



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, K1700 PASIR GUDANG
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 Tel: +607-2518888 Fax: +607-2519999 E-mail: info@pantechinfo.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



Cert. No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO
 PED 2014/68/EU, ANNEX 1, PARA 4.3.
 PED CERTIFICATE NO.:
 0038/PED/MUM/1110066/1



SPAN
 Sertifikasi Berhad
 NO. 5/UL PENDAFTARAN: SPAN/K7/A/00883-2011

SIRIM

Cert. No.: PP037201

Certificate No : PSA3-11867
 Date : 27/11/2020

PO No.	Invoice No.	Product Specification	Dimensional & Inspection Specification	Delivery Condition											
APO-2009-0020	L000010736	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)	Inter-Granular Corrosion Test											
JG116-10	4 inch Sch 10S x 6M	TP 316/316L	10	PASSED											
				Non Destructive Test											
				Eddy Current											
				Flattening											
				PASSED											
				Hydrostatic Test											
				Pressure / Hold											
				Result											
				1600 PSI, 5s											
				PASSED											
				Dimensional / PMI/ Visual Inspection											
				GOOD											
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	90		
Min	-	-	-	-	-	16.00	10.00	2.00	-	205	515	35			
Heat No.	0.023	0.48	1.17	0.025	0.001	16.68	10.03	2.02	< 0.01	348	591	52	81		

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-MR0103-2015

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: NH: Not Hydrostatically Tested

EDDY CURRENT ACCORDING TO ASTM E246-98 (Reapproved 2003)^{*1} REQUIREMENTS (REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE Z2.3.8.1, PROCEDURE ACC. TO CLAUSE Z2.3.9)



Head of Quality Assurance Department



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



Cert. No.: ISO9001-0047455

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



SPAN
SIRIM
CERT. NO.: PP087201

Certificate No : PSA3-11862
Date : 27/11/2020

NO. SUII PENDAFTARAN : SPAN/KP/A/00883-2011

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	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		Inter-Granular Corrosion Test		Dimensional / PMI/ Visual Inspection					
JG116-10	4 inch Sch 10S x 6M	TP 316/316L	10	Eddy Current	Flattening	PASSED		Pressure / Hold	Result				
				PASSED	PASSED	PASSED		1600 PSI, 5s	PASSED				
Specification		Chemical Composition (%)											
	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 -(KSI / MPa)	TS		
Min	-	-	-	-	-	16.00	10.00	2.00	-	205	515	35	90
Heat No.	0.023	0.48	1.17	0.025	0.001	16.68	10.03	2.02	< 0.01	348	591	52	81
JG116-10													

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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 9.2MM 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

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CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

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

*2: ME: Not Hydrostatically Tested

EDDY CURRENT ACCORDING TO ASTM A426-98 (Reapproved 2005)^{#1} REQUIREMENTS (REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.8.4, PROCEDURE ACC. TO CLAUSE 22.3.1.9)



Head of Quality Assurance Department