

WELDING PROCEDURE SPECIFICATION

WELDING PROCEDURE SPECIFICATION No: WPS-GASTECH-04 Page 1/2
SUPPORTED BY PROCEDURE QUALIFICATION RECORD No: PQR-GASTECH-04

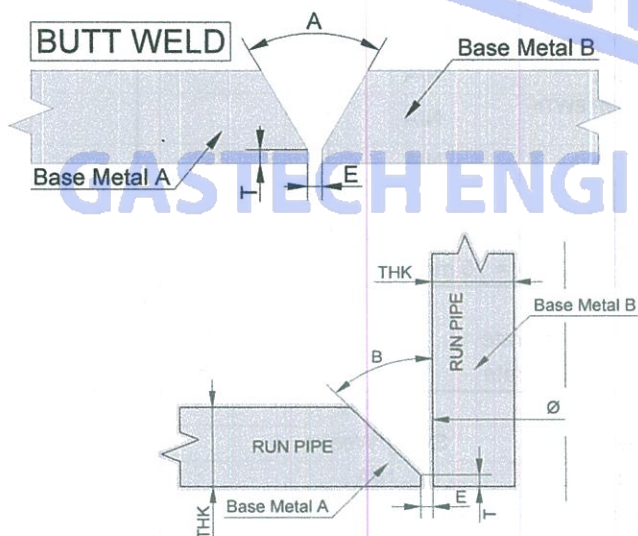
Welding process : **GTAW +SMAW** Type : **Manual/Mechanized** Joint design : **BW/FW**

QW-403 Base Metals	NE	Base material:	ASTM A516 Gr.70 or Equivalent	to	ASTM A516 Gr.70 or Equivalent	
	.11 E	P. Number	1	to	1	Min. Impact Test applications : N/A
	.5 SE	Group Number	Any	to	Any	SE Variable applicable : N/A
	.8/.6 E/SE	Thickness range	Groove 5 mm to 36 mm	Fillet	All	
	.9 E	Pipe Ø range :	Groove All	Fillet	All	
		Thickness range limitation (t weld > 13mm)	N/A			

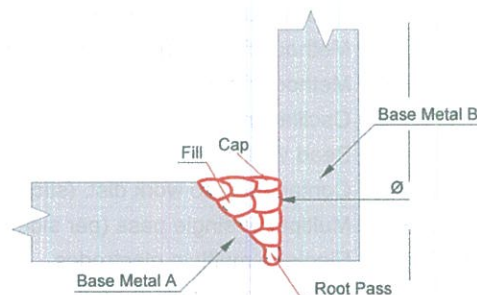
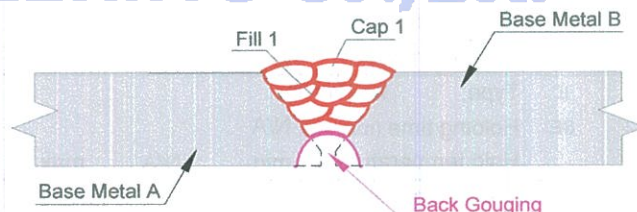
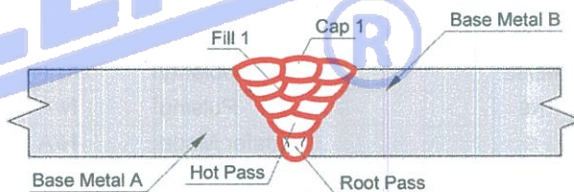
QW-402 Joints	.1 NE	Groove design A=60°±10° T=0 to 1.5 mm E=4 ±1mm	Preparation method :	Machining / Thermal Cutting / Grinding
	.4 NE	Deletion of Backing Not allowed	Tack welds :	Process: GTAW
	.5 NE	Addition of Backing Allowed		Location: In groove or bridge
	.10 NE	Root spacing N/A		Removal method Grinding
	.11 NE	Retainers N/A		

WELD PREPARATION

WELDING SEQUENCES / PASS LOCATION



Sketches, production drawings, weld symbols, or written description should show the general arrangement of the parts to be fused. Where applicable, the details of the joint groove may be specified.



QW-404 Filler Metals	QW-404				.33/ NE	.12 SE	.4 E	.5 E	.23 E	.50
	Process		Trade name	Manufacturer	Classification	AWS	F-No	A-No	Product form	Flux
	GTAW		KOVET-T50	KOVET	ER 70S-6	A5.18	6	1	Wire	N/A
	SMAW		LB52-18	Kobelco	E7018	A5.1	4	1	Flux-coated electrode	N/A
	.14/.22	E	Welding without filler metal is not allowed				Other requirements			
	.27	NE	Alloy Elements	N/A						
	.9/35	NE	Flux/Wire class.	N/A						

WELDING PROCEDURE SPECIFICATION

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SUPPORTED BY PROCEDURE QUALIFICATION RECORD No:

PQR-GASTECH-04

WELDING PARAMETERS

QW-405 Positions	.1 .3	NE NE	Weld Layer		Root Pass	Hot Pass	Fill/Cap/Pass			
			Welding process		GTAW	GTAW	SMAW			
			Welding positions		All	All	All			
			Welding progress		Up hill for 3G	Up hill for 3G	Up hill for 3G			
QW-404	.3/.6 .30	NE E	Trade name		0	0	E7018			
			Filler Metal Ø (mm)		2.4	2.4	3.2			
			Max "t" deposited		10 mm		26 mm			
QW-408 Gas	.2 .3 .9 .5 .10 .1	E NE	Shielding gas	Nature	Ar (min 99,99%)	Ar (min 99,99%)	N/A			
				Flow rate (l/min)	10 to 25	10 to 25	N/A			
		E NE	Backing gas	Nature	N/A	N/A	N/A			
				Flow rate (l/min)	N/A	N/A	N/A			
		E NE	Trailing	Nature	N/A	N/A	N/A			
				Flow rate (l/mn)	N/A	N/A	N/A			
QW-409 Electrical Characteristics	.8 NE NE .1 4/.30 NE/SE .3 NE .32 E .12 NE	NE NE	Amperes (A)		115 to 141	117 to 143	108 to 132			
			Volts (V)		11.2 to 12.8	11.2 to 12.8	21.4 to 24.6			
		SE NE/SE	Welding speed (mm/min)		44 to 60	48 to 66	52 to 79			
			Energy U x l x 60 / V (kJ/mm)		1.29 to 2.45	1.20 to 2.27	1.75 to 3.76			
		NE NE	Current or polarity		DC (-)	DC (-)	DC (+)			
			Pulsing		N/A	N/A	N/A			
		E NE	Transfer Mode		N/A	N/A	N/A			
			Tungsten Electrode (type)		Tungsten Electrode SFA 5.12 (EWP;EWTh-2...)			N/A		
		Tungsten Electrode (Ø mm)		2.4		2.4	N/A			
		QW-406 Preheat	.1 .2 .3	E NE SE	Preheat T°: Ambient (30°C)		ISO 13916 : temperature to be measured :			
Min interpass T°: Ambient					t ≤ 50 : A = 4 x t , 50 mm max.					
Maxi interpass T°: 250°C					t > 50 : A = 75 mm.					
QW-407 PWHT	.1 .2	E SE	Type: no PWHT							
			Holding time (min 1h) N/A		Heating rate		N/A	After	N/A	
			Hold temperature min N/A max N/A		Cooling rate		N/A	Up to	N/A	
QW-410 Technique	.1 .3 .5 .6 .7 .92 .8 .9/.87 .10 .11 .25 .26/.15 .64	NE NE NE NE NE SE NE NE/SE SE E NE NE/NE E	Welding process:		0		SMAW			
			String/Weave method		String/Weave		String/Weave			
			Orifice, cup or nozzle size		4,5,6,7,8		N/A			
			Method of initial and interpass cleaning		Grinding / Brushing		Grinding / Brushing			
			Method of back gouging		N/A		N/A			
			Oscillation (Machine or automatic)		N/A		N/A			
			Bead Width		max: 8 mm		max 22 mm			
			Contact tube to work dist. (stick out)		N/A		N/A			
			Multiple or single pass (per side)		Multiple		Multiple			
			Single to multiple electrodes		Single		Single			
			Vacuum chamber welding		N/A		N/A			
			Manual, Automatic, Semi automatic		Manual		Manual			
			Peening/ Electrode spacing		N/A		N/A			
			Use of thermal processes		N/A		N/A			

Notes :

- E = Essential variable : Can not be changed / SE = Supplementary Essential variable : Can not be change on impact tested welds
NE = Non Essential Variable : Guideline, could be changed with QAQC approval, if permitted by Client Specification
- Surfaces to be cleaned on both sides of weld preparation : 15mm

Manufacturer		GTC TECHNICAL CONSULTANCY CO., LTD.	
0	8/Jan/2026	Prepared by:	Reviewed by:
		Inspector: BUL VAN THAO	Approved by:
Rev	Date		

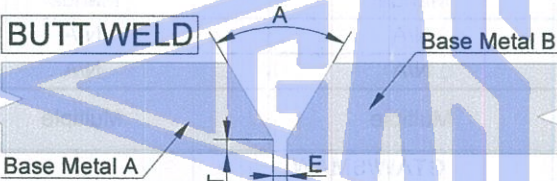
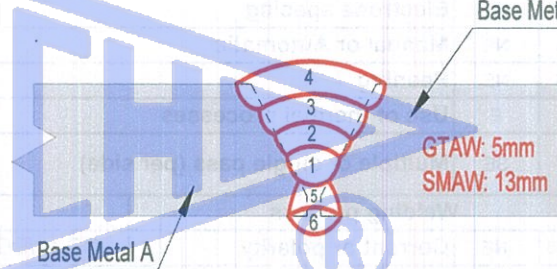
DIRECTOR

PROCEDURE QUALIFICATION RECORD No: **PQR-GASTECH-04** Page 1/2

SUPPORTED TO WELDING PROCEDURE SPECIFICATION No: **WPS-GASTECH-04**

Welding process : **GTAW +SMAW** Type : **Manual/Mechanized** Joint design : **BW**

QW-402 Joints	.1	NE	Groove design A=60° T=0.5 mm E=3.5 mm		Preparation method : Machining / Grinding Tack welds : Process: GTAW Location: bridge Removal method : Grinding
	.5	NE	Addition of Backing	N/A	
	.10	NE	Root spacing	N/A	
	.11	NE	Retainers	N/A	

Weld	WELD PREPARATION				WELDING SEQUENCES / PASS LOCATION			
								

QW-403 Base Metals		NE	Base material: ASTM A516 Gr.70		to	ASTM A516 Gr.70	
	.5	SE	Group Number	2	to	2	Min. Impact Test applications : N/A
	.11	E	P-No. Qualified	1	to	1	SE Variable applicable : N/A
	.6	SE	T Limits	Groove		18	Fillet N/A
	.8	E	T Qualified	Groove		18	Fillet N/A
			Pipe Ø range :	Groove	N/A		

QW-404	.33/ NE	.12 SE	.4 E	.5 E	.23 E	.50
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QW-404 Filler Metals	Process		Trade name		Manufacturer		Classification		AWS		F-No		A-No		Product form		Flux	
	GTAW		KOVET-T50		KOVET		ER 70S-6		A5.18		6		1		Wire		N/A	
	SMAW		LB52-18		Kobelco		E7018		A5.1		4		1		Flux-coated electrode		N/A	
	Welding process					GTAW			SMAW			QW-404 Filler Metals	.14	E	Welding without filler metal is not allowed			
			Filler Metal	Trade name		KOVET-T50		LB52-18										
	.3	NE		Ø (mm)		2.4		3.2										
	.30	E		Max "t" deposited		5		13		.22	E				No Consumable insert			

QW-405 Positions	.1	NE	Welding positions	1G	1G	Other requirements
	.3	NE	Welding progress	N/A		

QW-406 Preheat	.1	E	Preheat T°:	Ambient (30°C)	ISO 13916 : temperature to be measured :	
	.2	NE	Min interpass T°:	Ambient (30°C)	t ≤ 50 : A = 4 x t , 50 mm max.	
	.3	SE	Maxi interpass T°:	120°C	t > 50 : A = 75 mm.	

QW-407 PWHT	.1	E	Type: N/A								
	.2	NE	Holding time (min 1h) :		N/A		Heating rate		N/A	After	N/A
			Hold temperature	min	N/A	max	N/A	Cooling rate	N/A	Up to	N/A

QW-408 Gas	.2	E	Shielding gas	Nature	Ar (99,99%)							
	.3	NE		Flow rate (l/min)	15 to 20							
	.9	E	Backing gas	Nature	N/A							
	.5	NE		Flow rate (l/min)	N/A							
	.10	E	Trailing	Nature	N/A							
	.1	NE		Flow rate (l/mn)	N/A							

	Manufacturer : GAS TECHNICAL AND MECHANICAL ENGINEERING COMPANY LIMITED Add: 2274/9/12 NGUYEN VAN TAO ST, APT 18, HIEP PHUOC COMMUNE, HO CHI MINH CITY, VIETNAM PROCEDURE QUALIFICATION RECORD (PQR)		Carbon Steel Code : ASME IX-2025
	PROCEDURE QUALIFICATION RECORD No: PQR-GASTECH-04		

SUPPORTED TO WELDING PROCEDURE SPECIFICATION No: **WPS-GASTECH-04** Page 2/2

QW-410 Technique	Welding process :			GTAW		SMAW		
	.1	NE	String/weave method	String/Weave		String/Weave		
	.3	NE	Orifice, cup or nozzle size	5		N/A		
	.5	NE	Method of initial and interpass cleaning	Grinding / Brushing		Grinding / Brushing		
	.6	NE	Method of back gouging	N/A		Grinding		
	.7	NE	Oscillation / bead width	low / max 8 mm		low / max 22 mm		
	.8	NE	Contact tube to work dist. (stick out)	N/A		N/A		
	.9	NE	Multiple or single pass (per side)	Multiple		Multiple		
	.10	SE	Single or multiple electrodes	Single		Single		
	.11	E	Closed to out chamfer	N/A		N/A		
	.15	NE	Electrode spacing	N/A		N/A		
	.25	NE	Manual or Automatic	Manual		Manual		
	.26	NE	Peening	N/A		N/A		
	.64	E	Use of thermal processes	N/A		N/A		
.87	SE	Multiple or single pass (per side)	Multiple		Multiple			
QW-409 Electrical Characteristics	Welding process			GTAW/SMAW				
	.4/.30	NE	Current or polarity	DC (-)/DC(+)	.8	NE	Amperes (A)	See Welding monitoring report
	.3	NE	Pulsing	N/A			Volts (V)	
	.12	NE	Tungsten Electrode (type)	Lanthanated 2%	.1	SE	Welding speed (cm/min)	
			Tungsten Electrode (Ø mm)	2.4			Energy UxIx60/V (kJ/cm)	
QW-409 Electrical Characteristics								

TENSILE TESTS (QW-150), Report No: 05/01/26-04./KQTN						
Specimen No.	Width (mm)	Thickness (mm)	Area (mm ²)	Ultimate Total Load (KN)	Stress (N/mm ²)	Failure and Location
TS1	25.33	18	455.9	233.3	512	Ductile/Base Metal
TS2	25.21	18	453.8	231.5	510	

GUIDE BEND TESTS (QW-160), Report No: 05/01/26-04./KQTN		
Type and Figure No.	Thickness x Width (mm)	Result
Side Bend 1	18x10.26	Acceptable (no crack)
Side Bend 2	18x10.11	Acceptable (no crack)
Side Bend 3	18x10.08	Acceptable (no crack)
Side Bend 4	18x10.18	Acceptable (no crack)

TOUGHNESS TESTS (QW-170) Report No.: N/A
 FILLET WELD TEST (QW-180) Ref. Report No.: N/A
 Visual Examination : Acceptable , Report: N/A
 Radiographic or Ultrasonic Examination: : Acceptable , Report: GTC- GT/WPS - UT - 004
 Deposit Analysis
 Other:

CERTIFICATE OF COMPLIANCE			
Laboratory Agency name:	HOA BINH LAB	Date Test:	5/Jan/2026

We certify that the statements in this record are correct and that the test joints were prepared, fused, and tested in accordance with the requirements of Section IX of the ASME Boiler and Pressure Vessel Code.

Notes :
 1/ E = Essential variable : Can not be changed / SE = Supplementary Essential variable : Can not be changed on impact tested welds
 NE = Non Essential Variable : Guideline, could be changed with QAQC approval, if permitted by Client Specification
 2/ Surfaces to be cleaned on both sides of weld preparation : Steels = 15mm

0	8/Jan/2026	Manufacturer	GTC TECHNICAL CONSULTANCY CO., LTD.
		Prepared by:	Reviewed by: Inspector: BUI VAN THAO
Rev	Date		Approved by: To Van Cuong DIRECTOR

		WELDER, WELDING OPERATOR QUALIFICATION TEST CERTIFICATE			
Applicable Code/Standard: ASME Section IX, 2025 Edition		WPQ Certificate number: WE-GT-26-03			
Employer's name: GAS TECHNICAL AND MECHANICAL ENGINEERING COMPANY LIMITED		Welder name: DANG THANH TRUNG (GT-01)			
Address: 274/9/12 NGUYEN VAN TAO ST, APT 18, HIEP PHUOC COMMUNE, HO CHI MINH CITY, VIETNAM		Identification number: 094096013935			
		Test date: 29-Dec-2025			

Test Description

Identification of PQR followed: **PQR-GASTECH-04** Revision No.: **0** ☒ Test coupon ☐ Production weld
Specification and type/grade or UNS Number of base material(s): **ASTM A516 Gr.70** Thickness: **18 mm**

Testing Variables and Qualification Limits

Welding Variables (QW-403)	Actual Values	Range Qualified
Welding process (es)	GTAW+ SMAW	GTAW/SMAW
Type (i.e.; manual, semi-automatic) used	Manual	Manual
Backing (with/ without)	With	With (for CJP)
☒ Plate ☐ Pipe (enter diameter if pipe or tube)		Plate and Pipe
Base metal P-Number to P-Number	P-No.1 to P-No.1	P-No.1 through P-No.15F
Filler metal or electrode specification(s) (SFA) (info. only)	A5.18/A5.1	
Filler metal or electrode classification(s) (info. only)	ER 70S-6/E7018	All
Filler metal F-Number(s)	6/4	
Consumable insert (GTAW or PAW)	N/A	N/A
Filler Metal Product Form (solid/metal or flux-cored/powder)	-	-
Deposit thickness for each process	-	-
Process 1 GTAW 3 layers minimum ☐ Yes ☒ No	5 mm	Max: 10 mm
Process 2 SMAW 3 layers minimum ☒ Yes ☐ No	13 mm	Max: 26 mm
Position qualified (2G, 6G, 3F, etc.) (Table QW-461.9)	1G	Groove: F for Plate & Pipe (OD ≥ 73 mm). Fillet: F; H for Plate and Pipe
Vertical progression (uphill or downhill)	N/A	N/A
Type of fuel gas (OFW)	N/A	N/A
Inert gas backing (GTAW, PAW, GMAW)	N/A	N/A
Transfer mode (Spray/globular or pulse to short circuit-GMAW)	N/A	N/A
GTAW Welding current type/polarity (AC, DCEP, DCEN)	DCEN	DCEN

RESULTS

Visual examination of the completed weld (QW-302.4): **ACCEPTED**

- ☐ Transverse face and root bends [QW-462.3(a)] ☒ Side bends (QW-462.2) , Report: **05/01/26-04./KQTN**
☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)] ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)]
☐ Pipe specimen, macro test for fusion [QW-462.5(b)] ☐ Plate specimen, macro test for fusion [QW-462.5(e)]

Type	Result	Type	Result	Type	Result	Type	Result
-	-	-	-	-	-	-	-

Alternative volumetric examination results (QW-191): RT ☐ or UT ☒

Fillet weld – fracture test (QW-181.2): **N/A**

☐ Fillet welds in plate [QW-462.4(b)] Report:

Other tests: **N/A**

Film or specimens evaluated by: **N/A**

Mechanical tests conducted by: **Nguyen Trong Thai**

Welding supervised by: **Nguyen Dac**

Report No.: **GTC- GT/WPS - UT - 004**

Length and percent of defects: **N/A**

☐ Fillet welds in pipe [QW-462.4(c)]

Company: **N/A**

Laboratory test no.: **HOA BINH LAB (LAS-XD 265)**

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

GAS TECHNICAL AND MECHANICAL ENGINEERING COMPANY LIMITED		GTC TECHNICAL CONSULTANCY CO., LTD.	
Full Name:		Verified by:	
Signature:		Inspector: BUI VAN THACH	
Date: 14- Jan- 2026		GTC CSWIP 3.2: 348700/2 CWI: 17050871	
		Date: 14- Jan- 2026	

SEE OVERLEAF FOR EXPIRATION AND RENEWAL OF QUALIFICATION
(Cont'd- 2nd sheet)

DIRECTOR

WELDING MONITORING REPORT

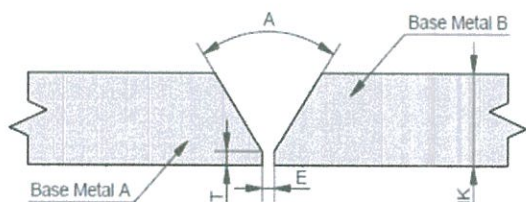
ASME IX-2025

GAS TECHNICAL AND MECHANICAL ENGINEERING COMPANY LIMITED

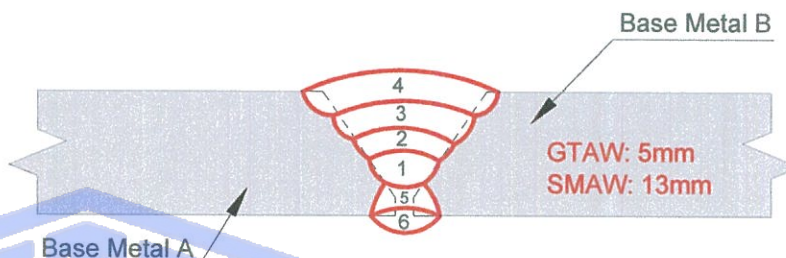
Add: 274/9/12 NGUYEN VAN TAO ST, APT 18, HIEP PHUOC COMMUNE, HO CHI MINH CITY, VIETNAM

PQR no: PQR-GASTECH-04 Support for WPS: WPS-GASTECH-04	Welding Process: GTAW + SMAW	Welder Name: DANG THANH TRUNG	Welder Stamp : 094096013935
Clampmeter No. (calibrated machine) Kyoritsu KEW 2055	Thermometer No. FLUKE 62 MAX	Oxygenmeter N° : N/A	Weld Machine S/N°. WSE-400 (GTAW) ZX7-500 (SMAW)
Shielding Gas: Argon	Backing Gas: Argon	Shield. Gas Flow Rate: N/A	Backing Gas Flow Rate: N/A
Monitored by: GTC TECHNICAL CONSULTANCY CO., LTD.		Position : TPI INSPECTOR	Name : NGUYEN DAC
		Signature :	Monitoring Date: 30/12/2025

T= 0.5 E= 3.5 A= 60 Bevel: 30



Material: ASTM A516 Gr.70, Plate 18mm



Weld preparation

Welding Sequence

Travel Speed= Length(cm) / Time(min)

Arc Energy= 0,06xVolts(V)xAmps(A) / Travel Speed (mm/min)

Layer / Pass n°	Filler Metal		Interpass Temp. (°C)	Amps (A)	Volts (V)	Weld Length (mm)	Welding Arc Time (min)		Travel Speed (mm/min)	Heat Input (kJ/cm)	Bead Width (mm)	Remark
	AWS Class	Diameter (mm)					Minutes	Second				

Side 1:

1	ER 70S-6	2.4		128	12.0	450	8	38	52	1.77	6	
2	ER 70S-6	2.4	58	130	12.0	450	7	52	57	1.64	8	
3	E7018	3.2	100	120	23.0	450	6	38	68	2.44	16	
4	E7018	3.2	120	120	23.0	450	7	24	61	2.72	22	

Side 2: after backgouging & grinding

5	E7018	3.2	80	120	23.0	450	7	14	62	2.66	10	
6	E7018	3.2	110	120	23.0	450	6	32	69	2.40	14	

Comments: Consummable, GTAW :
SAW

KOVET-T308
ER308L (TIEN TAI) TW-308L/TFS300

Date:



CÔNG TY CỔ PHẦN TƯ VẤN THIẾT KẾ KIỂM ĐỊNH XÂY DỰNG HÒA BÌNH
Địa chỉ: Số 964/1 Đường Lò Gốm, Phường Bình Tiên, Tp.Hồ Chí Minh
PHÒNG THÍ NGHIỆM VẬT LIỆU VÀ KIỂM ĐỊNH CÔNG TRÌNH XÂY DỰNG LAS-XD 265
Địa chỉ: 161B/81/2A Lạc Long Quân, Phường Bình Thới, Tp.Hồ Chí Minh
Email: Las265.hoabinh@gmail.com - Hotline: 0937836265 - 0962109262

Số: 05/01/26-03 ./KQTN

PHIẾU KẾT QUẢ THÍ NGHIỆM

Trang: 1/2

Số PYC: 050126-03

PHIẾU KẾT QUẢ THÍ NGHIỆM / TEST REPORT

XÁC ĐỊNH CƠ LÝ VẬT LIỆU THÉP/ DETERMINING MECHANICAL OF STEEL MATERIAL

- Đơn vị yêu cầu / Client : GASTECHNICAL AND MECHANICAL ENGINEERING COMPANY LIMITED
- Địa điểm / Location : 274/9/12 NGUYEN VAN TAO, St, APT 18, HIEP PHUOC COMMUNE, HO CHI MINH CITY, VIET NAM
- P.Pháp thử/ Test method : TCVN 197-2014, TCVN 198-2008, ASME IX_2025
- Thiết bị TN / Test Equipment : Máy kéo -nén- uốn thép WA-1000B, thước lá, cân kỹ thuật, một số dụng cụ khác...
- Ngày nhận mẫu / Recrived : 05/01/2026
- Ngày thí nghiệm / Tested : 05/01/2026
- Tên mẫu/Name of sample : MỐI HÀN THÉP TẤM / WELDING STEEL PLATE
: MẪU QUY TRÌNH HÀN/ PQR NO : PQR-GASTECH-04
: TÊN THỢ HÀN/ WELDER NAME : DANG THANH TRUNG
: MÃ SỐ THỢ HÀN/ WELDER ID : 094096013935
: PHƯƠNG PHÁP HÀN/ WELDING PROCESS : GTAW+SMAW
: VẬT LIỆU/ MATERIAL : A516 Gr.70
: VỊ TRÍ HÀN/ WELDING POSITION : 1G
: CHIỀU DÀY/ THICKNESS: 18 mm
- Số lượng/Quantity (mẫu) : 01 (Thép tấm : 450x400X18 mm)

Kết quả thí nghiệm xem trang sau / experimental results see next page:

TP.Hồ Chí Minh, ngày 05 tháng 01 năm 2026

CÔNG TY CP TV TK KIỂM ĐỊNH XÂY DỰNG HOÀ BÌNH

ĐD thí nghiệm

Tested by


Nguyễn Trọng Thái

T. Phòng Thí Nghiệm

Laboratory


KS. Nguyễn Ngọc Linh

Tổng Giám Đốc

Director


Nguyễn Việt Chánh

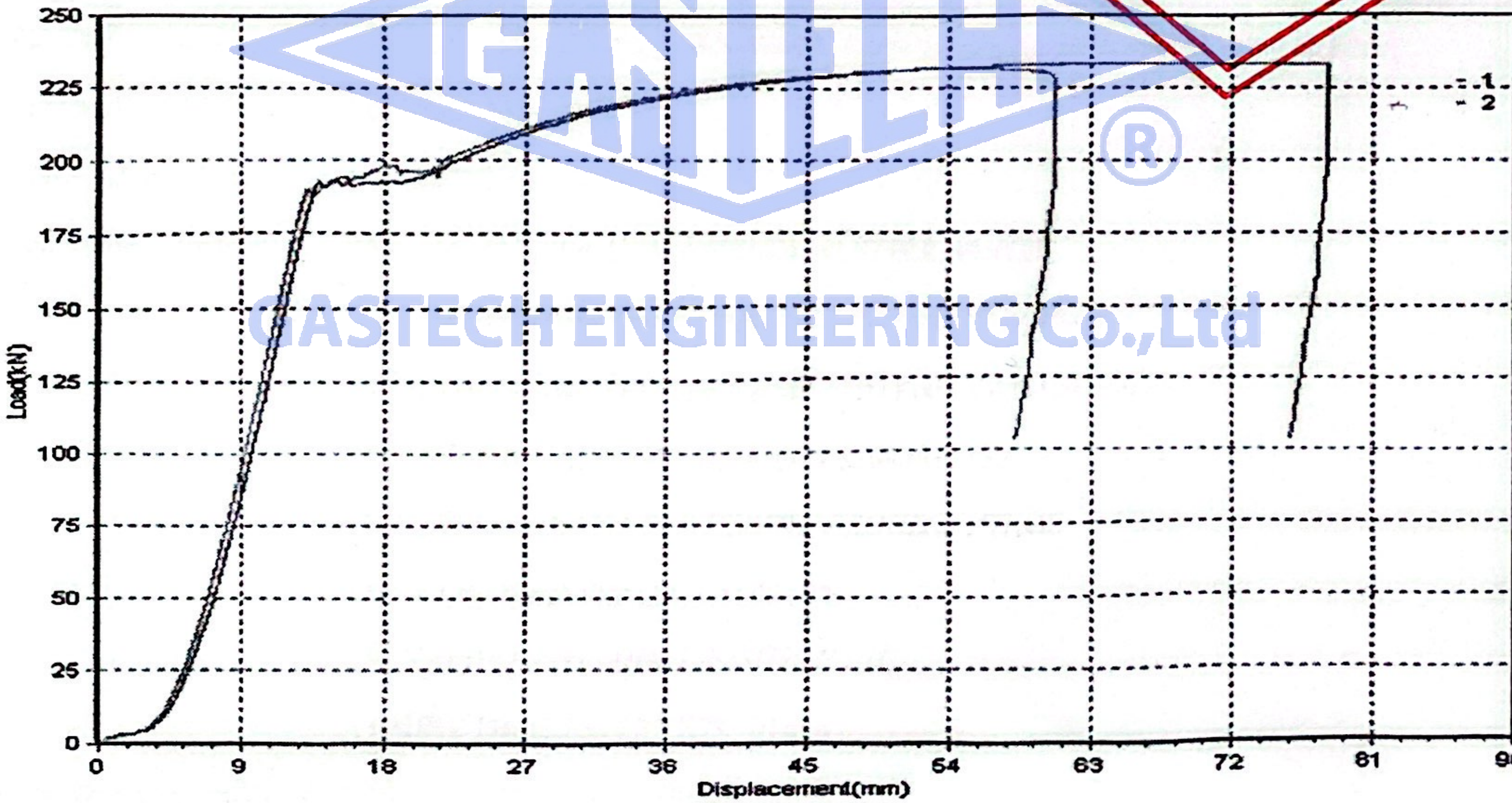
Ghi chú/ Notice

: 1. Mẫu do khách hàng cung cấp, kết quả chỉ có giá trị trên mẫu thử /

Specimens were supplied by client, test result is valid namely submitted specimens only

2 Các thông tin về mẫu, tên công trình, tên khách hàng, hạng mục do khách hàng cung cấp /

Information of specimens , project , client , item , were supplied by client

Số/Ref:...../KQTN		PHIẾU KẾT QUẢ THÍ NGHIỆM TEST REPORT				Trang/Page:.....	
II. KẾT QUẢ THÍ NGHIỆM/ TEST RESULTS (tt):							
STT	Mẫu thép Test Specimen	Mặt cắt ngang	Lực kéo chảy	Giới hạn chảy	Lực kéo đứt	Giới hạn bền	Vị trí bị đứt
No	(Bề dày) x (C. rộng) Thick x Width	Cross Section	Force at yield point	Yield Strength	Maximum force	Tensile Strength	Notice
	mm x mm	(mm ²)	(kN)	(N/mm ²)	(kN)	(N/mm ²)	
1	18.00 x 25.33	455.9	190.02	417	233.3	512	(3)
2	18.00 x 25.21	453.8	186.35	411	231.5	510	(3)
Ghi chú/ Notice: Mẫu được thử nghiệm với sự chứng kiến của các bên liên quan/ Test was witnessed in the presence of Concerned Parties.							
(1) :Đứt tại mối hàn/ Weld Metal (2) :Đứt ở vùng ảnh hưởng nhiệt/ Fractured at heat affected zone (3) Đứt tại vật liệu cơ bản/ Base Metal							
							
II. KẾT QUẢ THỬ UỐN NGUỘI / TEST RESULT OF BEND :							
Stt/	Mẫu thử/ Specimens			Số lượng	Góc uốn	Đường kính gối uốn	Kết quả thử uốn nguội
No	Ký hiệu mẫu	Dày	Rộng	Quantity	Bending angle	Diameter of angle	Test Result of bend
	Sample ID	Thickness	width	Thanh/ Bars	(Độ/ Degree)	(mm)	
1	Side bend	18.00	10.26	1	180°	40	Không Nứt / No Crack
2	Side bend	18.00	10.11	1	180°	40	Không Nứt / No Crack
3	Side bend	18.00	10.08	1	180°	40	Không Nứt / No Crack
4	Side bend	18.00	10.18	1	180°	40	Không Nứt / No Crack