



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

Tel: +607-2518888 Fax: +607-2519999 Website: www.pantechssalloy.com

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Certified to NSF/ANSI 61

Approval No.: ISO9001-0047465



MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/59/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO.: 0943/PED/MUM/111006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

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

Certificate No: PSA2-FT-4434
Date: 26 May 2022

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification				Delivery Condition
APO-2203-0114	L000013019	ASTM A403/A403M - 20 / ASME SA 403/SA403M - 21	ASME B16.9 - 18 / ASTM A960/A960M - 20 / ASME SA 960/SA960M - 21/ ASME SECTION II PART A - 2021				Solution Treated, Pickled-Passivated
Heat No.	Product & Size			Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
JG201-1	2" X 1 1/2"	SCH 40s	CON-REDUCER	30	WP304/304L-W	PASSED	-
BCA036-03-112CR	8" X 5"	SCH 10s	CON-REDUCER	1	WP304/304L-W	PASSED	-
KG153-1	8" X 5"	SCH 10s	CON-REDUCER	24	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	0.030	1.00	2.00	0.045	0.030	20.00	11.00	-	-	-	90		
Heat No.	-	-	-	-	-	18.00	8.00	-	-	205	515	28	-	
JG201-1	0.023	0.44	1.13	0.028	0.002	18.05	8.02	< 0.01	-	348	655	46	79	PASSED
BCA036-03-112CR	0.020	0.41	1.42	0.030	0.004	18.09	8.04	< 0.01	-	304	599	60	86	PASSED
KG153-1	0.021	0.41	1.15	0.036	0.001	18.18	8.03	< 0.01	-	334	638	45	76	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

Handwritten signature and stamp of QAQC Manager HASSANUDDIN. The stamp is circular with the text 'PANTECH STAINLESS & ALLOY INDUSTRIES SDN BHD' around the perimeter and 'QAQC MANAGER HASSANUDDIN' in the center.

Head of Quality Assurance Department



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SIRIM Cert. No.: PC005078

MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO.: 0343/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-4448
Date: 14 Jun 2022

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification			Delivery Condition
APO-2201-0186	L000013089	ASTM A403/A403M - 20 / ASME SA 403/SA403M - 21	ASME B16.9 - 18 / ASTM A960/A960M - 20 / ASME SA 960/SA960M - 21/ ASME SECTION II PART A - 2021			Solution Treated, Pickled-Passivated
Heat No.	Product & Size		Quantity (pcs)	Material Grade	Visual / Dimension / PMI Examination	Remarks
KG022-1	1" X 1/2"	SCH 40s CON-REDUCER	150	WP304/304L-W	PASSED	-
KG319-1	1 1/2" X 1"	SCH 10s CON-REDUCER	100	WP304/304L-W	PASSED	-
KS126-1	1 1/2" X 1"	SCH 40s CON-REDUCER	20	WP304/304L-W	PASSED	-
JG146-1	1 1/2" X 1 1/4"	SCH 10s CON-REDUCER	57	WP304/304L-W	PASSED	-
KG285-1	1 1/2" X 1 1/4"	SCH 10s CON-REDUCER	3	WP304/304L-W	PASSED	-
KG189-1	2" X 1 1/2"	SCH 10s CON-REDUCER	40	WP304/304L-W	PASSED	-
KG221-1	2 1/2" X 2"	SCH 10s CON-REDUCER	50	WP304/304L-W	PASSED	-
KG333-1	4" X 2 1/2"	SCH 10s CON-REDUCER	10	WP304/304L-W	PASSED	-
KG226-1	4" X 3"	SCH 10s CON-REDUCER	160	WP304/304L-W	PASSED	-
KG070-1	4" X 3"	SCH 40s CON-REDUCER	100	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	0.030	1.00	2.00	0.045	0.030	20.00	11.00	-	-	-	90		
Heat No.	-	-	-	-	-	18.00	8.00	-	-	205	515	28	-	-
KG022-1	0.020	0.44	1.16	0.028	0.002	18.18	8.02	< 0.01	-	339	646	85	81	PASSED
KG319-1	0.021	0.38	1.16	0.030	0.001	18.02	8.01	< 0.01	-	391	661	50	87	PASSED
KS126-1	0.024	0.52	1.00	0.028	0.001	18.14	8.02	< 0.01	-	372	699	53	80	PASSED
JG146-1	0.021	0.41	1.14	0.027	0.002	18.25	8.03	< 0.01	-	432	696	46	84	PASSED
KG285-1	0.024	0.37	1.12	0.034	0.001	18.14	8.02	< 0.01	-	373	683	50	79	PASSED
KG189-1	0.025	0.49	1.20	0.033	0.001	18.07	8.01	< 0.01	-	365	677	55	85	PASSED
KG221-1	0.026	0.37	1.14	0.031	0.002	18.11	8.03	< 0.01	-	352	680	55	81	PASSED
KG333-1	0.026	0.39	1.13	0.030	0.002	18.19	8.01	< 0.01	-	352	654	50	84	PASSED
KG226-1	0.026	0.38	1.15	0.031	0.001	18.16	8.03	< 0.01	-	363	673	54	88	PASSED
KG070-1	0.025	0.40	1.17	0.024	0.002	18.07	8.01	< 0.01	-	343	649	51	80	PASSED

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 QACC MANAGER
 HASSANUDIN
 Head of Quality Assurance Department