



# MILL TEST CERTIFICATE

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

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INSPECTION DOCUMENT; EN 10204: 2004 Type 3.1



Lloyd's Register

Cert. No.: ISO9001-0047465  
 PED CERTIFICATE NO.:  
 0038/PED/MUM/1110006/1



SIRM  
 Cert. No.: PP087201



Suruhanjaya Perindustrian A.P. NEGARA  
 NO. SIIL. PENDAFTARAN : SPAN/KP/A/00885-2011

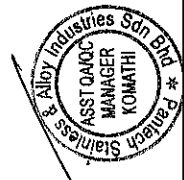
Customer : Unimech Engineering (M) SDN BHD.  
 Product : Welded Austenitic Stainless Steel Pipe

Certificate No : PSA3-11598  
 Date : 26/06/2019

PO No.	Invoice No.	Product Specification		Dimensional & Inspection Specification				Delivery Condition						
		ASTM A312/A312M - 17 / ASME SA312/SA312M - 17	ASTM A999/A999M - 16/ ASME SA999/SA999M - 15	B 36.19M-85 & B36.10M-04	Solution Treated, Pickled-Passivated, Plain Ends Square Cut	Hydrostatic Test	Dimensional / PMI/ Visual Inspection	Pressure / Hold	Result					
Heat No.	Size	Grade	Quantity (Length)	Non Destructive Test		Inter-Granular Corrosion Test	2500 PSI, 5s	PASSED	GOOD					
				Eddy Current	Flattening					2500 PSI, 5s	PASSED	GOOD		
HSA345-01113	1/2 inch Sch 40S x 6M	TP 316/316L	42	PASSED	PASSED	PASSED								
IEA278-01113	1/2 inch Sch 40S x 6M	TP 316/316L	169	PASSED	PASSED	PASSED								
<b>Chemical Composition (%)</b>														
Specification		C	Si	Mn	P	S	Cr	Ni	Mo	Pb	Tensile Test		Hardness, HRB	Remarks
Max		0.035	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-	YS	TS		
Min		-	-	-	-	-	16.00	10.00	2.00	-	-	-	-	(%)
Heat No.											205	515	35	
HSA345-01113		0.023	0.49	0.81	0.029	0.001	16.72	10.14	2.07	< 0.10	359	568	66	82
IEA278-01113		0.015	0.66	0.86	0.034	0.001	16.52	10.09	2.05	< 0.10	317	556	62	80

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 A376 - 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 A362-10 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 E226-98 (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)



Head of Quality Assurance Department