



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

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



Certified to NSF/ANSI 61



Cert No.: ISO9001-00474E5



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

Certificate No : PSA3-11931
Date : 18/02/2021

PO No.	Invoice No.	Product Specification	Dimensional & Inspection Specification	Delivery Condition													
APO-2101-0177	L000011209	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													
Heat No.	Size	Grade	Quantity (Length)	Non Destructive Test													
JS077-10	8 inch Sch 10S x 6M	TP 316/316L	5	Eddy Current PASSED Flattening PASSED													
				Inter-Granular Corrosion Test PASSED													
				Hydrostatic Test Pressure / Hold Result PASSED 1100 PSI, 5s													
				Dimensional / PMI/ Visual Inspection GOOD													
Specification																	
	Chemical Composition (%)																
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb	Tensile Test^{*1}							
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.	JS077-10	0.47	0.96	0.031	0.004	16.70	10.02	2.02	< 0.01						205	515	35
										319	576	59	Hardness, HRB	90	78	Remarks	

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

EDDY CURRENT ACCORDING TO ASTM E426-98 (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

OACQ MANAGER
HASANAUDDIN
PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD.

Head of Quality Assurance Department