



MILL TEST CERTIFICATE

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

KAWASAN PERINDUSTRIAN PASIR GUDANG, ZON 12B, 81700 PASIR GUDANG

PTD 204334, JALAN PLATINUM UTAMA,

JOHOR DARUL TAKZIM, MALAYSIA

Tel: +607-2518888 Fax: +607-2519999 E-mail: info@pantechssalloy.com

http://www.pantech-group.com

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

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



MS SIRM
Cert. No.: PC004871



Cert. No.: ISO9001-0007465



Certified to NSF/ANSI 61

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

Certificate No : PSA3-11888
Date : 21/12/2020



Suruhanjaya Perkhidmatan Air Negeri
NO. SUIH PENDAFTARAN : SPAN/9P/300-40/553/AW-1

PO No.	Invoice No.	Product Specification	Dimensional & Inspection Specification	Delivery Condition																																																																				
APO-2007-0154	L000010910	ASTM A312/A312M - 19 / ASME SA312/SA312M - 19	ASTM A999/A999M - 18/ ASME SA999/SA999M - 19 B. 36.19M-85 & B36.10M-04	Solution Treated, Pickled-Passivated, Plain Ends Square Cut																																																																				
Heat No.	Size	Grade	Quantity (Length)	Non Destructive Test																																																																				
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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 - 1a STANDARD. SPECIMEN GAUGE WIDTH: 19.2MM. FOR 1" ABOVE, 1" INCLUDE AND BELOW DIRECT TEST FROM PIPE. LONGITUDINAL DIRECTION, GAUGE LENGTH 7" (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

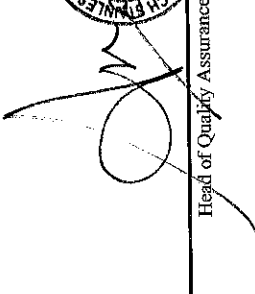
HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

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

*2: NDE: Not Hydrostatically Tested

EDDY CURRENT ACCORDING TO ASTM E426-98 (Reapproved 2003)¹ REQUIREMENTS (REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.3.4, PROCEDURE ACC. TO CLAUSE 22.3.9)


 OACC
 MANAGER
 HASSARUDDIN
 PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD.

Head of Quality Assurance Department



MILL TEST CERTIFICATE

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Suruhanjaya Perkhidmatan Air Awam
 NO. SUIL PENDAFARAN : SPAN/BP/300-10/553/A/W-1

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

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

Certificate No : PSA3-11891
 Date : 21/12/2020

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

PO No.	Invoice No.	Product Specification	Dimensional & Inspection Specification	Delivery Condition																																																																											
APO-2012-0045	L000010919	ASTM A312/A312M - 19 / ASME SA312/SA312M - 19	ASTM A999/A999M - 18/ ASME SA999/SA999M - 19 B 36.19M-85 & B36.10M-04	Solution Treated, Pickled-Passivated, Plain Ends Square Cut																																																																											
Heat No.	Size	Grade	Quantity (Length)	Dimensional / PMI/ Visual Inspection																																																																											
JS057-10	1/2 inch Sch 40S x 6M	TP 316/316L	33	GOOD																																																																											
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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 B

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156-2:2015 & NACE-MR0103-2015

HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1089°C, RAPIDLY COOLED WITH WATER

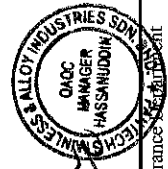
CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

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

EDDY CURRENT: ACCORDING TO ASTM E466-98 (Reapproved 2003)² REQUIREMENTS (REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.8.4. PROCEDURE ACC. TO CLAUSE 22.3.9)

*2: NH: Not Hydrostatically Tested

[Signature]
 Head of Quality Assurance Department



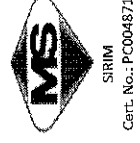


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INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

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



Cert. No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO
 PED 2014/58/EU, ANNEX 1, PARA 4.3.
 PED CERTIFICATE NO.:
 0038/PED/MUM/1110006/1



NO. SUJIL PENDAFTARAN : SPAN/BPI/300-10/555/A/W-1

Certificate No : PSA3-11892
 Date : 21/12/2020

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Heat No.	Size	Grade	Quantity (Length)	Eddy Current	Flattening	Corrosion Test	Pressure / Hold	Result	Pressure / Hold	Result	Pressure / Hold	Result	Pressure / Hold	Result	Pressure / Hold	Result	
JS059-10	1 inch Sch 40S x 6M	TP 316/316L	3	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	2500 PSI, 5s	PASSED	2500 PSI, 5s	PASSED	2500 PSI, 5s	PASSED	2500 PSI, 5s	PASSED	
JS139-10	1 inch Sch 40S x 6M	TP 316/316L	79	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	2500 PSI, 5s	PASSED	2500 PSI, 5s	PASSED	2500 PSI, 5s	PASSED	2500 PSI, 5s	PASSED	
Chemical Composition (%)																	
Specification	C	Si	Mn	P	S	Cr	Ni	Mo	Pb	Tensile Test ¹		Hardness, HRB		Remarks			
	Max	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-	YS	TS	E (%)					
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Heat No.	0.018	0.61	0.95	0.031	0.002	16.62	10.05	2.03	< 0.01	327	585	57					
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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 A362-10 PRACTICE E

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

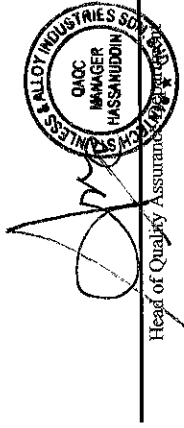
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CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

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EDDY CURRENT ACCORDING TO ASTM E266-98 (Reapproved 2003)¹ REQUIREMENTS (REFERENCE TO ASTM A999/A999M.12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.8.4, PROCEDURE ACC. TO CLAUSE 22.3.9)

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Head of Quality Assurance