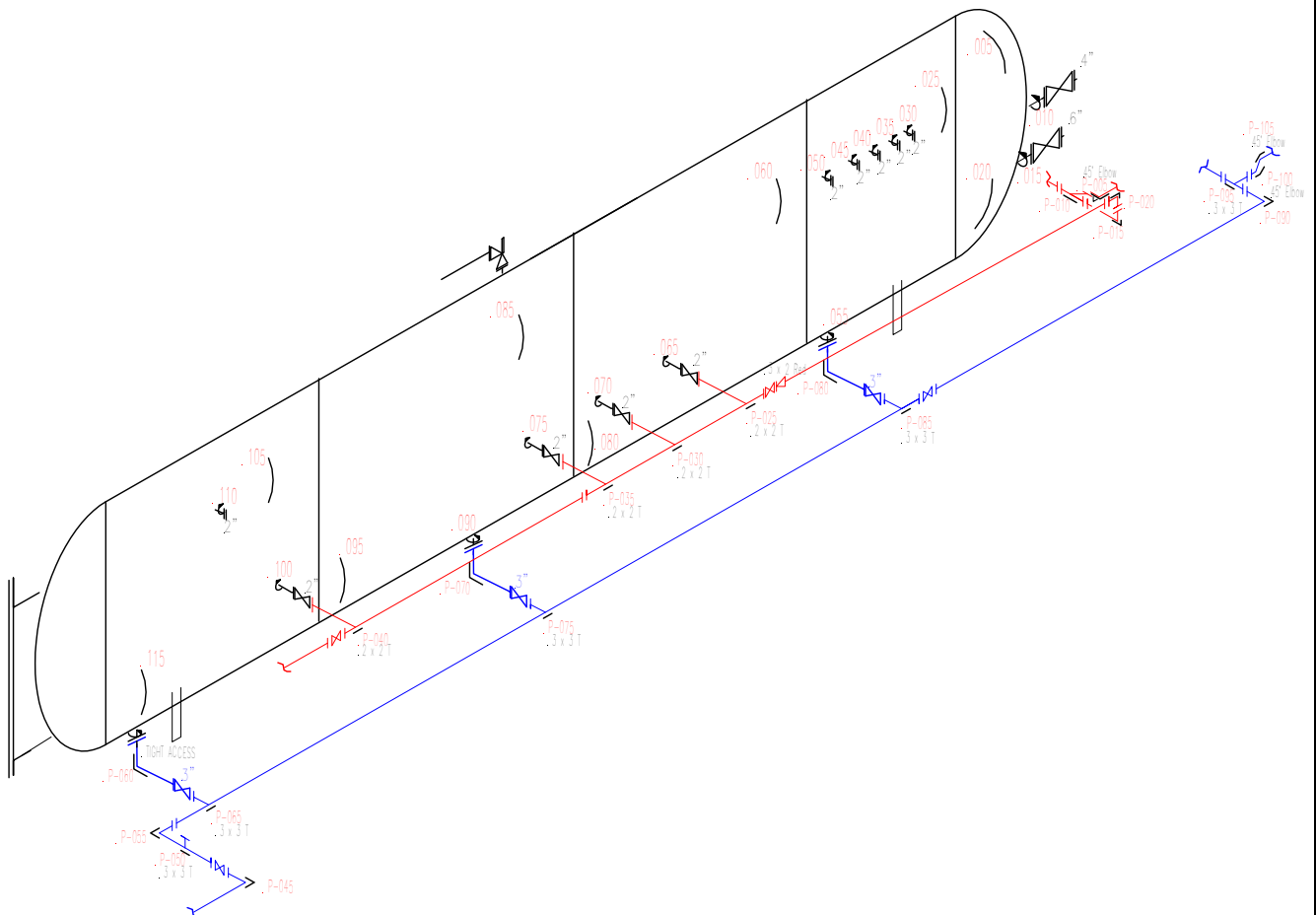
**DETAILED INSPECTION
UT THICKNESS**

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UT DRAWING



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PHOTOS



Nameplate



Overall

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Overall



PSV Nameplate

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SERVICE TAG IS MISSING

PSV Service Tag



PSV Overall

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Cladding Damage



Insulation Penetration with no sealant