

123 - 8805 Resources Road
Grande Prairie, AB
T8V 3A6
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lsmith@lanceinspections.com



**Magnetic Particle
Inspection Report**

02-02-69-03w5m Comp #2_MT_sep2023

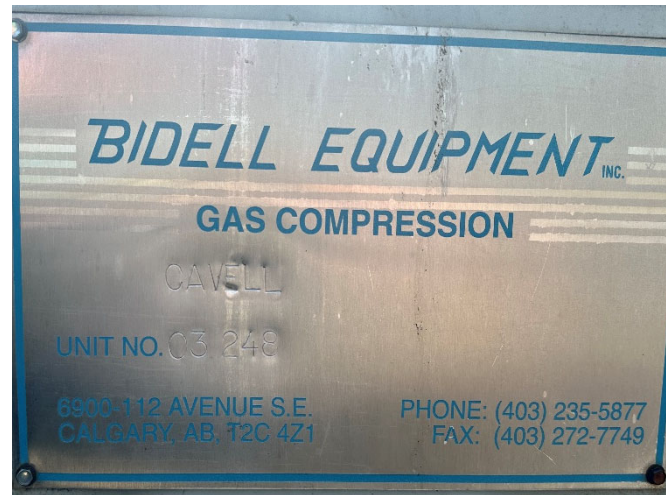
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Client: Cardinal Energy	Facility: South Mitsue Plant	Date: Sept 21, 2023
LSD: 02-02-69-03w5m	Item(s) Inspected: All Compressor #2 Scrubbers & Bottles	Job #: 4880
Material: Carbon Steel	Thickness: various	WO #: N/A
Ref. Code: Client Request	Surface Preparation: Painted/Brushed	Surf. Temp: 15°C
Procedure: MT-01 Rev. 8	MT Technique: 5.2 Wet Visible	
MPI Equipment: AC Yoke	Asset#: HY-17	Daily 10 lb Lifting Power Verification Completed
Particle Type: 5.2	MFR: Magnaflux	Name: 7HF & WCP-2
Light Source: White Light	Light Intensity Verified to >1000Lx	

Job Scope: To complete black and white wet visible magnetic particle inspection (MPI) on all suction scrubbers, suction bottles & discharge bottles in compressor #2 at 02-02-69-03w5m (South Mitsue Plant). The following welds were inspected as accessible:

- Nozzle to shell welds - Nozzle to re-pad welds - Re-pad to shell welds - Nozzle to flange butt welds - Nozzle pipe butt welds

Compressor #2 Unit #03 248



Results: All welds were inspected visually prior to MPI. There were no defects found during the visual inspection. All welds mentioned above were wire brushed or inspected over existing vessel paint. There was one crack measuring 6mm long on the bottom of the inlet nozzle to shell weld on the 3rd stage suction bottle (A#514714). This crack was blended out with a 120 grit sanding disk while on site and passed re-inspection. There were no further cracking or linear indications detected with MPI. All welds are considered acceptable to the reference code regarding MPI.

See additional pages for a list of vessels inspected & inspection photos

Technician(s): Kelsey Lush (CGSB UT-1, MT-2, PT-2, #22115) (SNT-TC-1A UT-I, MT-II, PT-II)	
Assistant(s): Dylan Schwabe	
Client Representative: Jason Nicholls (Cardinal Energy)	

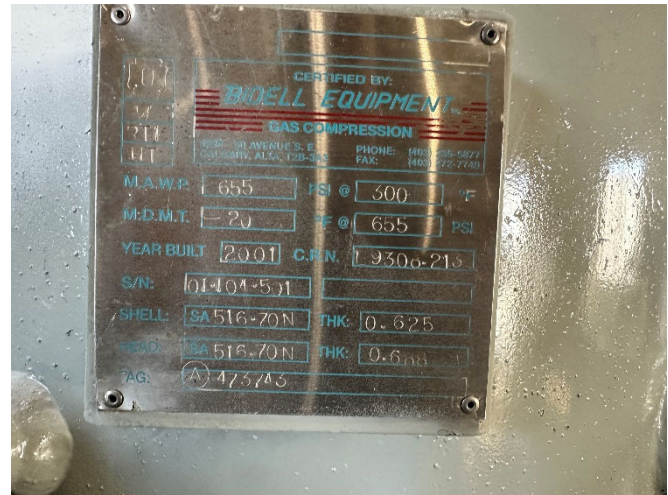
Pressure Vessels Inspected with MPI

LSD	Compressor Unit#	Vessel Description	Reg. A#	Serial #
02-02-69-03w5m	Comp #2	1st Stage Suction Scrubber	473743	01-104-501
02-02-69-03w5m	Comp #2	1st Stage Suction Bottle	514713	03-248-511
02-02-69-03w5m	Comp #2	1st Stage Discharge Bottle	514715	03-248-521
02-02-69-03w5m	Comp #2	2nd Stage Suction Scrubber	514711	03-248-502
02-02-69-03w5m	Comp #2	2nd Stage Suction Bottle	473747	01-104-512
02-02-69-03w5m	Comp #2	2nd Stage Discharge Bottle	473759	01-104-522
02-02-69-03w5m	Comp #2	3rd Stage Suction Scrubber	514712	03-248-503
02-02-69-03w5m	Comp #2	3rd Stage Suction Bottle	514714	03-248-513
02-02-69-03w5m	Comp #2	3rd Stage Discharge Bottle	514710	03-248-523

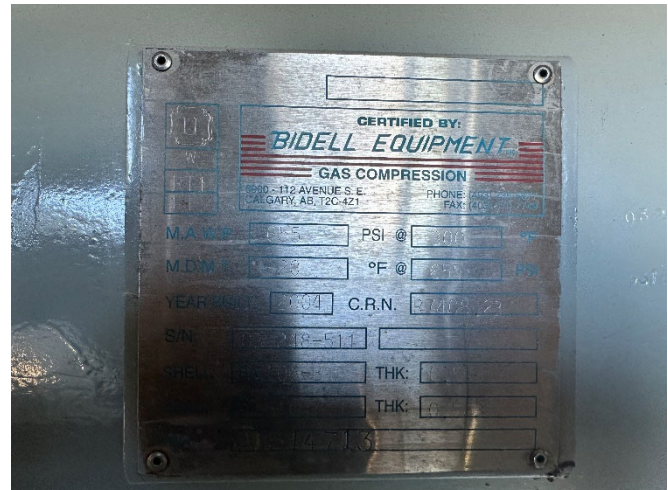
Inspection Photos:

Vessel Overviews & Data Plates

1st Stage Suction Scrubber A#473743



1st Stage Suction Bottle A#514713



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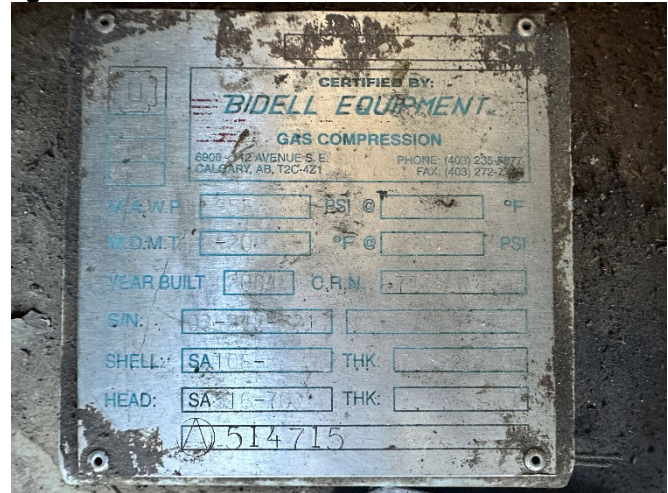


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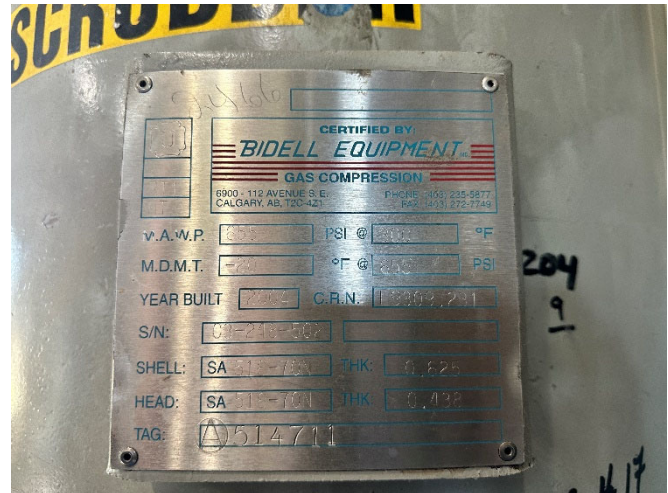
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1st Stage Discharge Bottle A#514715



2nd Stage Suction Scrubber A#514711



2nd Stage Suction Bottle A#473747



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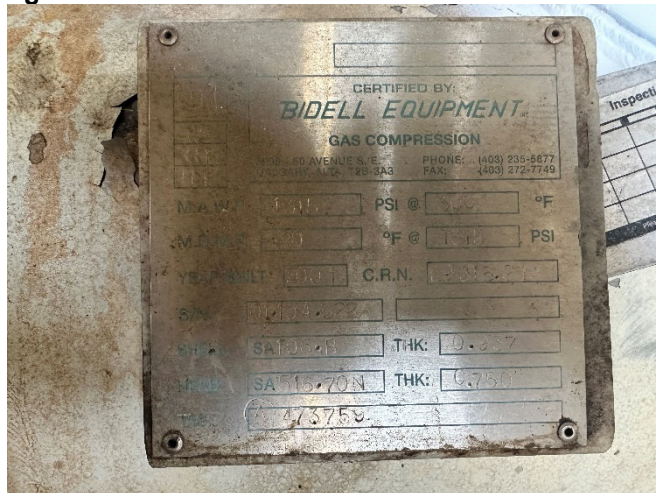


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2nd Stage Discharge Bottle A#473759



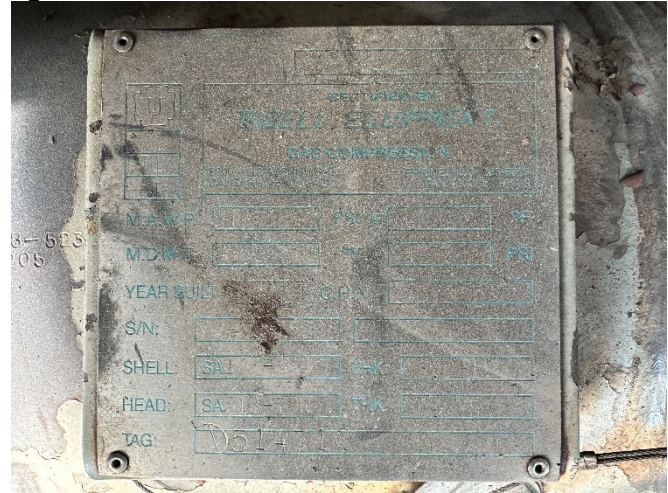
3rd Stage Suction Scrubber A#514712



3rd Stage Suction Bottle A#514714



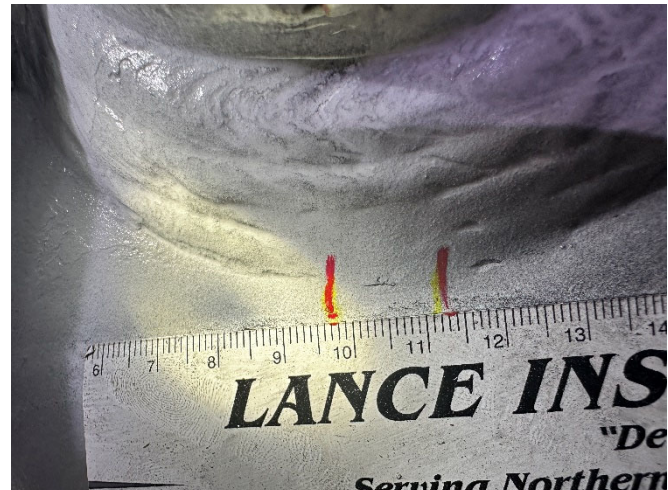
3rd Stage Discharge Bottle A#514710



3rd Stage Suction Bottle (A#514714) Crack - Approx 6mm long, located on bottom of inlet nozzle to shell weld:



After filing, indication remained:



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After excavation:



No indication remaining on final MT:

