

DAFTAR PUSTAKA

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LAMPIRAN

1. Pricelist Invoice

DETECH
Material Testing Laboratory



PROFORMA INVOICE

Invoice No. : 003N/DE.1/INV/I/2025
Date : January 16, 2025
Job No. : -
PO No. : -
Project Name : -

Company : Mhs. Febri Bagus Sabriya Aji
Testing for : -
Address : Universitas Islam 45
Attention : Account Payable

No.	Description	Qty	Unit Price (Rp)	Amount (Rp)
1	Preparation Sample for Microstructure/Metallography	3	500.000	1.500.000
2	Preparation Sample for Hardness Test	3	250.000	750.000
SUB TOTAL				2.250.000
PPN 11%				247.500
TOTAL				2.497.500

Please settlement to our account

2. Testing Report Vickers Harness

TESTING REPORT

Customer : Mhs. Febri Bagus Satriya Aji
Address : Universitas Islam 45

Total of Page : 1 of 1
Date of Received : January 16, 2025
Date of Tested : January 18, 2025

Object to be Tested : Joint Plate
Location of Performance : PT Detch Profesional Indonesia

Sample Marking : MHS.1.7

Client's Description of Sample

WPS No : -
Material Size : -
Testing Purpose : Material Testing
Welder's Name : -

Material Type/Grade : SPCC to SPCC
Welding Position : 1G
Welding Process : GMAW

Environment Temp : 25 ± 2 °C
Type of Test : Vickers Hardness Number (HV) Load Test, 10 Kgf
Test Method : ASTM E92-17

Reference Code : -

TESTING REPORT

Customer : Mhs. Febri Bagus Satriya Aji
Address : Universitas Islam 45

Total of Page : 1 of 1
Date of Received : January 16, 2025
Date of Tested : January 18, 2025

Object to be Tested : Joint Plate
Location of Performance : PT Detech Profesional Indonesia

Sample Marking : MHS.1.8

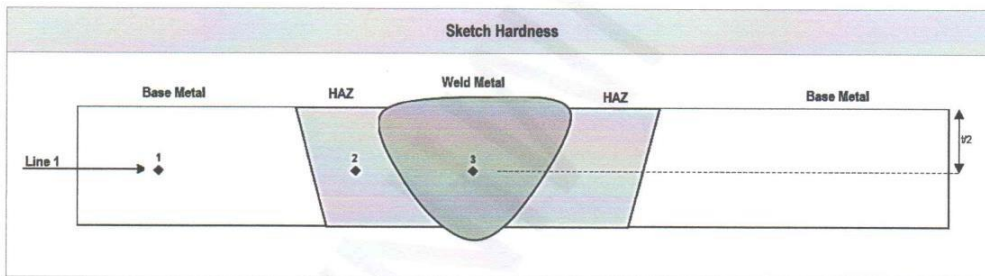
Client's Description of Sample

WPS No : -
Material Size : -
Testing Purpose : Material Testing
Welder's Name : -

Material Type/Grade : SPCC to SPCC
Welding Position : 1G
Welding Process : GMAW

Environment Temp : 25 ± 2 °C
Type of Test : Vickers Hardness Number (HV) Load Test, 10 Kgf
Test Method : ASTM E92-17

Reference Code : -



TESTING REPORT

Customer : Mhs. Febri Bagus Satriya Aji
Address : Universitas Islam 45

Total of Page : 1 of 1
Date of Received : January 16, 2025
Date of Tested : January 18, 2025

Object to be Tested : Joint Plate
Location of Performance : PT Detech Profesional Indonesia

Sample Marking : MHS.1.9

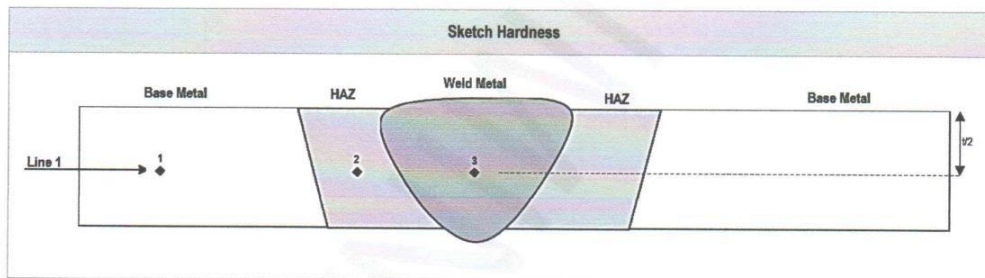
Client's Description of Sample

WPS No : -
Material Size : -
Testing Purpose : Material Testing
Welder's Name : -

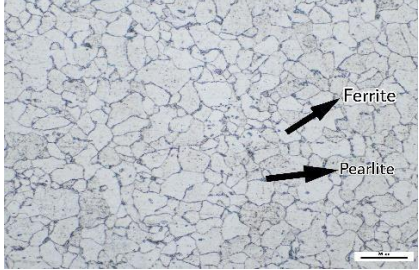
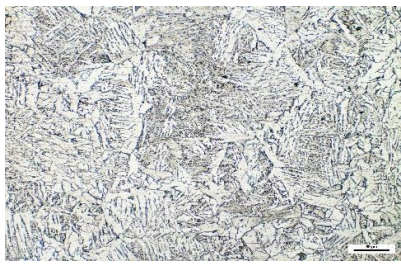
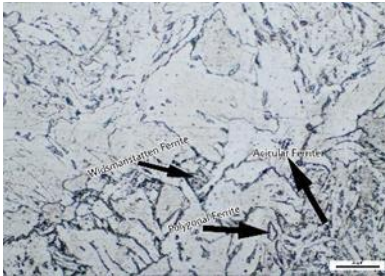
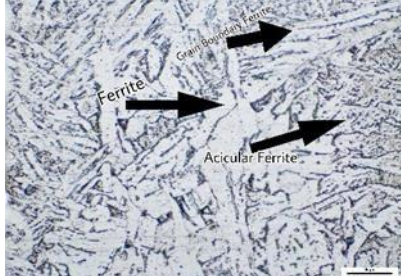
Material Type/Grade : SPCC to SPCC
Welding Position : 1G
Welding Process : GMAW

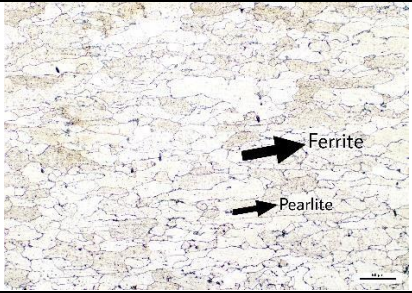
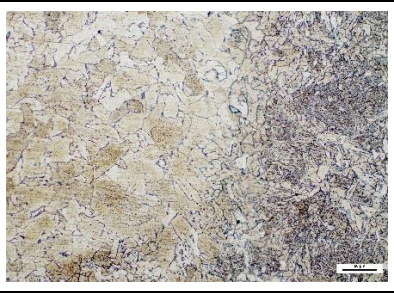
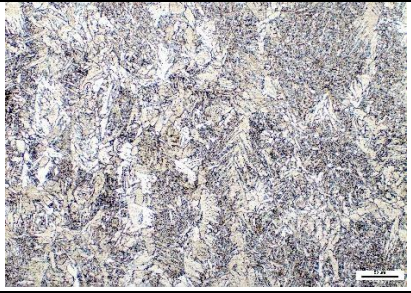
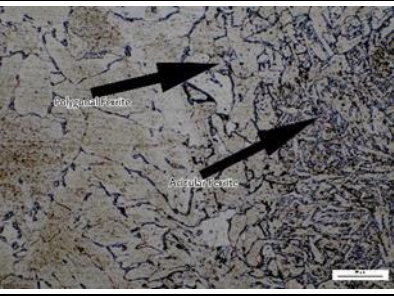
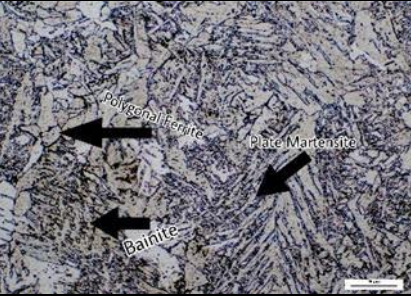
Environment Temp : 25 ± 2 °C
Type of Test : Vickers Hardness Number (HV) Load Test, 10 Kgf
Test Method : ASTM E92-17

Reference Code : -



3. Pengujian Metalografi

Arus Pengelasan & Pembesaran Mikroskop	Base Metal	HAZ	Weld Metal
95 A x200			
95 A x500	-		
100 A x200			

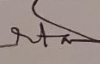
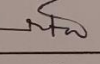
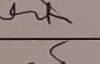
105 A x200	 Micrograph showing Ferrite and Pearlite phases. Arrows point to Ferrite and Pearlite. Scale bar is 100 μm.	 Micrograph showing a fine, dark, granular microstructure. Scale bar is 100 μm.	 Micrograph showing a fine, dark, granular microstructure. Scale bar is 100 μm.
105 A x500	-	 Micrograph showing Polygonal Ferrite and Bainite phases. Arrows point to Polygonal Ferrite and Bainite. Scale bar is 100 μm.	 Micrograph showing Polygonal Ferrite, Plate Martensite, and Bainite phases. Ar

4. Kartu Bimbingan Skripsi



KARTU BIMBINGAN TUGAS AKHIR / SKRIPSI
FAKULTAS TEKNIK
UNIVERSITAS ISLAM "45" BEKASI

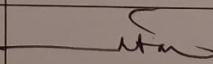
Nama Mahasiswa : Febri Bagus Satriya Adi
 NPM : 41187001200069
 Program Studi : Teknik Mesin S-1
 Judul Tugas Akhir / Skripsi : ANALISIS PENGARUH VARIASI ARUS PENGELASAN GMAW TERHADAP NILAI UJI KEKERASAN DAN STRUKTUR MIKRO PADA MATERIAL BAJA SPCC
 Dosen Pembimbing I : Ahsan, S.Pd., M.T.
 Dosen Pembimbing II : Yopi Handoyo, S.Si., M.T.

NO	HARI, TANGGAL	CATATAN	PARAF DOSEN
1	5/12/2024	Perbaiki Judul Penulisan.	
2	18/12/2024	Perbaiki Subbab Preparasi.	
3	30/12/2024	Cantumkan Sumber Tabel.	
4	3/1/2025	Salin Spej	

NO	HARI, TANGGAL	CATATAN	PARAF DOSEN
11	13-1-2025	Perbaikan latar belakang	YPM
12	14-1-2025	Perbaikan manfaat Penelitian	YPM
13	24-1-2025	Masukkan grafik heat input	YPM
14	25-1-2025	Masukkan teori kekerasan	YPM
15	28-1-2025	Masukkan teori struktur mikro	YPM
16	30-1-2025	Perbaiki saran	YPM
17			
18			

Catatan : 1. Bimbingan Laporan Tugas Akhir / Skripsi Minimal 8 kali.
2. Buku Referensi minimal 5 diambil dari perpustakaan Fakultas atau Universitas dan ditunjukkan saat sidang Tugas Akhir / Skripsi.

Disetujui Untuk Mengikuti Ujian Sidang

	Tanggal	Tanda Tangan
Pembimbing I H. ALISAN, ST, MT	30-1-2025	
Pembimbing II Yopi Handoyo, S.Si., MT	30-1-2025	YPM