



# MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428 W)  
 (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

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/1110006/1



SIRIM  
 402, Jalan Sultan Azlan Shah, Air Keroh  
 NO. SIJIL PENDAFTARAN : SPAN/KP/A/00883-2011

Certificate No : PSA3-11854  
 Date : 24/11/2020

PO No.	Invoice No.	Product Specification	Dimensional & Inspection Specification	Delivery Condition	Remarks							
APO-2010-0190	L000010653	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	Inter-Granular Corrosion Test	Hydrostatic Test	Dimensional / PMI/ Visual Inspection					
JE055-10	3/4 inch Sch 40S x 6M	TP 316/316L	127	Eddy Current PASSED Flattening PASSED	PASSED	Pressure / Hold Result 2500 PSI, 5s PASSED	GOOD					
ISA373-01-113	1 1/4 inch Sch 10S x 6M	TP 316/316L	44	PASSED	PASSED	2500 PSI, 5s PASSED	GOOD					
IYA106-01-113	1 1/4 inch Sch 10S x 6M	TP 316/316L	17	PASSED	PASSED	2500 PSI, 5s PASSED	GOOD					
Chemical Composition (%)												
Specification	C	Si	Mn	P	S	Cr	Ni	Mo	Pb	TS	E (%)	Hardness, HRB
Max	0.035	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-	-	-	90
Min	-	-	-	-	-	16.00	10.00	2.00	-	-	-	-
Heat No.												
JE055-10	0.016	0.50	0.99	0.033	0.001	16.70	10.18	2.08	< 0.01	515	35	-
ISA373-01-113	0.012	0.46	0.88	0.033	0.004	16.82	10.15	2.06	< 0.01	553	60	83
IYA106-01-113	0.022	0.56	1.11	0.028	0.001	16.70	10.10	2.25	< 0.01	653	52	80
										444	52	87

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 11.2" (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: Non Hydrostatically Tested

EDDY CURRENT ACCORDING TO ASTM E266-98 (Reapproved 2003)<sup>1</sup> REQUIREMENT'S (REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.3.4, PROCEDURE ACC. TO CLAUSE 22.3.9)

*[Signature]*  
 Head of Quality Assurance

*[Stamp: QAQC MANAGER, PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD., JOHOR DARUL TAKZIM, MALAYSIA]*