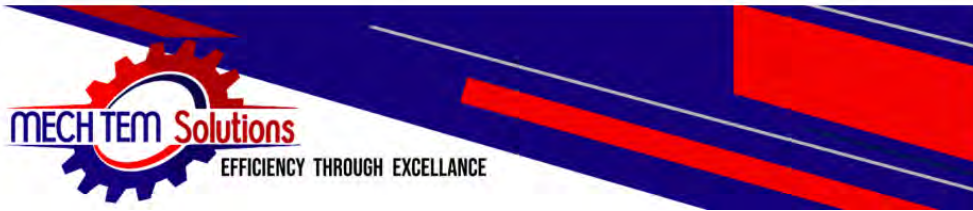




Procedure Qualification Record (PQR)										
MANUFACTURER		Mech-Tem (PTY) Ltd					Page 1 of 2			
PQR No.		P002-25			WPS No.		W002-25			
CODE AND YEAR EDITION		ASME BPVC IX:2023								
WELDER NAME		SS Mofokeng								
ID/PASSPORT No.		850131 5408 087								
WELDER STAMP No.		Not applicable								
PQR TEST DATE		2025/06/06								
REVISION		00								
Base Metals										
MATERIAL GRADE 1		EN 10025-2-S355JR+AR			GROUP No.		P1 Group 2			
MATERIAL GRADE 2		EN 10025-2-S355JR+AR			GROUP No.		P1 Group 2			
MATERIAL THICKNESS 1		16.0 mm								
MATERIAL THICKNESS 2		16.0mm								
BACKING MATERIAL		Weld Metal (Back Grinding)								
PIPE OUTSIDE DIAMETER		Not applicable								
TYPE OF JOINT		CJP Single V Groove Joint								
FILLER METALS										
NUMBER OF PROCESSES		One								
PROCESS		Gas Metal Arc Welding (GMAW)								
PROCESS TYPE		Semi Auto								
FILLER SPEC. (SFA)		AWS SFA A5.18								
FILLER CLASS No. (AWS)		ER70S-6								
FILLER F No.		F6								
FILLER A No./CHEM		A1								
DEPOSITED WELD THICKNESS		16.0mm								
TRADE NAME		EWN&S								
FILLER SIZE		1.2 mm								
FILLER BATCH NUMBER		0912								
SUPPLEMENTAL FILLER		N/A								
BACKING		Weld Metal								
PREHEAT AND INTERPASS TEMPRATURE					SHIELDING GAS					
PREHEAT TEMP.		24.2 °C			GAS TYPE		Argoshield 5			
HEAT METHOD		No Method Used			% COMP		Ar- 93% / Co2- 5% / O2- 2%			
TEMPERATURE CHECK		Digital Thermometer			FLOW RATE		23 Liter per Minute			
INTERPASS TEMPERATURE		275° C Maximum			ORIFICE		16 mm			
HEAT AREA		75mm each side of weld			TRAILING GAS		None			
PREHEAT MAINTANCE		None			BACKING GAS		None			
OTHER		None			FLOW RATE		None			
JOINT DESIGN					PASS LOCATION AND SEQUENCE					
PREPERATION METHODE		Grind			MAX RUN THICKNESS		5.0mm			
INITIAL CLEAN		Degreased			GOUGE METHOD		Back Grinding to sound metal			
BACK GOUGING		Yes			INTERPASS CLEAN		Grind/Brush			
ELECTRICAL CHARACTERISTICS										
PROCESS	WELD PASS NO.	CONSUMABLE TYPY	FILLER SIZE	WELD POSITION	AMPS (A)	VOLTS (V)	TRAVEL SPEED (mm/min)	PROGRESS	TYPE AND POLARITY	HEAT INPUT (kJ/MM)
GMAW	1-7	ER70S-6	1.2 mm	2G	225-280	22-27	290-350 mm/min	Not Applicable	DCEP	0.85-1.57



Procedure Qualification Record (PQR)						
MANUFACTURER		Mech-Tem (PTY) Ltd			Page 2 of 2	
PQR No.		P002-25		WPS No.	W002-25	
CODE AND YEAR EDITION		ASME BPVC IX:2023				
WELDER NAME		SS Mofokeng				
ID/PASSPORT No.		850131 5408 087				
WELDER STAMP No.		Not applicable				
PQR TEST DATE		2025/06/06				
REVISION		00				
WELDING TECHNIQUE						
SINGLE/MULTI ELECTRODE	Single Electrode	SOLID/TUBULAR WIRE	Solid	PEENING	None	
SINGLE/MULTI PASS	Multi Pass	ELECTRODE SPACE	N/A	C.T.W.D.	Not Recorded	
SIDES WELDED	One side	TRANSFER MODE	Globular and spray	TUNGSTEN TYPE	N/A	
STRING/WEAWE BEAD	Stringer & Weave	OSCILLATION	N/A	TUNGSTEN SIZE	N/A	
POWER SOURCE	Constant Voltage	WIRE FEED SPEED	Amperage Controlled			
POST-WELD HEAT TREATMENT						
HEATING RATE	None		COOLING RATE	None		
HOLDING TEMPERATURE	None		METHOD	None		
HOLDING TIME	None		PWHT CERT No.	None		
NON-DESTRUCTIVE EXAMINATION						
TYPE OF TESTING		ACCEPTABLE/NOT APPLICABLE			REPORT NO.	
RADIOGRAPHY		Acceptable				
ULTRASONIC		N/A				
MAGNETIC PARTICAL		N/A				
DYE PENETRANT		N/A				
VISUAL		Acceptable				
DESTRUCTIVE TESTING						
TENSILE TEST						
MARK	WIDTH (mm)	THICKNESS (mm)	AREA (MM)	ULTIMATE LOAD (KN)	TENSILE (MPa) STRENGHT	FRACTURE LOCATION AND APPEARANCE
1	20.0	15.11	302.20	146.60	485	PM Ductile
2	20.0	14.67	393.40	143.80	490	PM Ductile
BEND TEST: YES		BEND ANGLE: 180			Mandrel Dia (mm): 40	
TYPE OF BEND TEST		4 off Side bends				
RESULT OF BEND TEST		Acceptable				
MACRO TEST		N/A				
FILLET FRACTURE		N/A				
MECHANICAL TEST REPORT No.		Performed by VML Report MT9998/25/B				
NOTES:		MANUFACTURER:			COMPILED BY: AMH Quality Services	
REMARKS:		SIGNATURE:			SIGNATURE: AMH Quality Services <i>Aubrey Harmse (ANDT Level 2)</i>	
		DATE:			DATE: 2025/06/16	



Branches:

(Springs)
1 Jansen Road, Nuffield Springs
011 363 3330

(Nigel)
10 Lavers Road, Nigel
011 814 6251/5

(Sasolburg)
36 Geduld Street, sasolburg
016 976 0053

(Germiston)
45 Deodar Rd, Primrose
011 828 9907
Proud level 2 B-BBEE Contributor

CERTIFICATE NO. 20240928002

TEST CERTIFICATE

Commodity	Size	Batch No.	Mfg Date	Standard	Shielding Gas	Date of issue					
MIG welding wire	1.2mm	0912	2024.09	AWS A5.18 ER70S-6	CO2+Ar	2024.09.28					
Chemical Composition (%)											
Element	C	Mn	Si	P	S	Cu	Ni	Cr	Mo	V	
Specification	0.06-0.15	1.40-1.85	0.80-1.15	≤0.025	≤0.035	≤0.50	≤0.15	≤0.15	≤0.15	≤0.03	-
Filler Metal	0.070	1.51	0.88	0.018	0.012	0.16	0.01	0.05	0.002	0.005	-
Mechanical Properties Of Weld Metal (As Welded)											
	Tensile Strength	Yield Point	Elongation	Impact Temp	Impact Value						
	MPa	MPa	(%)	(°C)	(J)						
Requirement	500-640	≥420	≥20	-30	≥27						
Real Parameter	548	445	27.5	-30	71.7						
Remarks	This is a copy of the Original Certificate and the Original is kept at Head Office.										

AMH Quality Services
[Signature] 2025/06/10
Audrey Harmse (ANDT Level 2)

Radiographic Inspection Test Report



53 Houtkop Road
Duncanville
Vereeniging

Date: 10/06/2025
Report No: AMH-RT-25093
Pages: 1 of 1

Client Details

Job Description: Test Plate	Client Order Number: PQR
Client: AMH	Project: Procedure Qualification Record
Client Representative: Aubrey Harmse	Job Location: Glospech X-ray Bay

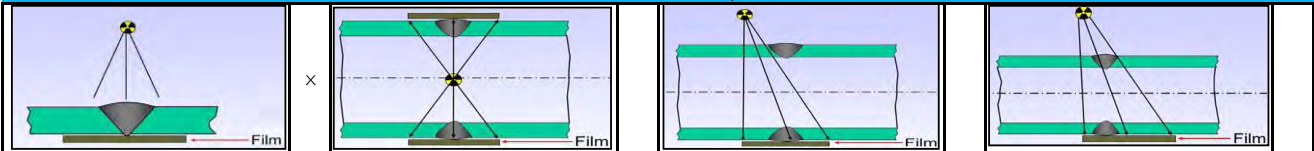
Test Component Details

Component Details: Test Plate	Original Manufacturer: SS Mofokeng 850131 5408 087
WPS/PQR: P002-25	Heat Treatment: No Post weld heat treatment
Material: EN 10025-2-S355JR+AR 2019	Weld Prep: CJP Single V Groove Joint
Material: EN 10025-2-S355JR+AR 2029	Extend of Test: 100% of weld
Manufacture Type: GMAW 2G	

Test Specification

Code: ASME BPVC IX: 2023	Procedure: Glospech RT001 Rev 00
Acceptance Criteria: ASME BPVC IX: 2023	Technique Sheet: Glo-ASME-SWSI Rev 00

Test Technique



Test Equipment & Consumables

Radiation Source / Voltage: Ir192	Radiation Source Size: 1mm x 2mm
Source Strength / Current: 10Ci	Source Strength / Current: 10Ci
Film Type: 100XD	Screen Type: Lead
Screen Thickness: 0,025mm	Screen Placement: Top and Bottom
Penetrameter Type: 6FEEN	Penetrameter Placement: Source side
Processing Chemicals: AFGA	Processing Temperature: 20

Test Results & Final Disposition

Weld/Item Identification	Welder Stamp	Weld Size	Weld Thickness	Film Position	Sensitivity Wire No.	SFD	Density	Exposure Time	Indication Type	Disposition
SS Mofokeng 850131 5408 087	N/A	300mm	16mm	0-30	10	400mm	2,6	8m10s	No recordable indication	ACC

Name	Technician	Interpreter	Client	Inspection Authority
	ACI APPEL	A EARLE		AMH Quality Services
Qualification	SNT-TC-1A Level 1	SNT-TC-1A Level 2		
Signature				Aubrey Harmse (ANDT Level 2)
Date	10/06/2025	10/06/2025		2025/06/10



Vaal Metalurgiese Laboratoriums (PTY) Ltd.
 7 Bretts Lane, 21 Telford Street, Duncanville,
 Vereeniging, 1939. Tel: 016 455 2000/1
 081 251 7742 or 081 252 2494
 E-mail: info@vml.co.za
 Fax to E-mail: 086 653 1208

TEST REPORT IN ACCORDANCE WITH EN 10204		REPORT NUMBER:	9998/25/B
CUSTOMER:	AMH Quality Services (Pty) Ltd For Mech-Tem (Pty) Ltd	DATE TESTED:	19/06/2025
ADDRESS:	13 Madission Street, Risiville, Meyerton, 1929	MATERIAL SPEC: *	BS EN 10025 2 S355JR+AR
TELEPHONE:	071 408 5018	SAMPLE ID: *	PQR 2: P002-25, WPS: P002-25 Welder: S.S. Mofokeng, ID: 850131 5408 087 Process: GMAW Position: 2G Consumable: ER70S-6 16mm
E-MAIL:	aubrey@amhquality.co.za		
CONTACT:	Aubrey Harmse		

TEST: TENSILE AND BEND	SPECIFICATION: * ASME IX:2023	METHOD: VML-QLT-MTD-0001 & VML-QLT-MTD-0006
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Tensile Test

TEST: TENSILE	SPECIFICATION: * ASME IX:2023	METHOD: VML-QLT-MTD-0001								
Sample	Dimensions (mm)	Area (mm ²)	Gauge (mm)	Yield Load (FeL) (kN)	Max Load (Fm) (kN)	Yield Stress (ReL) (MPa)	UTS (Rm) (MPa)	Elongation (A) (%)	ROA (Z) (%)	Fracture Location
Specification and customer requirements: BS EN 10025 2 S355JR+AR							355 Min	470 to 630		
Specification and customer requirements: Consumable: ER70S-6							470 Min	560 Min		
A: PQR 2: P002-25	20.00 x 15.11	302.20	50	112.00	146.60	371	485	35	61	PM Ductile
B: PQR 2: P002-25	20.00 x 14.67	393.40	50	119.00	143.80	406	490	34	56	PM Ductile

Bend Test

TEST: BEND TEST	SPECIFICATION: * ASME IX:2023	METHOD: VML-QLT-MTD-0006	
Bend Type	Mandrel Diameter (mm)	Bend angle (Deg.)	Requirements - Comments:
Side	40	180°	Acceptable
Side	40	180°	Acceptable
Side	40	180°	Acceptable
Side	40	180°	Acceptable



	Tests requested, in accordance with spec. provided	x	 2025/06/19 Aubrey Harmse (ANDT Level 2)	
	Tests requested, NOT in accordance with spec. provided			
Remarks: Heat Treatment. As Welded.			WITNESSED BY	TECHNICAL SIGNATORY
			L.J. Cloete	19/06/2025

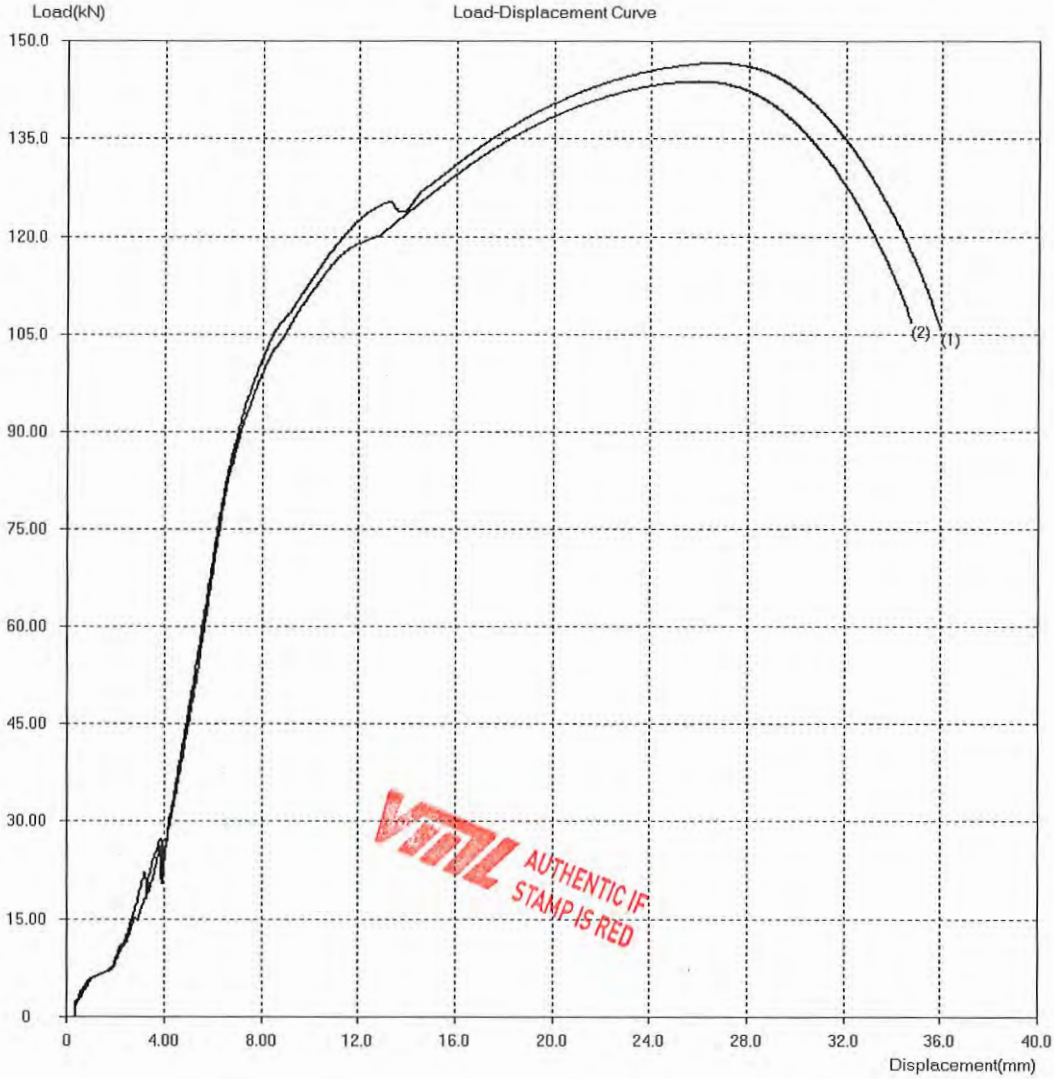
VML is accredited for the following methods: VML-QLT-MTD-0001 to 0011, 0013, 0022, 0030, 0031 and (Supporting international standards).

Whilst making every effort to ensure the accuracy of our results, they are without guarantee or warranty. The test results relate only to the items tested. This test report shall not be reproduced except in full, and with written approval of VML management. Samples will be discarded after 30 days. Ambient temperature controlled at 23°C ± 5°C. VML will not be held responsible for the accuracy of information supplied by customers. Samples tested as received unless otherwise stated. Estimation of Uncertainty not applied, available on request. The images shown are for illustration purposes only and may not be an exact representation of the sample tested / examined.

VML TENSILE TEST REPORT

CUSTOMER: AMH
 VML PROJECT NO: MT9998-25
 TYPE: Flat
 TEST DATE: 2025/06/19

	SampleNo	Size (mm)	Lo (mm)	FeL (KN)	Fm (KN)	ReL (Mpa)	Rm (Mpa)	So (mm ²)	A (%)	Z (%)	
1	PQR P002-25	20.00*15.11	50	112.00	146.60	371	485	302.20	35	61	PMD
2	PQR P002-25	20.00*14.67	50	119.00	143.80	406	490	293.40	34	56	PMD



TESTER: 
 VML MET LAB
 09
 CLOVIS

AUDITING: 
 VML MET LAB
 L'LOUËTE
AMH Quality Services
 2025/06/19
 Audrey Harmse (ANDT Level 2)

AMH Quality Services

2025/06/06

Aubrey Harmse (ANDT Level 2)

GEREGISTREERDE WOON- EN POSADRES

1. Bewaar die Bewys van u GEREGISTREERDE WOON- EN POSADRES in hierdie sakkie.

2. Indien u van adres verander het, of indien besonderhede van u huidige adres, by straatnaam en/of roomnr. ens. verander het, moet die vorm KENNIGGEWING VAN ADRESVERANDERING, wat in die sakkie agter in die identiteitsdepartement is, gedruk word om die verandering aan te meld en moet dit ingesleen word by al oërens word aan die raadsie streek/distrikantoor van die DEPARTEMENT VAN BINNELANDSE SAKE

REGISTERED RESIDENTIAL AND POSTAL ADDRESS

1. Keep the proof of your REGISTERED RESIDENTIAL AND POSTAL ADDRESS in this pocket.

2. If you have changed your address, or if particulars of your present address, e.g. name of street and its street number, etc. have been changed, the NOTICE OF CHANGE OF ADDRESS form in the packet at the back of the identity document must be used to report the change and it must be handed in at all post offices, the nearest to the district office of the DEPARTMENT OF HOME AFFAIRS.

1

I. D. No. 850131 5408 08 7

S. A. BURGER/S. A. CITIZEN

VAN/ SURNAME
MOFOKENG

VOORNAAM/ FORENAMES
SENEPHANE SARTIEL

GEREGISTREERDE DISTRIK OF LEEN-
DISTRIK OF COUNTRY OF BIRTH
SOUTH AFRICA

GEREGISTREERDE
DATE OF BIRTH
1985-01-31

DATUM UITTOERPELIK
DATE ISSUED
2001-11-20

VALIDITEIT IS OP 31 MAI 2011
BIJWONEN TOESIG
BIRMELANDSE SAKE

