



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

Cert. No.: PP087201

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

Certificate No : PSA2-24091  
Date : 08/10/2019

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

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		Non Destructive Test		Inter-Granular Corrosion Test		Hydrostatic Test		Dimensional /PMI/ Visual Inspection			
Heat No.	Size	Grade	Quantity (Length)	Eddy Current		Flattening		Inter-Granular Corrosion Test		Pressure / Hold		Result		Remarks	
IEA271-01112	6 inch Sch 10S x 6M	TP 304/304L	34	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	1300 PSI, 5s	PASSED	GOOD			
IEA273-02112	6 inch Sch 10S x 6M	TP 304/304L	30	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	1300 PSI, 5s	PASSED	GOOD			
ISA376-01112	6 inch Sch 10S x 6M	TP 304/304L	2	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	1300 PSI, 5s	PASSED	GOOD			
ISA393-01112	6 inch Sch 10S x 6M	TP 304/304L	24	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	1300 PSI, 5s	PASSED	GOOD			
ISA394-01112	6 inch Sch 10S x 6M	TP 304/304L	30	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	1300 PSI, 5s	PASSED	GOOD			
Specification		Chemical Composition (%)													
Max	C	Si	Mn	P	S	Cr	Ni	Pb	YS	TS	E	Hardness, HRB			
Min	0.035	1.00	2.00	0.045	0.030	20.00	11.00	-	-	-	-	90			
Heat No.	-	-	-	-	-	18.00	8.00	-	205	515	35	-			
IEA271-01112	0.023	0.35	0.97	0.040	0.002	18.05	8.06	< 0.10	283	634	49	82			
IEA273-02112	0.015	0.35	0.77	0.040	0.003	18.15	8.09	< 0.10	277	634	48	81			
ISA376-01112	0.018	0.65	0.99	0.029	0.001	18.25	8.15	< 0.10	363	655	59	82			
ISA393-01112	0.025	0.47	1.08	0.033	0.001	18.11	8.10	< 0.10	350	657	54	81			
ISA394-01112	0.021	0.43	1.02	0.033	0.001	18.06	8.21	< 0.10	350	664	52	78			

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 WITH PROCESS WITH NO FILLER METAL

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A362-10 PRACTICE E

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15136-2015 & NACE-MR0103-2015

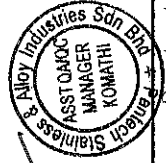
HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIALS HEAT ANALYSIS

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

\*2: NH: Not Hydrostatically Tested

EDDY CURRENT ACCORDING TO ASTM E426-98 (Reapproved 2003)<sup>41</sup> 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