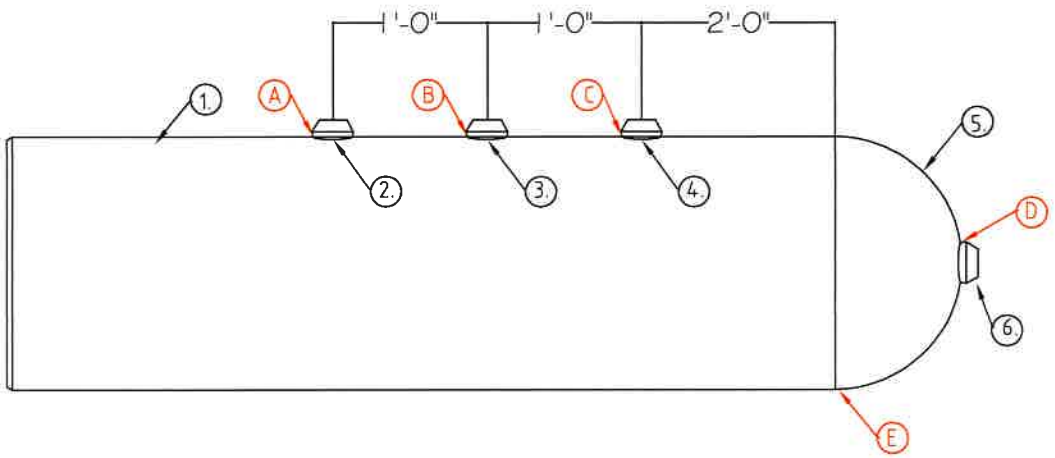
	MATERIAL	HEAT
1.	10" PIPE	GW0119
2.	1" TOL	50313
3.	2" TOL	50171
4.	2" TOL	50117
5.	10" CAP	933940/QT
6.	2" TOL FLAT 6M	1BUAN

	XRAY
A	MT-25
B	MT-24
C	MT-23
D	MT-37
E	XR-22

SN# 10TEST05



PIPE OD :10.75"
PIPE WALL THICKNESS: 0.375"
PIPE GRADE: X-42
MAX HYDRO. PRESSURE: 2225 psi

RIDGE RUNNER PIPELINE SERVICES	AS-BUILT DATA	BJB	10" WELD ON TEST HEADER
	PAGE 1 OF 1	11/27/18	

vallourec
2669 MARTIN LUTHER KING BLVD
YOUNGSTOWN, OH 44510

VALLOUREC STAR, LP
Seamless Tubular Products

Certified Test Report
02/08/2017

CUSTOMER: MCJUNKIN RED MAN CORPORATION
DESC: SEAMLESS HOT ROLLED
Customer PO-Rev#: S7N0023508-00
SLN: GW0119 **GRADE:** API 5L X42/B PSL 2 45th Ed., July 1, 2013
ORDER LINE #: Y-107280-001
OD: 10.750 **WALL:** 0.365 **LBS/FT:** 40.52 PEB DRL LP
W/O NO:
COMMENT: Melted and Manufactured in Ygstn, OH USA
LOT NUMBER:
This pipe is also manufactured to: ASTM A106B/C-15; ASTM A53B-12; ASME SA106B/C-2015; ASME SA53B-2015; V&M Star s QA program meets the requirements of DIN EN 10204-2004 Type 3.1.
Satisfies NACE MR0175/ISO15156:2015 and ANSI/NACE MR0103/ISO17945:2015
No repair welding has been conducted. Material is free from Mercury.

MECHANICAL PROPERTIES **ORIENTATION:** LONGITUDINAL **TYPE:** STRIP

	TENSILE SIZE		SPECIMEN CROSS SECTION	STRENGTH KSI			ELONGATION		
JT-POS	WIDTH(IN)	THICK(IN)	AREA(SQIN)	YIELD	TENSILE	Y/T RATIO	GAGE LENGTH	% ELONG	% RA
1)	1.509	0.369	0.5588	50.3	75.6	0.66	2	41.0	
2)									
3)									
4)									
5)									

SUPPLEMENTAL REQUIREMENT
HARDNESS: 79 HRBW AVG
FLATTENING: PASSED
NACE TEST: MR0175 / ISO15156-2
GRAIN SIZE:
OTHER:
COLLAPSE:
MIN:
AS QUENCHED:

MAX INTERNAL YIELD (psi): 2971
INSPECTION:
HYDROSTATIC TEST (psi): 2500for a 5 second minimum
Q/T: **AF:** 0 **AT:** 0 **TF:** 0 **TT:** 0
DRIFT PLUG SIZE:

CHEMICAL ANALYSIS: 61M Electromagnetic Inspected. Reference Standard was a test joint with 10% OD Longitudinal and Transverse notches.

WT%	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Nb	V	Al	Ca	B	Ti	N	CE
HEAT	0.21	0.69	0.008	0.005	0.21	0.20	0.07	0.08	0.02	0.011	0.000	0.002	0.029	0.0018	0.0002	0.002	0.0091	0.37
PRODUCT 1)	0.21	0.69	0.008	0.005	0.21	0.19	0.07	0.08	0.02	0.010	0.000	0.002	0.031	0.0017	0.0001	0.002	0.0074	0.36
PRODUCT 2)	0.20	0.69	0.008	0.006	0.21	0.19	0.07	0.08	0.02	0.010	0.000	0.002	0.030	0.0014	0.0002	0.002	0.0073	0.35
PRODUCT 3)																		
PRODUCT 4)																		

CHARPY IMPACT TESTING

DIRECTION TRANS
SIZE 3/4
NOTCH V

TEMP (Deg.F) LOCATION
1 32
2
3

NM - Not Measured
NR - Not Required

	FTLBS		SHEAR	
TEST #	MIN	ACTUAL	MIN	ACTUAL
1	11	34	NR	35
2	11	35	NR	35
3	11	36	NR	35
AVG	15	35	NR	35
1				
2				
3				
AVG				
1				
2				
3				
AVG				

This material has been produced and tested in accordance with the requirements of applicable specifications unless otherwise listed below. We hereby certify that the above test results are representative of those contained in the records of the company. Any modification to this certification as provided by Vallourec Star; without the expressed written consent of Vallourec Star negates the validity of the test report. Vallourec Star is not responsible for the inability of the material to meet specific applications.

SIGNED: **NAME:** JOE DOLAK **TITLE:** QA MANAGER - VSTAR OHIO
DATE APPROVED: 02/08/2017

ANVIL® INTERNATIONAL
Building Connections That Last

Certificate of Test

ITEM INFORMATION

Part Number: 0766260483 **Description:** 36-3X1 3000# THD UNIV ANVILET
Heat Code: 50313 **Heat Number:** 50313
Reference No.:
Part Specification: ASTM A105/A105M-14/ASME SA105-14 NACE MR 0103/MR 0175/ISO15156-2

CHEMICAL ANALYSIS %

C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb/Nb	Al	Co	CE
0.200	1.000	0.006	0.023	0.240	0.080	0.030	0.060	0.006	0.003	0.0140	0.036	0.002	0.388

CE (LONG FORMULA) = 0.388

PHYSICAL PROPERTIES

Yield PSI	Yield MPA	Tensile PSI	Tensile MPA	Elongation	REDUCTION OF AREA %	HARDNESS 1 BHN/HRC	HARDNESS 2 BHN/HRC
48588	334	73705	507	35.30	55.02	135	135

SUPPLEMENTAL INFORMATION

THE ORIGINAL MANUFACTURER'S CERTIFICATION MEETS THE REQUIREMENTS OF EN 10204 TYPE 3.1. WE CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF THE MILL CERTIFICATE, ISSUED BY THE MANUFACTURER OF THE STEEL EMPLOYED OR THE LABORATORY WHICH HAS DETERMINED IT, AS RETAINED IN THE RECORDS OF THE COMPANY. WE MAKE NO REPRESENTATION BEYOND THOSE OF THE MANUFACTURER OR ITS AGENT.

ANVIL INTERNATIONAL
Building Connections That Last

Certificate of Test

ITEM INFORMATION

Part Number: 0766260608 **Description:** 36-8X2 3000# THD UNIV ANVILET
Heat Code: 50171 **Heat Number:** 50171
Reference No.:
Part Specification: ASTM A105/A105M-14/ASME SA105-14 NACE MR 0103/MR 0175/ISO15156-2

CHEMICAL ANALYSIS %

C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb/Nb	Al	Co	CE
0.210	1.000	0.007	0.022	0.250	0.060	0.020	0.030	0.004	0.003	0.0140	0.026	0.003	0.389

CE (LONG FORMULA) = 0.389

PHYSICAL PROPERTIES

Yield PSI	Yield MPA	Tensile PSI	Tensile MPA	Elongation	REDUCTION OF AREA %	HARDNESS 1 BHN/HRC	HARDNESS 2 BHN/HRC
50276	346	74929	516	32.65	61.09	144	141

SUPPLEMENTAL INFORMATION

THE ORIGINAL MANUFACTURER'S CERTIFICATION MEETS THE REQUIREMENTS OF EN 10204 TYPE 3.1. WE CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF THE MILL CERTIFICATE, ISSUED BY THE MANUFACTURER OF THE STEEL EMPLOYED OR THE LABORATORY WHICH HAS DETERMINED IT, AS RETAINED IN THE RECORDS OF THE COMPANY. WE MAKE NO REPRESENTATION BEYOND THOSE OF THE MANUFACTURER OR ITS AGENT.

MILL TEST REPORTS

Bonney Forge
14496 Croghan Pike
Mt. Union, PA 17066

CERTIFIED MILL TEST REPORT

MRC 2/6/2018

LOT NO.
50117

CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS

6 X 2" STD A105 Weldolet™ Socket-weld

C	0.210	MN	1.010	P	0.008	S	0.016	SI	0.240
NI	0.020	CR	0.040	MO	0.004	CU	0.050	CO	0.003
V	0.003	AL	0.023	Nb	0.014				

CE(LONG FORMULA) = 0.392

T/S(PSI) 79857 Y/S(PSI) 52967 EL(%) 36.950 RA(%) 59.090

BRINELL HARDNESS 144, 141

Click here for Original Steel Mill Certification

1. CERTIFYING ASTM A105-14 / ASME SA105-15 EDITION.
2. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF NACE MR0175/ISO 15156-2.
3. THE MATERIAL SUPPLIED WAS INSPECTED AND MANUFACTURED IN ACCORDANCE WITH EN DIN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT.
4. THE ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.

THIS DOCUMENT HAS BEEN ELECTRONICALLY SUBMITTED.

Cancel Logout

TECTUBI RACCORDI S.p.A.
Via Roma 150,29027 Podenzano (PC), Italy
mail: info@tectubiraccordi.com
Tel: ++39 0523555111
Fax: ++39 0523555318

INSPECTION CERTIFICATE EN 10204 – 2004 ☒ 3.1 ☐ 3.2

NUMBER 108570 -3
REVISION 3
DATE 07/02/2017

CLIENT: ALLIED FITTING L.P.
ORDER:
JOB:

CLIENT ITEM	ITEM	Q.ty	DESCRIPTION	HEAT CODE	SPECIFICATION	MATERIAL	STEEL MAKER	CERT.N.	RAW MATERIAL
214	214	25	CAP BW 10" SCH. STD – SMLS	933940 - QT	ASTM A.860/A.860M-13 MSS SP-75 Edition 2008	WPHY65	VOESTALPINE	Q0389115	PLATE

CHEMICAL COMPOSITION ☒ BY LADLE ANALISYS * ☒ BY CHECK ANALYSIS () **

HEAT	Test	C	Mn	Si	P	S	Cr	Ni	Ti	Cu	V	Nb	Mo	Al	V+Nb	Ce	B
min.			1.00	0.15													
max.		0.20	1.45	0.40	0.03	0.01	0.30	0.50	0.05	0.35	0.10	0.04	0.25	0.06	0.12	0.42	0.001
933940 - QT	LADLE*	0.077	1.390	0.380	0.001	0.001	0.033	0.270	0.001	0.161	0.051	0.016	0.008	0.038	0.067	0.356	0.0002
933940 - QT	CHECK**	0.079	1.350	0.350	0.006	0.001	0.032	0.280	0.001	0.166	0.054	0.017	0.009	0.039	0.071	0.353	0.0002

The chemical values and tensile properties are a true and correct copy of the certificate issued by the supplier of raw materials or by the laboratory which has determined them.

MECHANICAL PROPERTIES ☐ ON RAW MATERIAL * ☒ ON FINISHED FITTINGS ** ☐ SUPPLEMENTARY REQ. ***

Tensile Test Temp. °C: +20 Impact Test Temp. °C: -46

	Y.S. MPA	U.T.S. MPA	E%	Senso Direct.	Dim. Sample		KCV (Joule)	Shear Area %	Lat.Exp. mm	Hardness HB	Red. Area %
min.	450	530	20			min.	34		min. 0.64	min.	
max.	555	705				average	40			max. 235	
247877**	495	606	28	T	10X10	495-606-28				190÷200	

REMARKS

Melting process: Electric Furnace

Manufacturing method: Hot Formed (780°C ÷ 980°C)

Heat treatment : Quenching at 920°C (1H/1" WTH) water cooling
Tempering at 680°C (1H/1" WTH) still air cooling

Visual and dimensional examination in accordance with:
ASME B16.9 - Ed. 2012
ASME B16.25 - Ed. 2012

Material according to:

NACE MR 01.75 - ISO 15156 Ed. 2009
UT EXAMINATION PERFORMED WITH SATISFACTORY RESULT

ACTIVITIES						
CERTIFICATE						
RESULT						
ACTIVITIES						
CERTIFICATE						
RESULT						

Work inspector
TECTUBI RACCORDI S.p.A. S. AMORINI
DATE SIGNATURE

Customer Inspector
DATE SIGNATURE

Third part inspector
DATE SIGNATURE

We hereby certify that the materials listed below have been manufactured in compliance with the order and mentioned rules.

☒ EU DIRECTIVE 97/23/EC ANNEXE I SECT. 4,3 & 7.5

WOI
WELDING OUTLETS, INC.
"WORLDWIDE INNOVATORS OF BRANCH CONNECTIONS"
1341 Hill Rd.
Houston, Tx 77039
(281) 590-0190
Fax: (281) 590-1415
E-Mail: woi@woihouston.com

ISO 9001:2008 Certified

SOLD TO: MRC N SALT LAKE-UT

CUSTOMER'S ORDER NO.: C1078894036B1

WOI S/O #.: C000085286

WE CERTIFY THAT THE MATERIAL FURNISHED ON THIS ORDER COMPLIES IN ALL RESPECTS WITH THE SPECIFICATIONS AS STATED AND THAT THIS CORRECT INFORMATION IS AS CONTAINED IN OUR RECORDS.
WOI PRODUCTS ARE MANUFACTURED IN THE UNITED STATES OF AMERICA

MATERIAL TEST REPORT

LN	ITEM	QUANTITY	DESCRIPTION	HEAT CODE
1	2SWB9M1053	2	36 - 8 X 2 9M SW BRANCHETTE A105 IAW MSS SP-97	1BUAN

CHEMICAL COMPOSITIONS

LADLE

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	V
.28	.86	.011	.020	.26	.07	.10	.03	.16	.002

PRODUCT

MECHANICAL COMPOSITION

	TENSILE PSI	YIELD PSI	ELONG %	RA %	BHN	BHN
MILL						
PRODUCT	80200	49400	28.2	61.5	143	143

COMMENTS

CE: .465
EN 10204 3.1
IAW ASTM A105-15 / ASME SA105-15

HEAT TREATMENT
NORMALIZED

BY _____
QUALITY ASSURANCE CONTROL DEPARTMENT

DATE: 06/11/2018

Made in the USA.

THIS PRODUCT HAS NOT COME IN DIRECT CONTACT WITH MERCURY OR ANY OF IT'S COMPOUNDS, NOR WITH ANY MERCURY CONTAINING DEVICE EMPLOYING A SINGLE BOUNDARY OF CONTAINMENT. THERE HAS BEEN NO REPAIR BY WELDING ON THIS MATERIAL.

Waggoner & Associates

Daily Radiographic Log

P.O. Box 307 West Monroe, La 71294
Phone: 1-800-894-3230 Fax: 318-324-8816
Email: waggonerndt@waggonerndt.com

REPORT # 1

RIG # 9537

TERMS AND ABBREVIATION

I.P.	-Inadequate Penetration	P.	-Porosity
I.F.	-Incomplete Fusion	H.B.	-Hollow Bead
B.T.	-Burn Through	C.R.	-Crack
B.T.A.	- Burn Through Areas	I.U.	-Internal Undercut
S.I.	-Slag Inclusions	O.U.	-Outside Undercut
S.L.	-Slag Line(s)	I.C.	-Internal Concavity

LOCATIONS

R.S.	-RIGHT OF WAY Side	B.	-Bottom
D.S.	-Ditch Side	T.Q.	-Top Quarter
T.	-Top	B.Q.	-Bottom Quarter

JOB DESCRIPTION Test headers

JOB, WO, AFE #, PO # ETC. PO-2018 1775

CUSTOMER NAME Ridge runner

BILLING ADDRESS 51 Scott's Run rd.

CITY Maidsville STATE WV ZIP 26541

ATTN:

DAY Mon DATE 11/19/18

LOCATION Maidsville

STATE West Virginia

X-RAY NO.	WITHIN CODE	PIPE SIZE	FILM SIZE	INSP. TYPE	NO. EXP.	WALL THICK.	GAMMA/ X-RAY	REMARKS
1. Xr-1	YES	6.625 in	70 mm	RT	3	0.280 in	GAMMA	
2. Xr-2	YES	6.625 in	70 mm	RT	3	0.280 in	GAMMA	
3. Xr-3	YES	6.625 in	70 mm	RT	3	0.280 in	GAMMA	
4. Xr-4	YES	6.625 in	70 mm	RT	3	0.280 in	GAMMA	
5. Xr-5	YES	4.5 in	70 mm	RT	3	0.237 in	GAMMA	
6. Xr-6	YES	4.5 in	70 mm	RT	3	0.237 in	GAMMA	
7. Xr-7	YES	4.5 in	70 mm	RT	3	0.237 in	GAMMA	
8. Xr-8	YES	4.5 in	70 mm	RT	3	0.237 in	GAMMA	
9. Xr-9	YES	4.5 in	70 mm	RT	3	0.237 in	GAMMA	
10. Xr-10	NO	4.5 in	70 mm	RT	3	0.237 in	GAMMA	Porosity 2-0 view
11. Xr-11	YES	4.5 in	70 mm	RT	3	0.237 in	GAMMA	
12. Xr-12	YES	4.5 in	70 mm	RT	3	0.237 in	GAMMA	
13. Xr-13	YES	2.375 in	70 mm	RT	4	0.218 in	GAMMA	
14. Xr-14	YES	2.375 in	70 mm	RT	4	0.218 in	GAMMA	
15. Xr-15	YES	2.375 in	70 mm	RT	4	0.218 in	GAMMA	
16. Xr-16	YES	2.375 in	70 mm	RT	4	0.218 in	GAMMA	
17. Xr-17	YES	2.375 in	70 mm	RT	4	0.218 in	GAMMA	
18. Xr-18	YES	2.375 in	70 mm	RT	4	0.218 in	GAMMA	
19. Xr-19	YES	2.375 in	70 mm	RT	4	0.218 in	GAMMA	
20. Xr-20	NO	2.375 in	70 mm	RT	4	0.218 in	GAMMA	Porosity 0-A view
21. XR-21	YES	8.625 in	70 mm	RT	3	0.322 in	GAMMA	
22. XR-22	YES	10.75 in	70 mm	RT	3	0.375 in	GAMMA	
23. XR-23	YES	10.75 in	70 mm	RT	3	0.375 in	GAMMA	
24. XR-24	YES	20 in	70 mm	RT	3	0.500 in	GAMMA	
25. XR-25	YES	20 in	70 mm	RT	3	0.500 in	GAMMA	
26. XR-26	YES	24 in	70 mm	RT	3	0.500 in	GAMMA	
27. XR-27	YES	24 in	70 mm	RT	3	0.500 in	GAMMA	
28. XR-28	YES	24 in	70 mm	RT	3	0.500 in	GAMMA	
29. XR-29	YES	24 in	70 mm	RT	3	0.500 in	GAMMA	
30.		in				in		
31. MT-1	YES	1 in	N/a	MT		in		
32. MT-2	YES	2 in	N/a	MT		in		
33. MT-3	YES	2 in	N/a	MT		in		
34. MT-4	YES	2 in	N/a	MT		in		
35. MT-5	YES	2 in	N/a	MT		in		
36. MT-6	YES	1 in	N/a	MT		in		
37. MT-7	YES	4 in	N/a	MT		in		
38. MT-8	YES	4 in	N/a	MT		in		
39. MT-9	YES	2 in	N/a	MT		in		
40. MT-10	YES	2 in	N/a	MT		in		

X

NAME: Todd Matiyasic

BADGE #: 3487

TECHNICIAN LEVEL: Level II

ASST NAME: Brian Luketich

ASST NAME:

ASST NAME:

PIPELINE ☑ STATION ☐

JOB COMPLETE Yes

DISPOSITION OF FILM Turned In

GRADED ACCORDING TO API 1104

PROCEDURES TURNED IN Yes

TECH. CERTIFICATION TURNED IN Yes

RT Yes MT Yes UT ___ PT ___

ATV No ATV# 2971 Crawler No # Mag Cans 4

Pulling Mach No B. Hardness No WT Trailer No

UNIT SIZE 2

UNITS REMAINING OVERNIGHT Yes

FROM Office TO Job

MILEAGE DESCRIPTION Round Trip

MILEAGE 211

TOTAL HRS UTILIZED 10

REFERENCE # ___

Brandon bever
PRINT NAME (APPROVED BY)

X
SIGNATURE (APPROVED BY)

11/19/18
DATE

Waggoner & Associates

Test headers

Date: 11/19/18 Report: 1 Job: PO-2018 1775

Daily Radiographic Log

X-RAY NO.	WITHIN CODE	PIPE SIZE	FILM SIZE	INSP. TYPE	NO. EXP.	WALL THICK.	GAMMA/ X-RAY	REMARKS
41. MT-11	YES	4 in	N/a	MT		in		
42. MT-12	YES	4 in	N/a	MT		in		
43. MT-13	YES	2 in	N/a	MT		in		
44. MT-14	YES	2 in	N/a	MT		in		
45. MT-15	YES	4 in	N/a	MT		in		
46. MT-16	YES	2 in	N/a	MT		in		
47. MT-17	YES	2 in	N/a	MT		in		
48. MT-18	YES	2 in	N/a	MT		in		
49. MT-19	YES	2 in	N/a	MT		in		
50. MT-20	YES	2 in	N/a	MT		in		
51. MT-21	YES	4 in	N/a	MT		in		
52. MT-22	YES	4 in	N/a	MT		in		
53. MT-23	YES	2 in	N/a	MT		in		
54. MT-24	YES	2 in	N/a	MT		in		
55. MT-25	YES	1 in	N/a	MT		in		
56. MT-26	YES	1 in	N/a	MT		in		
57. MT-27	YES	2 in	N/a	MT		in		
58. MT-28	YES	2 in	N/a	MT		in		
59. MT-29	YES	2 in	N/a	MT		in		
60. MT-30	YES	2 in	N/a	MT		in		
61. MT-31	YES	1 in	N/a	MT		in		
62. MT-32	YES	2 in	N/a	MT		in		
63. MT-33	YES	2 in	N/a	MT		in		
64. MT-34	YES	2 in	N/a	MT		in		
65. MT-35	YES	2 in	N/a	MT		in		
66. MT-36	YES	1 in	N/a	MT		in		
67. MT-37	YES	2 in	N/a	MT		in		
68. MT-38	YES	2 in	N/a	MT		in		
69. MT-39	YES	2 in	N/a	MT		in		
70. MT-40	YES	2 in	N/a	MT		in		
71. MT-41	YES	1 in	N/a	MT		in		
72. MT-42	YES	1 in	N/a	MT		in		
73. MT-43	YES	2 in	N/a	MT		in		
74. MT-44	YES	2 in	N/a	MT		in		
75. MT-45	YES	2 in	N/a	MT		in		
76. MT-46	YES	2 in	N/a	MT		in		
77.		in				in		
78.		in				in		
79.		in				in		
80.		in				in		
81.		in				in		
82.		in				in		
83.		in				in		
84.		in				in		
85.		in				in		
86.		in				in		
87.		in				in		
88.		in				in		
89.		in				in		
90.		in				in		
91.		in				in		
92.		in				in		
93.		in				in		
94.		in				in		
95.		in				in		
96.		in				in		
97.		in				in		
98.		in				in		
99.		in				in		
100.		in				in		
101.		in				in		
102.		in				in		
103.		in				in		
104.		in				in		
105.		in				in		

REFERENCE # _____