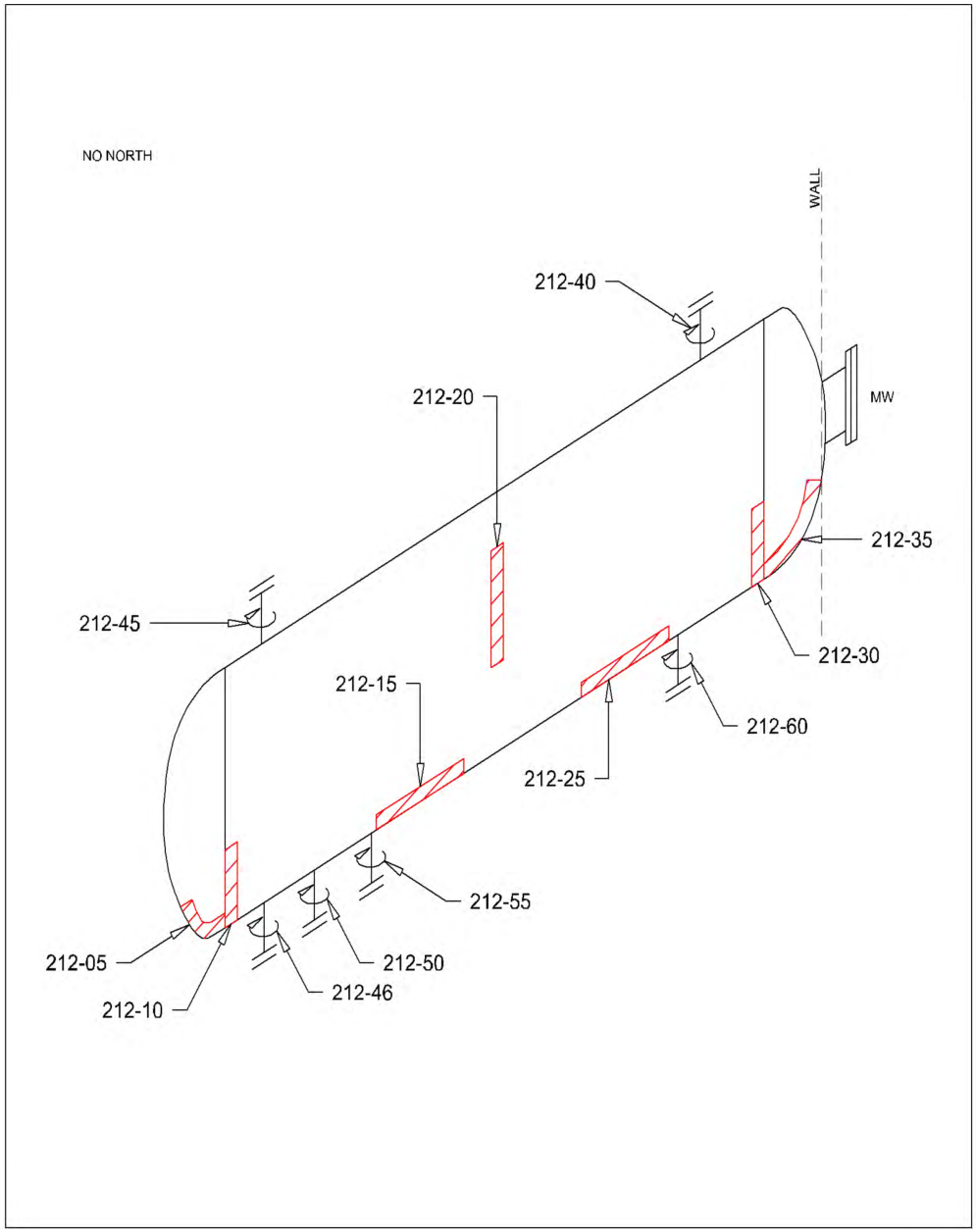
Item: Horizontal Separator - Vessel

Technician:

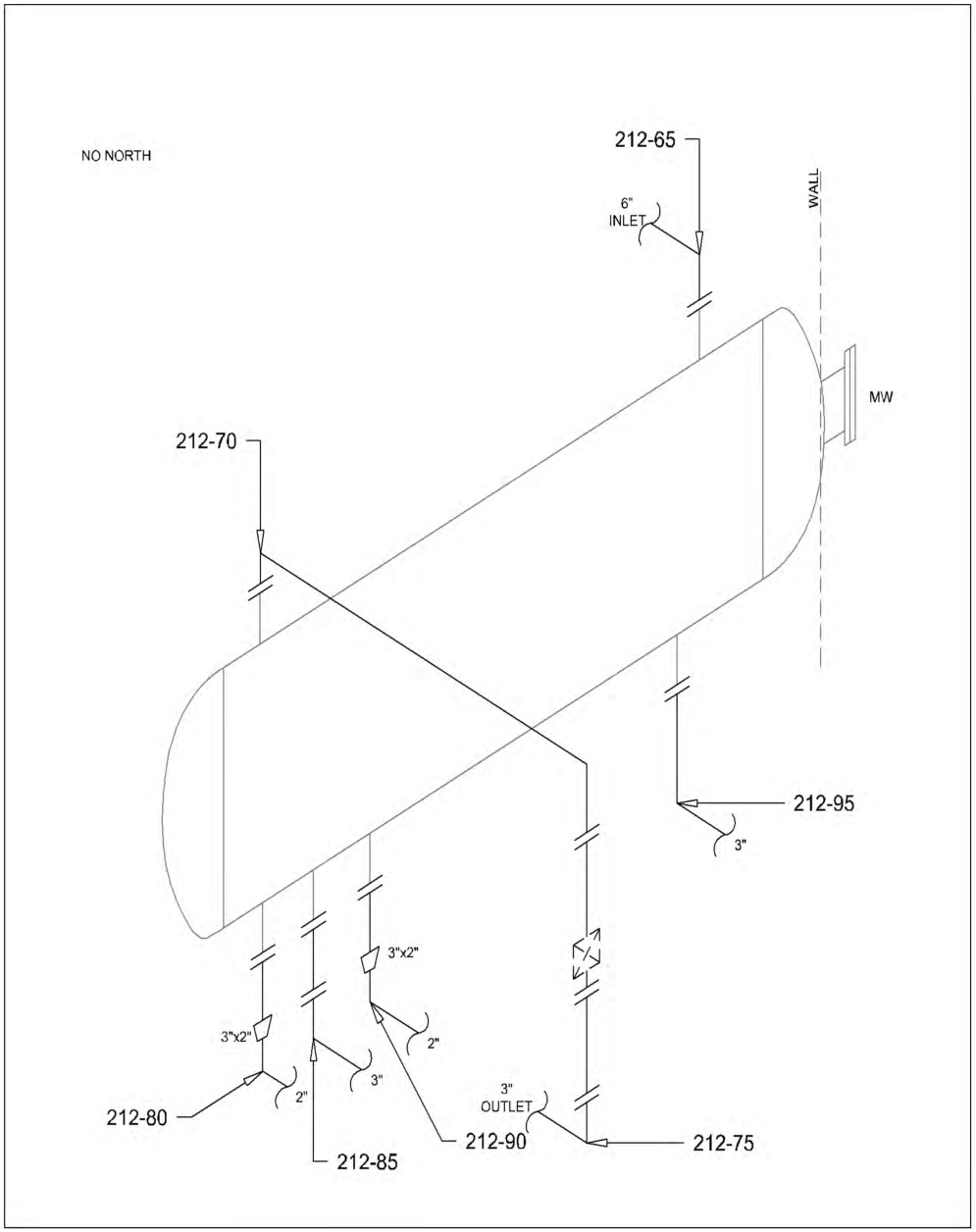
CGSB 48.9712 UT, MT LEVEL II
SNT UT, MT LEVEL II
12288



Client:	(
LSD:	00-00-000-00W0M
Drawing#:	212
Location:	Blackfalds
Regulatory#:	**A0406890**
Serial:	V-1091-002
CRN#:	P9104.21
NB#:	
Date:	04.07.2021
Job#:	

Item: Horizontal Separator - Piping

Technician:
CGSB 48.9712 UT, MT LEVEL II
SNT UT, MT LEVEL II
12288



Client:	
LSD:	00-00-000-00W0M
Drawing#:	212A
Location:	[illegible], Blackfalds
Regulatory#:	**A0406890**
Serial:	V-1091-002
CRN#:	P9104.21
NB#:	
Date:	04.07.2021
Job#:	

HUNT INSPECTION LTD.

STATIC DATA

Date:	04.07.2021	**Vessel Name:**	Horizontal Separator	**Vessel Shell Nom:**	1.375 in
LSD:	00-00-000-00W0M	**Regulatory#:**	**A0406890**	**Vessel Head Nom:**	1.312 in
Drawing#:	212 **Report#:** 7557	**Serial#:**	V-1091-002	**- Shell Nom:**	
Inspector:		**CRN#:**	P9104.21	**- Head Nom:**	
Location:	Blackfalds	**NB#:**		**Shell Side MAWP:**	740 psi
District:		**Tag#:**		**Shell Side MAWT:**	100 °F
Process:	Sweet Natural Gas	**Year Built:**	2002	**Tube Side MAWP:**	
-#:	Separator Bldg	**Manufacture:**	Delaney Energy Manufacturing Ltd	**Tube Side MAWT:**	
UT Tech.:	UT 1-1, Rev 7	**Vessel CA:**	0.0625 in	**Radiography:**	RT-1
Surface Cond:	Smooth Painted	**Vessel OD:**	66 in	**Code Stamp:**	U
Surface Temp:	50 °F	**AB 506 Vessel Type:**	Sweet Unfired Plant Vessels	**Orientation:**	Horizontal
Job#:		**Manway:**	Yes	**Insulated:**	NO
Vessel Comment:				**HT:**	NO

TML 212-05

Type	Head
Shape	Ellipsoidal
Side	Shell
OD	66 in
Code	ASME Sec VIII, Div 1
Material	SA 516 - 70
Stress	20000 psi
Efficiency	1

UT SURVEY READINGS (in)

	Date	1	2	3	4	5	6
Previous	Apr-21	1.383	1.390	1.390	1.377	1.370	1.389
Current	Apr-21	1.383	1.390	1.390	1.377	1.370	1.389

Concerns: All Readings Acceptable

Comments:

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
1.312 in	**1.370 in**	1.383 in	1.177 in	0.0625 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	0.00	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

TML 212-10

Type	Shell
Shape	Cylindrical
Side	Shell
OD	66 in
Code	ASME Sec VIII, Div 1
Material	SA 516 - 70
Stress	20000 psi
Efficiency	1

UT SURVEY READINGS (in)

	Date	1	2	3	4	5	6
Previous	Apr-21	1.392	1.393	1.394	1.394	1.395	1.399
Current	Apr-21	1.392	1.393	1.394	1.394	1.395	1.399

Concerns: All Readings Acceptable

Comments:

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
1.375 in	**1.392 in**	1.394 in	1.197 in	0.0625 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	0.00	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

TML 212-15

Type	Shell
Shape	Cylindrical
Side	Shell
OD	66 in
Code	ASME Sec VIII, Div 1
Material	SA 516 - 70
Stress	20000 psi
Efficiency	1

UT SURVEY READINGS (in)

	Date	1	2	3	4	5	6
Previous	Apr-21	1.346	1.344	1.333	1.332	1.324	1.325
Current	Apr-21	1.346	1.344	1.333	1.332	1.324	1.325

Concerns: All Readings Acceptable

Comments:

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
1.375 in	**1.324 in**	1.334 in	1.197 in	0.0625 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	3.71	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

HUNT INSPECTION LTD.

STATIC DATA

Date:	04.07.2021	**Vessel Name:**	Horizontal Separator	**Regulatory#:**	**A0406890**
LSD:	00-00-000-00W0M	**Location:**	- , Blackfalds	**Serial:**	V-1091-002
Drawing#:	212	**Job#:**		**CRN#:**	P9104.21

TML 212-20

Type	Shell
Shape	Cylindrical
Side	Shell
OD	66 in
Code	ASME Sec VIII, Div 1
Material	SA 516 - 70
Stress	20000 psi
Efficiency	1

UT SURVEY READINGS (in)

	1	2	3	4	5	6
Date Apr-21	1.420	1.419	1.418	1.417	1.418	1.417
Previous						
Current Apr-21	1.420	1.419	1.418	1.417	1.418	1.417

Concerns All Readings Acceptable

Comments

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
1.375 in	**1.417 in**	1.418 in	1.197 in	0.0625 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	0.00	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

TML 212-25

Type	Shell
Shape	Cylindrical
Side	Shell
OD	66 in
Code	ASME Sec VIII, Div 1
Material	SA 516 - 70
Stress	20000 psi
Efficiency	1

UT SURVEY READINGS (in)

	1	2	3	4	5	6
Date Apr-21	1.250	1.249	1.260	1.221	1.220	1.252
Previous						
Current Apr-21	1.250	1.249	1.260	1.221	1.220	1.252

Concerns Low Reading 7.0% Below CA

Comments

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
1.375 in	**1.220 in**	1.242 in	1.197 in	0.0625 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	11.27	**Short Term C.R.**	
% Below C.A.	7.05	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

TML 212-30

Type	Shell
Shape	Cylindrical
Side	Shell
OD	66 in
Code	ASME Sec VIII, Div 1
Material	SA 516 - 70
Stress	20000 psi
Efficiency	1

UT SURVEY READINGS (in)

	1	2	3	4	5	6
Date Apr-21	1.371	1.365	1.361	1.343	1.315	1.344
Previous						
Current Apr-21	1.371	1.365	1.361	1.343	1.315	1.344

Concerns All Readings Acceptable

Comments

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
1.375 in	**1.315 in**	1.350 in	1.197 in	0.0625 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	4.36	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

TML 212-35

Type	Head
Shape	Ellipsoidal
Side	Shell
OD	66 in
Code	ASME Sec VIII, Div 1
Material	SA 516 - 70
Stress	20000 psi
Efficiency	1

UT SURVEY READINGS (in)

	1	2	3	4	5	6
Date Apr-21	1.392	1.390	1.407	1.409	1.360	1.380
Previous						
Current Apr-21	1.392	1.390	1.407	1.409	1.360	1.380

Concerns All Readings Acceptable

Comments

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
1.312 in	**1.360 in**	1.390 in	1.177 in	0.0625 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	0.00	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

HUNT INSPECTION LTD.

STATIC DATA

Date:	04.07.2021	**Vessel Name:**	Horizontal Separator	**Regulatory#:**	**A0406890**
LSD:	00-00-000-00W0M	**Location:**	Blackfalds	**Serial:**	V-1091-002
Drawing#:	212	**Job#:**		**CRN#:**	P9104.21

TML 212-40

Type	Inlet	Nozzle	**Date**		1	2	3	4	5	6
Shape	Cylindrical		Apr-21		0.878	0.881	0.888	0.893	0.892	0.896
Side	Shell			**Previous**						
OD	6.625 in	SCH XXS	Apr-21	**Current**	0.878	0.881	0.888	0.893	0.892	0.896
Code	ASME Sec VIII, Div 1			**Concerns**	All Readings Acceptable					
Material	SA 106 - B									
Stress	17100 psi									
Efficiency	1			**Comments**						

UT SURVEY READINGS (in)

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
0.864 in	**0.878 in**	0.888 in	0.109 in	0.0625 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	0.00	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

TML 212-45

Type	Outlet	Nozzle	**Date**		1	2	3	4	5	6
Shape	Cylindrical		Apr-21		0.597	0.592	0.575	0.570	0.570	0.588
Side	Shell			**Previous**						
OD	3.5 in	SCH XXS	Apr-21	**Current**	0.597	0.592	0.575	0.570	0.570	0.588
Code	ASME Sec VIII, Div 1			**Concerns**	All Readings Acceptable					
Material	SA 106 - B									
Stress	17100 psi									
Efficiency	1			**Comments**						

UT SURVEY READINGS (in)

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
0.600 in	**0.570 in**	0.582 in	0.051 in	0.0625 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	5.00	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

TML 212-46

Type		Nozzle	**Date**		1	2	3	4	5	6
Shape	Cylindrical		Apr-21		0.601	0.616	0.623	0.590	0.590	0.583
Side	Shell			**Previous**						
OD	3.5 in	SCH XXS	Apr-21	**Current**	0.601	0.616	0.623	0.590	0.590	0.583
Code	ASME Sec VIII, Div 1			**Concerns**	All Readings Acceptable					
Material	SA 106 - B									
Stress	17100 psi									
Efficiency	1			**Comments**						

UT SURVEY READINGS (in)

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
0.600 in	**0.583 in**	0.600 in	0.051 in	0.0625 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	2.83	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

TML 212-50

Type		Nozzle	**Date**		1	2	3	4	5	6
Shape	Cylindrical		Apr-21		0.591	0.589	0.589	0.598	0.579	0.576
Side	Shell			**Previous**						
OD	3.5 in	SCH XXS	Apr-21	**Current**	0.591	0.589	0.589	0.598	0.579	0.576
Code	ASME Sec VIII, Div 1			**Concerns**	All Readings Acceptable					
Material	SA 106 - B									
Stress	17100 psi									
Efficiency	1			**Comments**						

UT SURVEY READINGS (in)

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
0.600 in	**0.576 in**	0.587 in	0.051 in	0.0625 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	4.00	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

HUNT INSPECTION LTD.

STATIC DATA

Date:	04.07.2021	**Vessel Name:**	Horizontal Separator	**Regulatory#:**	**A0406890**
LSD:	00-00-000-00W0M	**Location:**	Blackfalds	**Serial:**	V-1091-002
Drawing#:	212	**Job#:**		**CRN#:**	P9104.21

TML	**212-55**										
Type		Nozzle	**Date**		1	2	3	4	5	6	
Shape	Cylindrical		Apr-21		0.580	0.591	0.584	0.600	0.605	0.603	
Side	Shell			**Previous**							
OD	3.5 in	SCH XXS	Apr-21	**Current**	0.580	0.591	0.584	0.600	0.605	0.603	
Code	ASME Sec VIII, Div 1			**Concerns**	All Readings Acceptable						
Material	SA 106 - B										
Stress	17100 psi										
Efficiency	1			**Comments**							

UT SURVEY READINGS (in)

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
0.600 in	**0.580 in**	0.594 in	0.051 in	0.0625 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	3.33	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

TML	**212-60**										
Type		Nozzle	**Date**		1	2	3	4	5	6	
Shape	Cylindrical		Apr-21		0.569	0.561	0.559	0.584	0.585	0.606	
Side	Shell			**Previous**							
OD	3.5 in	SCH XXS	Apr-21	**Current**	0.569	0.561	0.559	0.584	0.585	0.606	
Code	ASME Sec VIII, Div 1			**Concerns**	All Readings Acceptable						
Material	SA 106 - B										
Stress	17100 psi										
Efficiency	1			**Comments**							

UT SURVEY READINGS (in)

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
0.600 in	**0.559 in**	0.577 in	0.051 in	0.0625 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	6.83	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

TML	**212-65**										
Type	Inlet	Piping	**Date**		1	2	3	4	5	6	
Shape	90° Elbow		Apr-21		0.424	0.425	0.422	0.423	0.426	0.428	
Side	Shell			**Previous**							
OD	6.625 in	SCH XS	Apr-21	**Current**	0.424	0.425	0.422	0.423	0.426	0.428	
Code	ASME B.31.3			**Concerns**	All Readings Acceptable						
Material	SA 234 - WPB										
Stress	20000 psi										
Efficiency	1			**Comments**							

UT SURVEY READINGS (in)

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
0.432 in	**0.422 in**	0.425 in	0.122 in	0.0540 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	2.31	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

TML	**212-70**										
Type	Outlet	Piping	**Date**		1	2	3	4	5	6	
Shape	90° Elbow		Apr-21		0.300	0.295	0.288	0.286	0.288	0.287	
Side	Shell			**Previous**							
OD	3.5 in	SCH XS	Apr-21	**Current**	0.300	0.295	0.288	0.286	0.288	0.287	
Code	ASME B.31.3			**Concerns**	All Readings Acceptable						
Material	SA 234 - WPB										
Stress	20000 psi										
Efficiency	1			**Comments**							

UT SURVEY READINGS (in)

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
0.300 in	**0.286 in**	0.291 in	0.064 in	0.0375 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	4.67	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

HUNT INSPECTION LTD.

STATIC DATA

Date:	04.07.2021	**Vessel Name:**	Horizontal Separator	**Regulatory#:**	**A0406890**
LSD:	00-00-000-00W0M	**Location:**	Blackfalds	**Serial:**	V-1091-002
Drawing#:	212	**Job#:**		**CRN#:**	P9104.21

TML 212-75

Type	Outlet	Piping	**Date**		1	2	3	4	5	6
Shape	90° Elbow		Apr-21		0.294	0.290	0.285	0.283	0.284	0.282
Side	Shell			**Previous**						
OD	3.5 in	SCH XS	Apr-21	**Current**	0.294	0.290	0.285	0.283	0.284	0.282
Code	ASME B.31.3			**Concerns**	All Readings Acceptable					
Material	SA 234 - WPB									
Stress	20000 psi									
Efficiency	1			**Comments**						

UT SURVEY READINGS (in)

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
0.300 in	**0.282 in**	0.286 in	0.064 in	0.0375 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	6.00	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

TML 212-80

Type		Piping	**Date**		1	2	3	4	5	6
Shape	90° Elbow		Apr-21		0.216	0.207	0.197	0.197	0.200	0.206
Side	Shell			**Previous**						
OD	2.375 in	SCH XS	Apr-21	**Current**	0.216	0.207	0.197	0.197	0.200	0.206
Code	ASME B.31.3			**Concerns**	All Readings Acceptable					
Material	SA 234 - WPB									
Stress	20000 psi									
Efficiency	1			**Comments**						

UT SURVEY READINGS (in)

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
0.218 in	**0.197 in**	0.204 in	0.044 in	0.0272 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	9.63	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

TML 212-85

Type		Piping	**Date**		1	2	3	4	5	6
Shape	90° Elbow		Apr-21		0.298	0.293	0.289	0.288	0.298	0.294
Side	Shell			**Previous**						
OD	3.5 in	SCH XS	Apr-21	**Current**	0.298	0.293	0.289	0.288	0.298	0.294
Code	ASME B.31.3			**Concerns**	All Readings Acceptable					
Material	SA 234 - WPB									
Stress	20000 psi									
Efficiency	1			**Comments**						

UT SURVEY READINGS (in)

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
0.300 in	**0.288 in**	0.293 in	0.064 in	0.0375 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	4.00	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

TML 212-90

Type		Piping	**Date**		1	2	3	4	5	6
Shape	90° Elbow		Apr-21		0.216	0.207	0.209	0.206	0.216	0.217
Side	Shell			**Previous**						
OD	2.375 in	SCH XS	Apr-21	**Current**	0.216	0.207	0.209	0.206	0.216	0.217
Code	ASME B.31.3			**Concerns**	All Readings Acceptable					
Material	SA 234 - WPB									
Stress	20000 psi									
Efficiency	1			**Comments**						

UT SURVEY READINGS (in)

UT RESULT SUMMARY

Nominal	Minimum	Average	T-Min	CA
0.218 in	**0.206 in**	0.212 in	0.044 in	0.0272 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	5.50	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO

HUNT INSPECTION LTD.

STATIC DATA

Date:	04.07.2021	**Vessel Name:**	Horizontal Separator	**Regulatory#:**	**A0406890**
LSD:	00-00-000-00W0M	**Location:**	Blackfalds	**Serial:**	V-1091-002
Drawing#:	212	**Job#:**	[illegible]	**CRN#:**	P9104.21

TML	**212-95**	
Type		Piping
Shape	90° Elbow	
Side	Shell	
OD	3.5 in	SCH XS
Code	ASME B.31.3	
Material	SA 234 - WPB	
Stress	20000 psi	
Efficiency	1	

UT SURVEY READINGS (in)

	Date	1	2	3	4	5	6
Previous	Apr-21	0.294	0.293	0.280	0.278	0.290	0.303
Current	Apr-21	0.294	0.293	0.280	0.278	0.290	0.303

Concerns All Readings Acceptable

Comments

UT RESULT SUMMARY

Nominal	**Minimum**	**Average**	**T-Min**	**CA**
0.300 in	**0.278 in**	0.290 in	0.064 in	0.0375 in

UT ANALYSIS OF LOW MINIMUM READING

% Below Nom.	7.33	**Short Term C.R.**	
% Below C.A.	0.00	**Long Term C.R.**	
Below T-Min	NO	**Remaining Life**	
Int. Corrosion	NO	**Assumed Nominal**	NO
Int. Erosion	NO	**Assumed Material**	NO