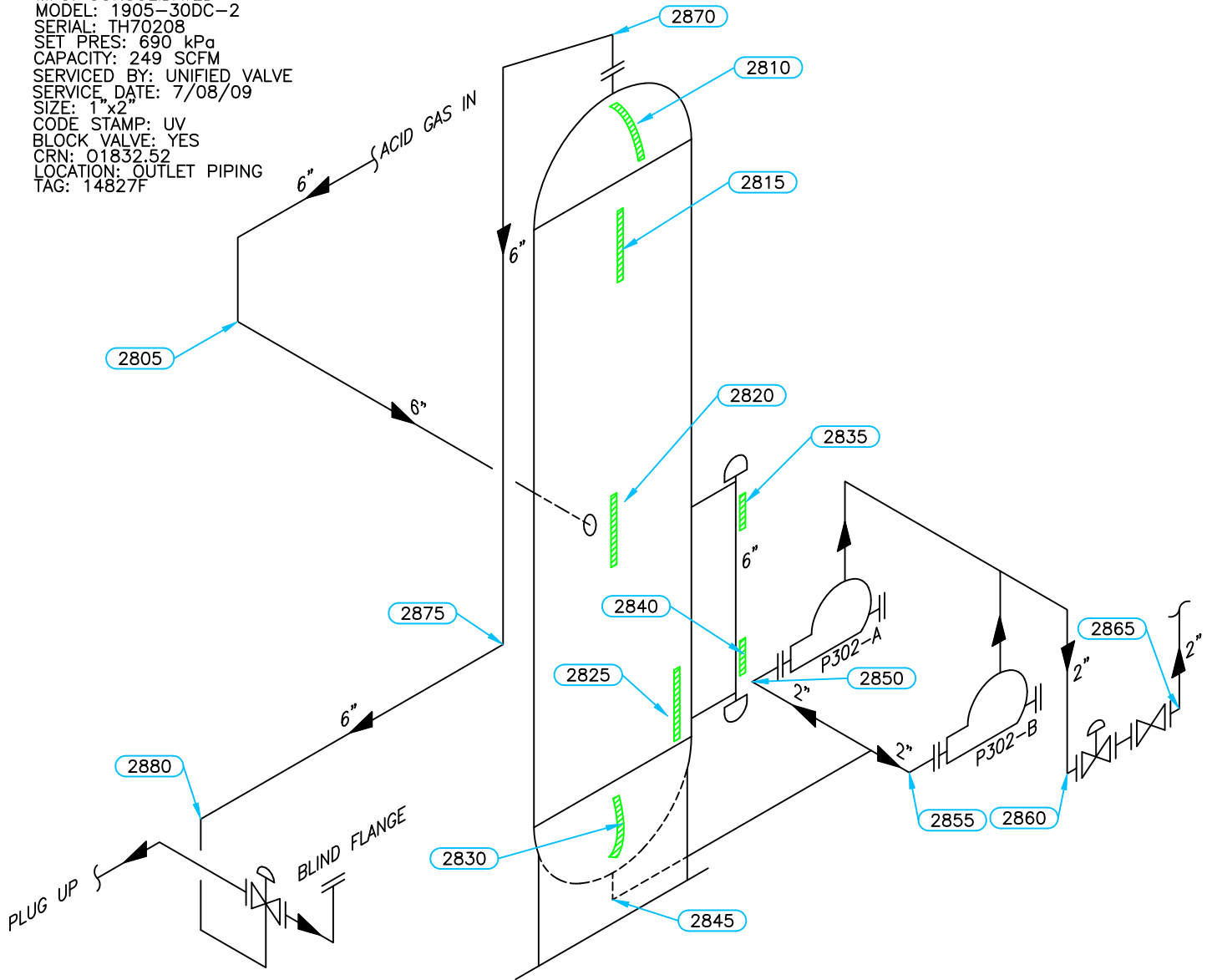


PSV DATA

MFG: CONSOLIDATED
 MODEL: 1905-30DC-2
 SERIAL: TH70208
 SET PRES: 690 kPa
 CAPACITY: 249 SCFM
 SERVICED BY: UNIFIED VALVE
 SERVICE DATE: 7/08/09
 SIZE: 1"x2"
 CODE STAMP: UV
 BLOCK VALVE: YES
 CRN: 01832.52
 LOCATION: OUTLET PIPING
 TAG: 14827F



Equip. No. _____ Prov. Reg. No. **2564041** C.R.N. **H-7275.21** Serial No. **TW89J025** Yr. Inst. _____
 Code/Div. **ASME VIII, DIV 1** Size: **24in x 36in** Manufacturer: **TYSON'S WELDING** Yr. Blt. **1989**
 C. Stamp: **NO** Service: **SOUR** PWHT: **HT** Radiography: **RT-1** Insulated: **NO**

Design & Materials Data

HEAD:
 Top Mat'l. **SA 516 70N** Top Nom. **9.0mm** Top C.A. **3.2mm**
 Btm. Mat'l. _____ Btm. Nom. _____ Btm. C.A. _____

CHANNEL:
 Material: _____ Nominal: _____ C.A. _____

BOOT
 Head Mat'l. _____ Head Nom. _____ Head C.A. _____
 Shell Mat'l. _____ Shell Nom. _____ Shell C.A. _____

SHELL
 Material: **SA 516 70N** Nominal: **9.5mm** C.A. **3.2mm**

MAWP Shell Side: **689 kPa** @ Temp. **149°C**
 MAWP Tube Side: _____ @ Temp. _____

CLIENT	CANADIAN NATURAL RESOURCES	
FACILITY	CYPRESS GAS PLANT LSD b-99-C/94-B-16	
ITEM	ACID GAS SCRUBBER	
BY: TR	DATE: 01/2009	DWG.# 28

UTS DATA

CLIENT: CANADIAN NATURAL RESOURCES
EQUIPMENT: ACID GAS SCRUBBER
CRN#: H-7275.21
PROV REG: A 2564041
TESTED ON STREAM

FACILITY: CYPRESS GAS PLANT
SERVICE: SOUR
LOCATION: b-99-C/94-B-16
RTD JOB #: 10.112596
REFER TO DRAWING: 28

Test Point	THICKNESS DATA				Flag	T-Min	C.A.	Nom.	Short Term	Long Term	Ave. mm/py	Retirement Date
2810												
Description: TOP HEAD												
	2009	1	2013	1								
Min. Thick.	10		10		5.80		3.2	9.00	0	0		
Average:	10.2		10.2						0	0		
Analysis:												
2815												
Description: UPPER SHELL												
	2009	1	2013	1								
Min. Thick.	10.3		10.3		6.30		3.2	9.50	0	0		
Average:	10.6		10.6						0	0		
Analysis:												
2820												
Description: MID SHELL												
	2005	5	2009	1	2013	1						
Min. Thick.	10.3		10		10		6.30	3.2	9.50	0	.04	
Average:	10.3		10.1		10.1					0	.03	
Analysis:												
2825												
Description: LOWER SHELL												
	2005	5	2009	1	2013	1						
Min. Thick.	10.1		9.8		9.8		6.30	1.7	3.2	9.50	0	.04
Average:	10.2		10		10					0	.03	
Analysis:												
2830												
Description: BOTTOM HEAD												
	2005	5	2009	1	2013	1						
Min. Thick.	9.7		9.4		9.4		5.80	1.7	3.2	9.00	0	.04
Average:	9.8		9.8		9.8					0	0	2167
Analysis: 2009/1 MIN SCAN AT SKIRT												
2845												
Description: 2" 90° NOZZLE												
	2005	5	2009	1	2013	1						
Min. Thick.	9.4		9.3		9.3		7.90	1.6	3.2	11.10	0	.01
Average:	9.6		9.5		9.5					0	.01	
Analysis: 01/2013 CRITICAL THICKNESS CALCULATIONS CARRIED OUT TO 0.2mm BUT CODE MINIMUM IS MAINTAINED AT 1.6mm. RETIREMENT DATE: 2218												

UTS DATA

CLIENT: CANADIAN NATURAL RESOURCES
EQUIPMENT: ACID GAS SCRUBBER PIPING
CRN#:
PROV REG:
TESTED ON STREAM

FACILITY: CYPRESS GAS PLANT
SERVICE: SOUR
LOCATION: b-99-C/94-B-16
RTD JOB #: 10.112596
REFER TO DRAWING: 28

Test Point	THICKNESS DATA					Flag	T-Min	C.A.	Nom.	Short Term	Long Term	Ave. mm/py	Retirement Date
2805													
Description: 6" 90° ELBOW													
	2005	5	2009	1	2013	1							
Min. Thick.	7.1		6.7		6.7		6.21	.9	7.10	0		.05	
Average:	7.2		6.9		6.9					0		.04	
Analysis: 01/2013 MIN SCAN AT MID ELBOW, MID APEX													
2835													
Description: 6" FLOAT COLUMN													
	2005	5	2009	1	2013	1							
Min. Thick.	7.7		7		7		6.21	.9	7.10	0		.09	
Average:	7.8		7.2		7.2					0		.08	
Analysis:													
2840													
Description: 6" FLOAT CLOUMN													
	2009	1	2013	1									
Min. Thick.	6		6				6.21	1.6	1.6	7.10	0	0	
Average:	6.1		6.1							0		0	
Analysis: 01/2013 CRITICAL THICKNESS CALCULATIONS CARRIED OUT TO 0.6mm BUT CODE MINIMUM IS MAINTAINED AT 1.6mm. RETIREMENT DATE: 2189													
2850													
Description: 2" 90° ELBOW													
	2009	1	2013	1									
Min. Thick.	4.8		4.8				4.81	1.6	.7	5.50	0	0	
Average:	5.1		5.1							0		0	
Analysis: 01/2013 MIN SCAN AT DOWNSTREAM WELD. CRITICAL THICKNESS CALCULATIONS CARRIED OUT TO 0.2mm, BUT CODE MINIMUM IS MAINTAINED AT 1.6mm. RETIREMENT DATE: 2056													
2855													
Description: 2" 90° ELBOW													
	2009	1	2013	1									
Min. Thick.	4.8		4.8				3.41	.5	3.90	0		0	
Average:	5		5							0		0	
Analysis:													
2860													
Description: 2" 90° ELBOW													
	2009	1	2013	1									
Min. Thick.	4.1		4.1				3.41	.5	3.90	0		0	
Average:	4.4		4.4							0		0	
Analysis:													

UTS DATA

CLIENT: CANADIAN NATURAL RESOURCES
EQUIPMENT: ACID GAS SCRUBBER PIPING
CRN#:
PROV REG:
TESTED ON STREAM

FACILITY: CYPRESS GAS PLANT
SERVICE: SOUR
LOCATION: b-99-C/94-B-16
RTD JOB #: 10.112596
REFER TO DRAWING: 28

Test Point	THICKNESS DATA					Flag	T-Min	C.A.	Nom.	Short Term	Long Term	Ave. mm/py	Retirement Date
2865													
Description: 2" 90° ELBOW													
	2009	1	2013	1									
Min. Thick.	4.1		4.1			3.41	.5	3.90	0	0			
Average:	4.4		4.4						0	0			
Analysis: 01/2013 MIN SCAN AT UPSTREAM WELD													
2870													
Description: 6" 90° ELBOW													
	2009	1	2013	1									
Min. Thick.	7		7			6.21	.9	7.10	0	0			
Average:	7.4		7.4						0	0			
Analysis: 01/2013 MIN SCAN AT APEX													
2875													
Description: 6" 90° ELBOW													
	2005	5	2009	1	2013	1							
Min. Thick.	7.6		7.5		7.5			6.21	.9	7.10	0	.01	
Average:	7.9		7.6		7.6					0	.04		
Analysis:													
2880													
Description: 4" 90° ELBOW													
	2009	1	2013	1									
Min. Thick.	6.3		6.3			5.25	.8	6.00	0	0			
Average:	6.5		6.5						0	0			
Analysis:													