

LAMPIRAN



SLV METROPOLITAN INDONESIA
INDUSTRIAL TRAINING CENTER

SURAT KETERANGAN

No : 2/3 SLV/III/2026

Yang bertandatangan dibawah ini , kepala Workshop PT. SLV METROPOLITAN INDONESIA menerangkan bahwa mahasiswa tersebut dibawah ini :

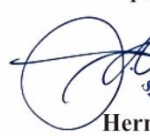
No	N a m a	N I M
1	Masrohan	22DK50019
2	Panca Mahardhika Pribadi	22DK50004

Telah melakukan penelitian Tugas Akhir di PT. SLV METROPOLITAN INDONESIA pada tanggal 7 Maret 2026.

Demikian Surat Keterangan ini di buat untuk dapat dipergunakan sebagaimana mestinya

Cilegon, 8 Maret 2026

Kepala Workshop

 
Herman Nowiyanto



SLV METROPOLITAN INDONESIA

INDUSTRIAL TRAINING CENTER

CERTIFICATE OF TRAINING

No : WI.0007850/A109-I/SLV/25

This is to certify that,

ACHMED ANDREAN ARISTAMA

Has successfully completed the training as

WELDING INSPECTOR

The above name has received formal classroom training, practice,
and examination

Organized by

PT. SLV METROPOLITAN INDONESIA

Date of Course January 06th up to February 02nd, 2025

Cilegon, February 15th, 2025

Director Of

PT. SLV Metropolitan Indonesia



Helman Novrando

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0007850

Name : ACHMED ANDREAN ARISTAMA
Place & Date of Birth : Cilegon, May 22nd, 2002
Registration Number : WI.0007850/A109-I/SLV/25

No	Description
1	Safety and Workplace Preparation
2	Welding Process
3	Welding Consumables
4	Welding Positions
5	Drawing and Welding Symbol
6	Participation in the Quality System
7	Visual Inspection
8	NDT Penetrant Test (PT) and NDT Magnetic Particle Test (MT)
9	NDT Ultrasonic Test (UT)
10	NDT Radiography Test (RT)
11	Destructive Testing
12	Inspection Test Plan (ITP)
13	Supervision of Welding Inspection Activities
14	Code and Standard Related to Welding
15	WPS – PQR – WPQT
16	Fabrication of Steel Structures, Tubular / Non-Tubular
17	Fabrication of Tanks, Boilers, and Pressure Vessels
18	Fabrication of Ships / Floating Structure
19	Fabrication of Piping and Pipelines

This candidate has completed classroom training, practice and examination for Welding Inspector.



Cilegon, February 15th, 2025

ACHMED ANDREAN ARISTAMA



PHASED ARRAY ULTRASONIC TEST REPORT

CLIENT UNIOGHA CILACAP		REPORT NO 001/PAUT/TA-SL-VIHF26		PROCEDURE ASME V	
LOCATION PT. SILV. METROPOLITAN		DATE 8 Maret 2026		ACC. CRITERIA ASME B31.3	
PROJECT TA-PAUT MASROHAN		CONTRACT NO		SOP NO	

ESSENTIAL EQUIPMENT Probe: 5MHz Instrument: S-SCAN/B-SCAN Scan Type: S-SCAN/B-SCAN Angular Range: 40° - 70° PAUT TECH: ☒ SWSI ☐ SWDI ☐ ToFD Calibration Block: ☒ HW ☐ OD ☐ T ₂ Reference Level: DAC / 6dB Drop 1" SNOT SIZE: - SCAN SPEED: - INDEX POINT: - ENCODER: NID 2000 Sn. 132777		PROBE TYPE SIZE: ☒ 4 X 10° ☐ 4 X 15° WEDGR TYPE: LEAD COUPLANT: 0,250 mm ANGLE STEP: 0,125 mm REV BLOCK: 0,125 mm SCAN OVERLAP: ☒ FS ☐ SS SENSITIVITY: ☐ 1A ☒ 1B ☐ 1C		MATERIAL SPEC ☒ Carbon Steel ☐ Stainless Steel WELD PROCESS Material Type: A 106 B ☐ GTAW ☒ SMAW ☐ FCAW TECHNICIAN EXAMINER: FERRY OPERATOR: PUNCHIKY ROCHMAN TECH: HUDA	
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NO	IDENTIFICATION	JOINT NO	LOCATION	MATERIAL TIK (mm)	WELD TIK (mm)	PIPE DIA	WELDER STAMP	SCAN ANGLE (°)	INDICATION TYPE	INCL. CL. DEF.	INCL. CL. DEF.	CRACKS	SLAG INCLUSION	POROSITY	DEPTH (mm)	LENGTH (mm)	IDENT. (mm)	RESULT		REMARKS
																		ACC	REJECT	
VARIASI 1 – ARUS RENDAH Root: 70A Hot: 80A Filler: 105A Caping: 90A Heat Input: 0.73-1.23 kJ/mm																				
1	SPEKIMEN 1	SP-1	0°-360°	10.97	10.97	168 mm		40-70	Planar	✓	✓				9.9	10	3.0	ACC		LOF-Root Pass
2	SPEKIMEN 1	SP-1	0°-360°	10.97	10.97	168 mm		40-70	Planar	✓	✓				9.6	5	2.0	ACC		LOF-Root Pass
3	SPEKIMEN 1	SP-1	0°-360°	10.97	10.97	168 mm		40-70	Planar	✓	✓				9.3	7	2.5	ACC		LOF-Root Pass
4	SPEKIMEN 1	SP-1	0°-360°	10.97	10.97	168 mm		40-70	Volumetric				✓		7.8	4	1.5	ACC		Slag-Filler Pass
5	SPEKIMEN 1	SP-1	0°-360°	10.97	10.97	168 mm		40-70	Planar	✓	✓				9.7	8	3.0	ACC		LOF-Root Pass
6	SPEKIMEN 2	SP-1	0°-360°	10.97	10.97	168 mm		40-70	Volumetric				✓		7.5	4	1.5	ACC		Slag-Filler Pass
7	SPEKIMEN 2	SP-1	0°-360°	10.97	10.97	168 mm		40-70	Planar	✓	✓				9.1	6	2.0	ACC		LOF-Root Pass
8	SPEKIMEN 2	SP-1	0°-360°	10.97	10.97	168 mm		40-70	Volumetric				✓		5.2	4	1.5	ACC		Slag-Filler Pass
9	SPEKIMEN 2	SP-1	0°-360°	10.97	10.97	168 mm		40-70	Planar	✓	✓				7.9	7	2.5	ACC		LOF-Root Pass
10	SPEKIMEN 2	SP-1	0°-360°	10.97	10.97	168 mm		40-70	Round type				✓		4.9	3	1.0	ACC		Porosity-Capping Pass
11	SPEKIMEN 3	SP-1	0°-360°	10.97	10.97	168 mm		40-70	Planar		✓				9.8	7	3.0	ACC		IP-Root Pass
12	SPEKIMEN 3	SP-1	0°-360°	10.97	10.97	168 mm		40-70	Volumetric				✓		7.6	4	1.5	ACC		Slag-Hot Pass
13	SPEKIMEN 3	SP-1	0°-360°	10.97	10.97	168 mm		40-70	Planar	✓	✓				9.4	6	2.0	ACC		LOF-Root Pass
14	SPEKIMEN 3	SP-1	0°-360°	10.97	10.97	168 mm		40-70	Round type				✓		5.1	3	1.0	ACC		Porosity-Capping Pass
15	SPEKIMEN 3	SP-1	0°-360°	10.97	10.97	168 mm		40-70	Volumetric				✓		7.7	5	2.0	ACC		Slag-Filler Pass
VARIASI 2 – ARUS MENENGGAL Root: 85A Hot: 100A Filler: 120A Caping: 110A Heat Input: 0.89-1.39 kJ/mm																				
1	SPEKIMEN 1	SP-2	0°-360°	10.97	10.97	168 mm		40-70	Round type				✓		9.8	3	1.5	ACC		Scattered Porosity
2	SPEKIMEN 1	SP-2	0°-360°	10.97	10.97	168 mm		40-70	Round type				✓		9.2	6	2.0	ACC		Scattered Porosity
3	SPEKIMEN 1	SP-2	0°-360°	10.97	10.97	168 mm		40-70	Round type				✓		7.4	4	1.0	ACC		Minor Slag
4	SPEKIMEN 2	SP-2	0°-360°	10.97	10.97	168 mm		40-70	Volumetric				✓		5.1	5	1.5	ACC		Slag-Filler Pass
5	SPEKIMEN 2	SP-2	0°-360°	10.97	10.97	168 mm		40-70	Round type				✓		9.5	4	1.0	ACC		Scattered Porosity
6	SPEKIMEN 2	SP-2	0°-360°	10.97	10.97	168 mm		40-70	Volumetric				✓		7.1	6	2.0	ACC		Slag-Hot Pass
7	SPEKIMEN 3	SP-2	0°-360°	10.97	10.97	168 mm		40-70	Round type				✓		4.8	3	1.0	ACC		Minor Porosity
8	SPEKIMEN 3	SP-2	0°-360°	10.97	10.97	168 mm		40-70	Round type				✓		5.3	5	1.5	ACC		Scattered Porosity
9	SPEKIMEN 3	SP-2	0°-360°	10.97	10.97	168 mm		40-70	Volumetric				✓		7.0	8	2.0	ACC		Slag-Hot Pass
VARIASI 3 – ARUS TINGGI Root: 95A Hot: 115A Filler: 130A Caping: 120A Heat Input: 1.00-1.52 kJ/mm																				
1	SPEKIMEN 1	SP-3	0°-360°	10.97	10.97	168 mm		40-70	Volumetric				✓		9.3	7	3.0	ACC		Porosity Cluster Root
2	SPEKIMEN 1	SP-3	0°-360°	10.97	10.97	168 mm		40-70	Volumetric				✓		4.9	6	2.5	ACC		Porosity Cluster Filler
3	SPEKIMEN 1	SP-3	0°-360°	10.97	10.97	168 mm		40-70	Volumetric				✓		7.2	5	2.0	ACC		Porosity Cluster Hot
4	SPEKIMEN 2	SP-3	0°-360°	10.97	10.97	168 mm		40-70	Round type				✓		9.1	4	1.5	ACC		Minor Porosity
5	SPEKIMEN 2	SP-3	0°-360°	10.97	10.97	168 mm		40-70	Volumetric				✓		4.7	7	3.0	ACC		Slag-Hot Pass
6	SPEKIMEN 2	SP-3	0°-360°	10.97	10.97	168 mm		40-70	Round type				✓		7.5	4	1.5	ACC		Minor Porosity
7	SPEKIMEN 3	SP-3	0°-360°	10.97	10.97	168 mm		40-70	Volumetric				✓		2.8	7	2.5	ACC		Slag-Hot Pass
8	SPEKIMEN 3	SP-3	0°-360°	10.97	10.97	168 mm		40-70	Round type				✓		5.1	4	1.5	ACC		Minor Porosity
9	SPEKIMEN 3	SP-3	0°-360°	10.97	10.97	168 mm		40-70	Volumetric				✓		9.4	6	2.0	ACC		Slag-Hot Pass
10	SPEKIMEN 3	SP-3	0°-360°	10.97	10.97	168 mm		40-70	Round type				✓		7.3	4	1.5	ACC		Minor Porosity
11	SPEKIMEN 3	SP-3	0°-360°	10.97	10.97	168 mm		40-70	Volumetric				✓		4.8	6	2.0	ACC		Porosity-Filler Pass

EXAMINER	INSPECTOR 1	INSPECTOR 2	INSPECTOR 3
 DATE: 7 Maret 2026	N/A	N/A	N/A

