



# 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

http:// www.pantech-group.com

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1



MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO.: 0343/PED/MUM/1110006/1

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

Certificate No : PSA3-FT-1664  
Date : 26 May 2022

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification				Delivery Condition								
APO-2203-0146	L000013022	ASTM A403/A403M - 20 / ASME SA 403/SA403M - 21	ASME B16.9 - 18 / ASTM A980/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								
KG497-1	2"	SCH 10s	90° LR ELBOW	2	WP316/316L-W	PASSED	-								
KG346-1	3"	SCH 10s	90° LR ELBOW	9	WP316/316L-W	PASSED	-								
KG256-1	3"	SCH 10s	TEE	5	WP316/316L-W	PASSED	-								
KG256-1	3" X 2"	SCH 10s	CON-REDUCER	5	WP316/316L-W	PASSED	-								
Specification	Chemical Composition (%)										Tensile Test *1			Hardness (HRB)	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb	YS (KSI / MPa)	TS (KSI / MPa)	E (%)			
Max	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-	-	-	90			
Min	-	-	-	-	-	16.00	10.00	2.00	-	205	515	28			
Heat No.															
KG497-1	0.020	0.47	1.37	0.031	0.002	16.74	10.05	2.02	< 0.01	388	621	53	82	PASSED	
KG346-1	0.025	0.42	1.21	0.027	0.001	16.75	10.03	2.02	< 0.01	355	586	47	79	PASSED	
KG256-1	0.019	0.46	1.18	0.027	0.002	16.80	10.03	2.03	< 0.01	357	594	50	79	PASSED	
KG256-1	0.019	0.46	1.18	0.027	0.002	16.80	10.03	2.03	< 0.01	357	594	50	79	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 WITH 6.2MM FORCE AREA & 1.6MM GAGE LENGTH. TEST FROM PIPE. FORCE-TIME RECORD AVAILABLE UPON REQUEST.

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 F  
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 MATERIALS HEAT ANALYSIS  
\*1 YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION  
MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

Handwritten signature and circular stamp: GACC MANAGER HASSANUDDIN, Head of Quality Assurance Department



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Certified to NSF/ANSI 61

Approval No.: ISO9001-0047465



NO. SIJIL PENDAFTARAN : SPAN/BPI/300-10/553/A/W-4

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: Seamless Austenitic Stainless Steel Fitting

Certificate No : PSA3-FT-1662  
Date : 26 May 2022

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification				Delivery Condition								
APC-2203-0146	L000013023	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							
LB001-1	3"	SCH 10s	CAP	1	WP316/316L-W	PASSED		-							
Specification	Chemical Composition (%)										Tensile Test *1			Hardness (HRB)	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Mo	Pb	YS (KSt / MPa)	TS (KSt / MPa)	E (%)			
Max	0.030	1.00	2.00	0.045	0.030	18.00	14.00	3.00	-	-	-	-	90		
Min															
Heat No.	-	-	-	-	-	16.00	10.00	2.00	-	-	205	515	28		
LB001-1	0.023	0.42	1.28	0.024	0.001	16.60	10.00	2.02	< 0.01		380	625	46	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: QAQC MANAGER HASSANUDDIN, Head of Quality Assurance Department