

NON DESTRUCTIVE EXAMINATION AND INSPECTION REPORT

FACILITY Lady Fern Gas Plan ITEM: Glycol Contactor CRN: K 5940.2	Serial No.	6324 – 20	sions # Site No. BC Prov. Reg. No Not Stated
FABRICATOR: Presson	11903 kPa		e Mfg 1999
Design Pressure	11903 kPa ℃	1725 psi	Inspected By (1) Len Semanuik
Design Temp. (Max/Min)	-	192 °F	Inspected By (2)
Operating Pressure	kPa	psi	
Operating Temp. (Max/Min)	°C	°F	
Material Spec. Shell SA	516 70 N		
Material Spec. Heads SA	516 70 N		Signature (1)
Min. Thickness Shell	38.1 mm	1.500 ins	
Min. Thickness Heads	36.5 mm	1.437 ins	
Corrosion Allowance:	1.6 mm	.0625 ins	Signature (2)
Dimensions: 42 in. x 15 ft.			
Code Sec'n: ASME VIII / Div 1		RT ¹	PWHT NII
NDE Method(s) Used:			
□ ∪т □ мт Х ∨т	🗆 AUT		
PRD DATA:PRD I.D. #Type26314G153S/1Capacity16130 Scfm	Serial # Manufacturer Nozzle Size	C00139134 Andersen 1.5 in. x 3 in.	Visions #Set Pressure1275 PSIService DateAug 2004

OPERATING HISTORY: (add attachments if necessary)

This vessel has been in service since 1999. This is the first internal inspection carried out on this vessel. This inspection was planned due to a problem in maintaining dew point at minus 15. This is the dew point acceptable for processing at the Duke facility in Ft Nelson B.C.

Glycol is Selexol and Triethelene mix for hydrocarbon absorption. The dew point drops to minus 10 or lower when pressure drops to 7000 Kpa. When pressure is maintained at 8000 Kpa or above dew point remains constant at minus 15. The top of the contactor operates at upper limit of temp for this contactor and is not easily lowered.

Note: No soiled trays or plugged chimneys were detected – the demister was clean and clear. A refrigeration package seems to be the logical solution to this problem.

THIS INSPECTION: (attach extra sheets if required)Date:Visual ExternalPaint: Good condition, no loose or flaking paint.Data Plate: Intact, attached and legible.Ground: The skid package is grounded.Skirt / Bolting: Good, the vessel is firmly mounted to skid shack floor.Piping: Firmly supported – no deflection.Gages: Appear functional – within range for operation.Valves: No leaking detected.Sight Glasses: Unobstructed

Date: Nov 3 – 2005

Item:	Glycol Contactor	LSD:	c 47 H / 94 H 1	(A)	401435
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THIS INSPECTION (CONTD)

Internal:

Note: Visual inspection carried out through .750 inch inspection / drain weld o lets and a 2 inch weld o let at the top of the vessel and at the bottom of the vessel. Bottom head: Good condition, no failed coating, no pitting. Lower Shell: Good condition, no failed coating, no previous pitting. Strainer Caps: Good condition, no failed coating, no previous pitting. Bubble Caps: There was approximately 1 cube of soil removed from internal surface – loose and laced with hydrocarbons. Good condition, no failed coating, no previous pitting. Chimneys: Good condition, no failed coating, no previous pitting. Demister: Good condition, intact and attached. Thermal Probe: Intact and firmly attached.

Nozzles: Unobstructed.

NDE Inspections: No NDE Inspections carried out at this time.

Repairs and/or Recommendations

1. Installation of refrigeration package to maintain dew point.

Additional notes or sketch

This equipment is considered suitable for a further

Corrosion rate - general:	mpy
Corrosion rate - pitting:	mpy
Time to C.A. depletion:	years

years operation under present operating conditions

Next inspection due:



Screen caps and glycol coil 1st tray



Inlet diffuser



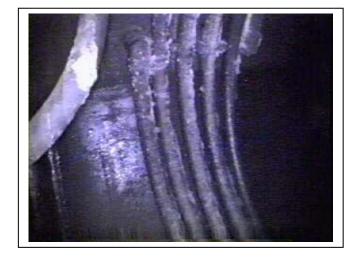
Glycol coil in lower shell – attachment to shell.





Inlet diffuser and coil in lower shell.





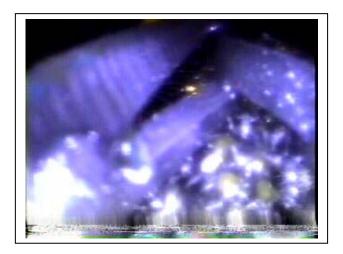
Diffuser



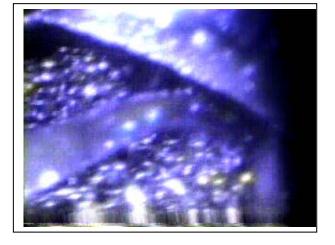
Close up of demister - not soiled.

Demister on top outlet.

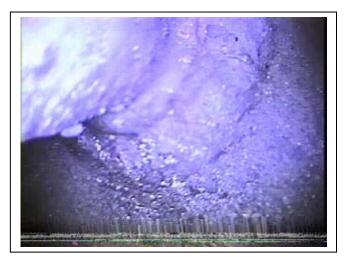


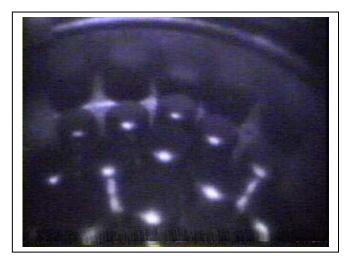


Glycol nozzle - lower shell



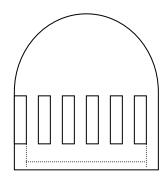
Over view of screen caps – middle tray.





Close up of slots in screen caps - residual glycol surrounds cap





The strainer cap sits inside a outer closure - so the liquid level is maintained about .250 inches above the tray level - the glycol drains down the chute and the gas rises through the slots in the cap - the slots are open in this contactor.

