



DBI, Inc. Quality Inspection and Consulting Services

*Reliable...Responsive...Resourceful...Proactive*

Williams Field Services

Stewart Dew Point Hickory, PA

7-19-2012

A-Scan Baseline Inspection

Vessel No.: V-210

Vessel Name: Vent Scrubber

P&ID No: STWT-P01-011



**DBI Incorporated**

**Lincoln Nebraska**

4223 Progressive Avenue.Lincoln NE 68504.Telephone: 402-467-1818 Fax: 402-467-1766

**Omaha Nebraska**

2211 S. 156<sup>th</sup> Circle.Omaha NE 68130.Telephone:402-330-9612.Fax: 402-330-9640

**Overland Park Kansas**

11660 West 90th.Overland Park KS 66214.Telephone: 913-888-2321 Fax: 913-888-2351



## Summary Report

Report Reviewed By:

API 510 #30888

Client: Williams Field Services  
Location: Stewart Dew Point Hickory, PA

Vessel No.: V-210  
Vessel Name: Vent Scrubber

Inspection Date: 7-19-2012

Type of Inspection: A-Scan Baseline Inspection

Note: An A-Scan baseline inspection was performed on the V-210 Vent Scrubber. The V-210 Vent Scrubber meets MAWP of 150 psi with a remaining service life of 20+ years. The long and short term corrosion rates were determined using the nominal thickness of the vessel.

Next UT Inspection: 7/18/2017 API 510 para. 6.4  
Next Visual Inspection: 7/18/2017

								Short Term	Long Term	Remaining
								Corrosion	Corrosion	Life
	TNom	Top	Bottom	North	South	East	West	Rate	Rate	(Years)
Top Head				0.610	0.612	0.610	0.614			
TML 1	0.625			0.620	0.622	0.622	0.622	0.001	0.001	20+
TML 2	0.625			0.620	0.622	0.621	0.623	0.001	0.001	20+
Knuckle				0.568	0.594	0.583	0.568			



Client: Williams Field Services  
Location: Stewart Dew Point Hickory, PA

Vessel No.: V-210  
Vessel Name: Vent Scrubber

### Vessel Parameters

Design Pressure (MAWP):	150 psi	Top Head Material:	SA-516-70
Design Temperature:	140 F	Top Head Type:	2:1 Ellipsoidal
Operating Pressure:	.5 psi	Allowable Stress:	20,000
Operating Temperature:	-50 F	Joint Efficiency:	.85
Diameter: I.D or O.D	42" OD	Bottom Head Material:	SA-516-70
Length S/S:	7'- 6"	Bottom Head Type:	2:1 Ellipsoidal
Shell Material:	SA-516-70	Allowable Stress:	20,000
Allowable Stress:	20,000	Joint Efficiency:	.85
Joint Efficiency:	.85	Date Manufactured:	2008
Corrosion Allowance:	.125	In Service Date:	2008

ASME CODE EDITION USED FOR CALCULATIONS  
ASME Section VIII, Division 1. 2001 Edition

### Paint Information

Average paint coating thickness:	N/A	Thickness measured with paint:	N/A
Paint Multiplier:	N/A	Thickness measured without paint:	N/A

### Name Plate Information

U1A Available:	Yes	ASME stamp present on vessel:	Yes
Name Plate present:	Yes	Rubbing taken:	Digital Photo



Client: Williams Field Services  
Location: Stewart Dew Point Hickory, PA

Vessel No.: V-210  
Vessel Name: Vent Scrubber

### Vessel Data

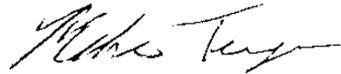
Vessel Class:	2	Date Manufactured:	2008
Manufactures Serial #:	G-2646-1	In Service Date:	2008
Product in Vessel:	Gas	Date of ASME VIII Vessel	2007
		Mfg. under:	
P&ID Drawing #:	011	Code Cases:	N/A
P&ID Prepared By:	Laurel Mountain Midstream, LLC	Addenda:	2008
Manufacturer:	Premier Ind. Inc.	National Board Number:	871
Vessel Length S/S:	7'- 6"	Vessel Insulated:	No
Diameter I.D or O.D:	42" OD	Describe openings (if any):	N/A
No. of Shell Sections:	1	ANSI Flange Rating:	150 #
No. of Nozzles:	6	Vessel Orientation:	Vertical
Design Pressure (MAWP):	150 psi	Operating Pressure:	.5 psi
Design Temperature:	140 F	Operating Temperature:	-50 F
Top Head Type:	2:1 Ellipsoidal	Bottom Head Type:	2:1 Ellipsoidal
Top Head Material:	SA-516-70	Bottom Head Material:	SA-516-70
Top Head Weld Type:	Type 1	Bottom Head Weld Type:	Type 1
Shell Material:	SA-516-70	Shell Weld Type:	Type 1
Radiography:	Spot	Hydrostatic:	195 psi

### Relief Valve Information

Relief Valve Tag Number:	220 A/B	Relief Valve Pressure Setting:	125 psi
Relief Valve Test Date:	9/10	Relief Valve Size:	1" x 2"



## PRESSURE VESSEL EXTERNAL INSPECTION

Client: Williams Field Services Date Inspected: 7-19-2012  
Location: Stewart Dew Point Hickory, PA Inspector(s): Mike Troyer  
Vessel No.: V-210  
Vessel Name: Vent Scrubber Signature: 

### NAME PLATE

Item Inspected	Yes	No	NA = Not Applicable	Comments:
Name Plate present & legible	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good condition
National Board #	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	871
Manufacturer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Premier Ind. Inc.
Serial #/ Year Built	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G-2646-1/ 2008
Repair or Rerate Name Plate	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

### FOUNDATION

Concrete condition (spalling, cracks)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None noted
Foundation settling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appears level
Coating condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
Cradle supports (moisture, cracks)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None noted

### SUPPORTS

Describe type (legs, saddle, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Skirt
Corrosion, pitting (describe)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None noted
Weld condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good condition
Paint condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No paint failure noted
Anchor bolts (tightness & corrosion)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appears tight
Insulation deterioration	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

### SHELL

Corrosion, pitting (describe)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None noted
Bulges/ Blisters/ Deformations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None noted
Weld condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good condition
Paint condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No paint failure noted
Insulation deterioration	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
Biological growth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None noted
UT Measurements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See autocad drawing



**HEADS**

Item Inspected	Yes	No	NA = Not Applicable	Comments:
Corrosion, pitting (describe)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None noted
Bulges/ Blisters/ Deformations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None noted
Weld condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good condition
Paint condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No paint failure noted
Insulation deterioration	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
UT Measurements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See autocad drawing

**MANWAYS & NOZZLES**

Corrosion, pitting (describe)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None noted
Weld condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good condition
Flange condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Good condition
Bolting condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minor surface rust
Repad condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
Insulation deterioration	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
UT Measurements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See autocad drawing

**APPURTENANCES**

Grounding (tightness & corrosion)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ground connection is tight
Gauges, Sight glass (damage)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No damage noted
Relief Valve #/ Size/ Set Pressure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	220 A/B/ 1" x 2"/ 125 psi

**LADDERS, STAIRS, PLATFORMS**

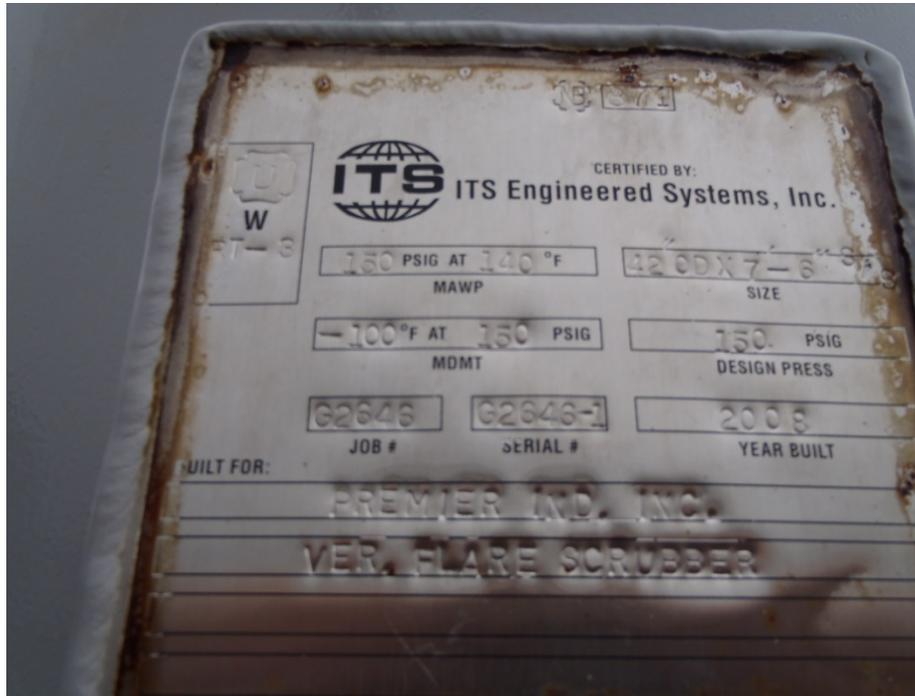
Corroded, Broken Parts	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
Paint condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
Wear (ladder rungs, stair treads)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
Handrails secure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
Flooring condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
Tightness (bolts, tie down clips)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
Attachment welds	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
Corrosion, pitting (describe)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

**ADDITIONAL COMMENTS:**



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FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS (Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only) As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

42" OD X 7'-6" S/S VERTICAL

1. Manufactured and certified by ITS ENGINEERED SYSTEMS, INC. 6818 FM 2855 KATY, TEXAS 77493
2. Manufactured for PREMIER INDUSTRIES, INC 3450 PETERS ROAD HARVEY, LA 70058
3. Location of Installation UNKNOWN
4. Type: VERTICAL G2646-1 G2646-3-01-01 REV 0 871 2008
5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 2007

6. Shell: SA-516-70N 6250" 1250" 42" OD 11'-11"
7. Seams: TYPE I SPOT 85 TYPE I SPOT
8. Heads: (a) Matl. SA-516-70N (b) Matl. SA-516-70N

Table with 10 columns: Location (Top, Bottom, Ends), Minimum Thickness, Corrosion Allowance, Crown Radius, Knuckle Radius, Elliptical Ratio, Conical Apex Angle, Hemispherical Radius, Flat Diameter, Side to Pressure (Convex or Concave). Rows (a) TOP and (b) BOTTOM.

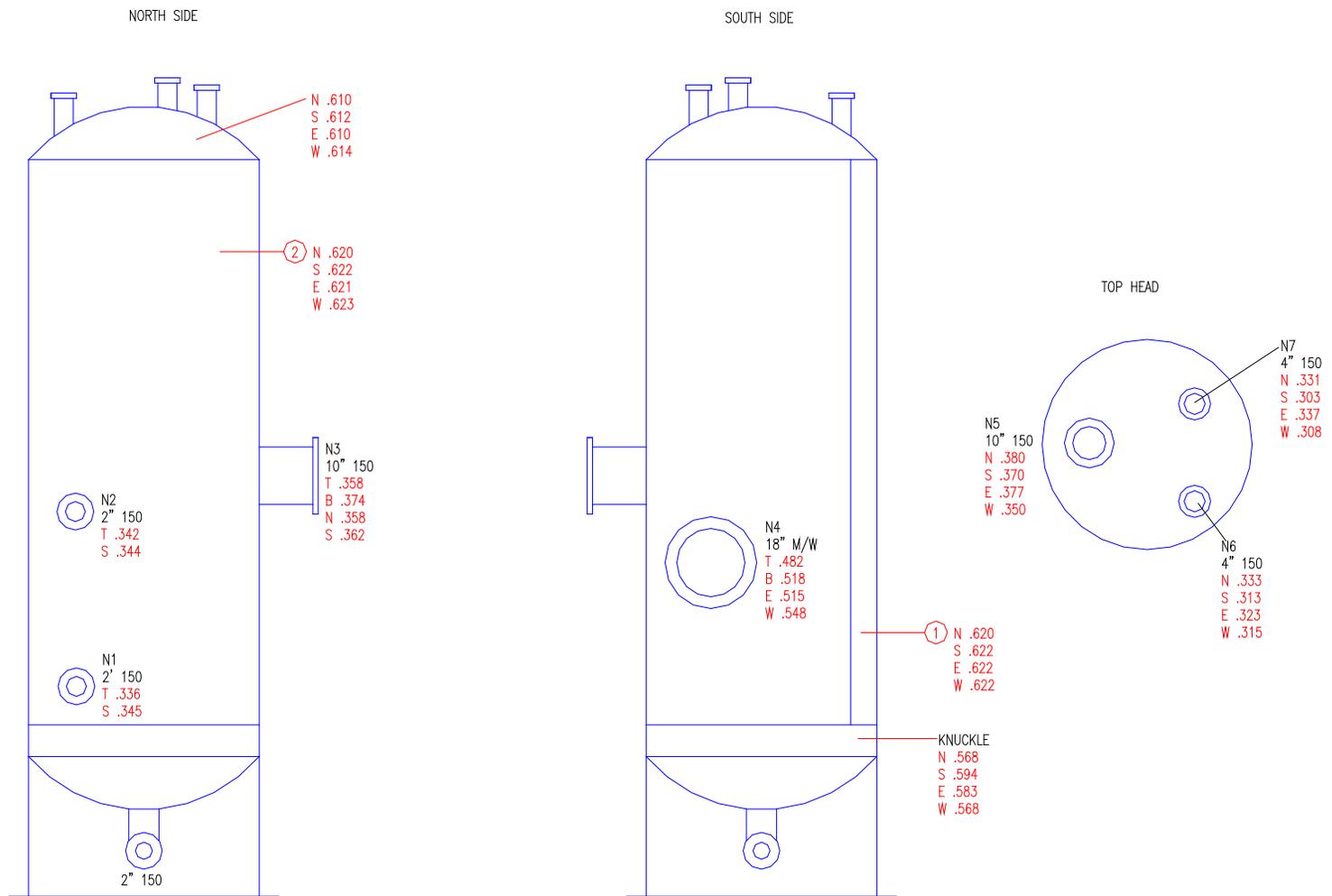
9. MAWP 150 (internal) 140 (external) psi at max. temp. 140 (internal) 195 (external) psi. Min. design metal temp. -100 (internal) 150 (external) psi. Hydro. test pressure 195 psi.

Table with 9 columns: Purpose (Inlet, Outlet, Drain), No., Diam. or Size, Type, Matl., Nom. Thk., Reinforcement Matl., How Attached, Location. Rows include INLET/OUTLET, MANWAY, TURE/SAFETY HE, PUMP RETURN, TEMP IND, AIN, OUTLET, LEV.

11. Supports: Skirt YES Lugs (No) Legs (No) Other (Describe) Attached WELDED TO HEAD (Where and how)

12. Remarks: Manufacturer's Partial Data Reports property identified and signed by Commissioned Inspectors have been furnished for the following items of the report: MATERIAL IS EXEMPT FROM IMPACT TESTING PER UCS-66(b)(3).

CERTIFICATE OF SHOP / FIELD COMPLIANCE and CERTIFICATE OF SHOP / FIELD INSPECTION. Includes fields for authorization number (20340), date (12/01/2010), manufacturer (ITS ENGINEERED SYSTEMS, INC), and inspector (Signature) with commission number (NB#12355A-FIN TX1681).



**NOTES**

1. P&ID NO: STWT-P01-011
- 2.
- 3.
- 4.
- 5.
- 6.

<b>CLIENT:</b> Williams Field Services		<b><i>DBI, Incorporated</i></b> 5330 N. 57th Street Lincoln, Nebraska 68507
<b>LOCATION:</b> Stewart Dew Point Hickory. PA		
<b>INSPECTION DATE:</b> 7-19-2012		<b>ACAD DWG. FILE:</b> V-210
<b>VESSEL No:</b> V-210	<b>DWN BY:</b> MCS	<b>CKD BY:</b>
<b>VESSEL ID:</b> Vent Scrubber		<b>MECHANICAL INTEGRITY INSPECTION</b>