



# MILL TEST CERTIFICATE

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

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

PTD 204334, JALAN PLATINUM UTAMA,

KAWASAN PERINDUSTRIAN PASIR GUDANG, ZON 12B, 81700 PASIR GUDANG

JOHOR DARUL TAKZIM, MALAYSIA

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http://www.pantech-group.com



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

## INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

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

Certificate No: PSA2-FT-4132  
Date: 11 Nov 2020

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition			
APO-2010-0067	L000010641	ASTM A403/A403M - 20 / ASME SA 403/SA403M - 19	ASME B16.9 - 18 / ASTM A960/A960M - 20 / ASME SA 960/SA960M - 19	Solution Treated, Pickled-Passivated			
Heat No.	Product & Size			Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
IYA070-02-112CR	1" X 1/2"	SCH 10s	CON-REDUCER	60	WP304/304L-W	PASSED	-
FEA150-01-112CR	1 1/2" X 1"	SCH 10s	CON-REDUCER	100	WP304/304L-W	PASSED	-
ISA384-01-112CR	1 1/2" X 1 1/4"	SCH 10s	CON-REDUCER	50	WP304/304L-W	PASSED	-
IYA142-01-112CR	2" X 1"	SCH 10s	CON-REDUCER	200	WP304/304L-W	PASSED	-
IYA141-01-112CR	2" X 1 1/2"	SCH 10s	CON-REDUCER	300	WP304/304L-W	PASSED	-
ESA045-02-112CR	2" X 1 1/2"	SCH 40s	CON-REDUCER	80	WP304/304L-W	PASSED	-
ISA356-04-112CR	2 1/2" X 1 1/2"	SCH 10s	CON-REDUCER	40	WP304/304L-W	PASSED	-
JGA057-01-112CR	8" X 5"	SCH 10s	CON-REDUCER	4	WP304/304L-W	PASSED	-
JGA130-01-112CR	8" X 5"	SCH 10s	CON-REDUCER	26	WP304/304L-W	PASSED	-

Specification	Chemical Composition (%)									Tensile Test *1			Hardness (HRB)	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Pb	YS (KSI / MPa)	TS (KSI / MPa)	E (%)			
	Max	Min	Max	Min	Max	Max	Max	Max	Max	Max	Max	Max		
Heat No.	0.030	1.00	2.00	0.045	0.030	20.00	11.00	-	-	-	-	90		
IYA070-02-112CR	0.019	0.46	1.60	0.030	0.001	18.00	8.00	< 0.01	205	515	28	-	PASSED	
FEA150-01-112CR	0.018	0.36	0.94	0.038	0.001	18.00	8.07	< 0.01	406	718	57	89	PASSED	
ISA384-01-112CR	0.015	0.47	0.98	0.031	0.002	18.05	8.11	< 0.01	430	666	50	87	PASSED	
IYA142-01-112CR	0.022	0.37	1.59	0.030	0.002	18.10	8.00	< 0.01	372	655	56	85	PASSED	
IYA141-01-112CR	0.022	0.48	1.55	0.028	0.001	18.10	8.00	< 0.01	362	656	60	82	PASSED	
ESA045-02-112CR	0.026	0.39	1.50	0.038	0.001	18.30	8.05	< 0.01	376	686	52	85	PASSED	
ISA356-04-112CR	0.017	0.40	1.05	0.034	0.001	18.09	8.03	< 0.01	380	669	55	85	PASSED	
JGA057-01-112CR	0.020	0.42	1.07	0.034	0.002	18.35	8.02	< 0.01	351	648	55	80	PASSED	
JGA130-01-112CR	0.020	0.42	1.16	0.029	0.002	18.17	8.02	< 0.01	335	638	55	78	PASSED	

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 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE. LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS: AOD / VOD

PIPE RAW MATERIAL - 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

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

Head of Quality Assurance Department





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Cert. No.: ISO9001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO  
PED 2034/68/EU, ANNEX 1, PARA 4.3.  
PED CERTIFICATE NO.:  
0038/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

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

Certificate No: PSA2-FT-4133  
Date: 11 Nov 2020

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification			Delivery Condition	
APO-2010-0067	L000010642	ASTM A403/A403M - 20 / ASME SA 403/SA403M - 19	ASME B16.9 - 18 / ASTM A960/A960M - 20 / ASME SA 960/SA960M - 19			Solution Treated, Pickled-Passivated	
Heat No.	Product & Size			Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
IYA091-01-112LR	1"	SCH 10s	90° LR ELBOW	1500	WP304/304L-W	PASSED	-
IYA092-01-112LR	1"	SCH 10s	90° LR ELBOW	1500	WP304/304L-W	PASSED	-

Specification	Chemical Composition (%)								Tensile Test <sup>1</sup>			Hardness (HRB)	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Pb	YS (KSI / MPa)	TS (KSI / MPa)	E (%)		
	Max												
Heat No.	0.030	1.00	2.00	0.045	0.030	20.00	11.00	-	-	-	-	90	
IYA091-01-112LR	0.020	0.41	1.65	0.027	0.001	18.30	8.10	< 0.01	205	515	28	-	PASSED
IYA092-01-112LR	0.026	0.48	1.53	0.025	0.001	18.40	8.00	< 0.01	372	676	50	89	PASSED

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AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

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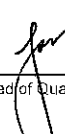
HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156 -2015 & NACE-MR0103-2015

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MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

  
 ASST QA/QC  
 MANAGER  
 KOMATHI  
 Head of Quality Assurance Department