



MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)
 (A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

FTD 204334, JALAN PLATINUM UTAMA,
 KAWASAN PERINDUSTRIAN PASIR GUDANG, ZON 12B, 81700 PASIR GUDANG
 JOHOR DARUL TAKZIM, MALAYSIA
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 http://www.pantechgroup.com



SIRIM
 Cert. No.: PC004871



Certified to
 NSF/ANSI 61



Cert. No.: ISO9001-
 0047465



Suruhanjaya Perkhidmatan Air, Kembara
 NO. SUIL PENDAFTARAN : SPAN/8P/300-10/553/A/W-1

MATERIAL MANUFACTURER APPROVAL ACCORDING TO
 PED 2014/68/EU, ANNEX 1, PARA 4.3.
 PED CERTIFICATE NO.:
 0343/PED/MUM/1110006/1

Customer : Unimech Engineering (M) Sdn Bhd
 Product : Welded Austenitic Stainless Steel Pipe

Certificate No : PSA3-12026
 Date : 23/06/2021

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

| PO No. | Invoice No. | Product Specification | Dimensional & Inspection Specification | | | | Delivery Condition | | | | |
|---|---------------------|-----------------------|--|--|--|---|-------------------------|---|-----------------|---|----------|
| | | | ASTM A312/A312M - 19 / ASME SA312/SA312M - 19 | ASTM A999/A999M - 18/ ASME SA999/SA999M - 19 B 36.19M-2018 & B36.10M-2018 | Solution Treated, Pickled-Passivated, Plain Ends Square Cut | Hydrostatic Test Pressure / Hold 2500 PSI, 5s | Result PASSED | Dimensional / PMI/ Visual Inspection GOOD | | | |
| Heat No. | Size | Grade | Quantity (Length) | Non Destructive Test | | Inter-Granular Corrosion Test PASSED | Hardness, HRB | Remarks | | | |
| | | | | Eddy Current PASSED | Flattening PASSED | | | | | | |
| KG120-10 | 2 inch Sch 40S x 6M | TP 316/316L | 37 | | | | | | | | |
| Chemical Composition (%) | | | | | | | | | | | |
| Specification Max Min Heat No. | C | Si | Mn | P | S | Cr | Ni | Mo | Pb | Tensile Test *1 YS TS Elongation (%) | E (%) |
| | 0.035 - 0.024 | 1.00 - 0.48 | 2.00 - 1.23 | 0.045 - 0.024 | 0.030 - 0.002 | 18.00 16.00 16.57 | 14.00 10.00 10.03 | 3.00 2.00 2.03 | - - <0.01 | | |

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER,
 AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370 - 12a STANDARD. SPECIMEN GAUGE WIDTH 19.2MM FOR 1" ABOVE, 1" INCLUDE AND BELOW DIRECT TEST FROM PIPE. LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS: AOD / VOD

WELDED BY ELECTRIC FUSION WELDING PROCESS WITH NO FILLER METAL

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-10 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156 -2015 & NACE-MR0105-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1059°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

*1: YS, YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

EDDY CURRENT ACCORDING TO ASTM E262-98 (Reapproved 2003) *2: NR: Not Hydrostatically Tested

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[Signature]
 Head of Quality Assurance Department



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INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer : Unimech Engineering (M) Sdn Bhd
Product : Welded Austenitic Stainless Steel Pipe



Cert. No.: PC004871



Certified to NSF/ANSI 61



Cert. No.: ISO9001-0047465



SUBSIDIARY PERKORPORATAN AIR NEGARA
NO. 53IL PENDAFTARAN: SPAN/891/900-10/553/A/W-1

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3.
PED CERTIFICATE NO.: 0038/PED/MUM/1110006/1

Certificate No : PSA3-12002
Date : 24/05/2021

| PO No. | Invoice No. | Product Specification | | Dimensional & Inspection Specification | | | | | | | | | | Delivery Condition | |
|---------------------------------|-------------------------|--|-------|--|----------------------|------------|-------------------------------|--------|------------------|--------------|--------------------------------------|--------|---|--------------------|---------|
| | | ASTM A312/A312M - 19 / ASME SA312/SA312M - 19 | Grade | Quantity (Length) | Non Destructive Test | | Inter-Granular Corrosion Test | | Hydrostatic Test | | Dimensional / PMI/ Visual Inspection | | Solution Treated, Pickled-Passivated, Plain Ends Square Cut | | |
| Heat No. | Size | | | | Eddy Current | Flattening | PASSED | PASSED | 2500 PSI, 5s | 2500 PSI, 5s | PASSED | PASSED | GOOD | GOOD | |
| JS077-10 | 1 1/2 inch Sch 40S x 6M | TP 316/316L | 4 | | PASSED | PASSED | | | | | | | | | |
| KG091-10 | 1 1/2 inch Sch 40S x 6M | TP 316/316L | 6 | | PASSED | PASSED | | | | | | | | | |
| Chemical Composition (%) | | | | | | | | | | | | | | | |
| Specification | | C | Si | Mn | P | S | Cr | Ni | Mo | Pb | Tensile Test ¹ | | Hardness, HRB | | Remarks |
| Max | 0.035 | 1.00 | 2.00 | 0.045 | 0.030 | 18.00 | 14.00 | 3.00 | | | YS | TS | E | | |
| Min | - | - | - | - | - | 16.00 | 10.00 | 2.00 | | | (KSI / MPa) | (%) | | | |
| Heat No. | | | | | | | | | | | 205 | 515 | 35 | 90 | |
| JS077-10 | 0.009 | 0.47 | 0.96 | 0.031 | 0.004 | 16.70 | 10.02 | 2.02 | | < 0.01 | 390 | 609 | 55 | 82 | |
| KG091-10 | 0.024 | 0.48 | 1.23 | 0.024 | 0.002 | 16.57 | 10.03 | 2.03 | | < 0.01 | 326 | 610 | 61 | 78 | |

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NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS: AOD / VOD

WELDED BY ELECTRIC FUSION WELDING PROCESS WITH NO FILLER METAL.

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-10 PRACTICE: E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156-2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 650°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIALS HEAT ANALYSIS

*1 YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

EDDY CURRENT ACCORDING TO ASTM E426-98 (Reapproved 2003) *2 REQUIREMENTS (REFERENCE TO ASTM A999A/999M-12 REQUIREMENTS, DISCONTINUITY ACC TO CLAUSE 22.3.8.4 PROCEDURE ACC TO CLAUSE 23.3.9)

*2: NI: Not Hydrostatically Tested

Signature of QACC Manager
QACC MANAGER
PANTECH INDUSTRIES SDN. BHD.
KAWASAN PERINDUSTRIAN PASIR GUDANG

Head of Quality Assurance Department