



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 E-mail: info@pantechssalloy.com

http://www.pantech-group.com



Cert. No.: ISO9001-0047465

PED CERTIFICATE NO.: 0038/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: PSA2-FT-4089
Date: 28 Aug 2020

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification				Delivery Condition						
APO-2002-0184	L000010267	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						
JOA001-01-102LR	3/4"	SCH 10s	90° LR ELBOW	499	WP304/304L-S	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	
Min	-	-	-	-	-	18.00	8.00	-	205	515	28	-	
Heat No.													
JOA001-01-102LR	0.027	0.34	1.09	0.033	0.001	18.15	8.10	< 0.10	252	599	56	77	PASSED

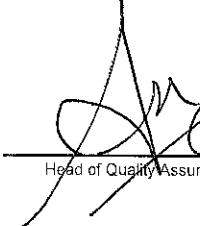

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER;

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

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



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Cert. No.: ISO9001-0047465

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-4090
Date: 28 Aug 2020

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition			
APO-2002-0184	L000010267	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
JSA417-04-112LR	1 1/2"	SCH 10s	90° LR ELBOW	641	WP304/304L-W	PASSED	-
JSA420-01-112CR	3" X 2"	SCH 10s	CON-REDUCER	200	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												
Heat No.	0.030	1.00	2.00	0.045	0.030	20.00	11.00	-	-	-	-	90	
JSA417-04-112LR	-	-	-	-	-	18.00	8.00	-	205	515	28	-	
JSA420-01-112CR	0.009	0.46	1.18	0.028	0.001	18.11	8.04	< 0.10	356	663	54	85	PASSED
	0.013	0.39	1.17	0.030	0.002	18.04	8.02	< 0.10	349	651	54	82	PASSED

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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
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Handwritten signature and circular stamp: PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. QAQC MANAGER Head of Quality Assurance



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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-4111
Date: 25 Sept 2020

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification			Delivery Condition
APO-2009-0107	L000010410	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
FEA142-02-112CR	6" X 4"	SCH 10s CON-REDUCER	97	WP304/304L-W	PASSED	-
FEA142-02-182CR	6" X 4"	SCH 10s CON-REDUCER	3	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	Heat No.											
FEA142-02-112CR	0.030	1.00	2.00	0.045	0.030	20.00	11.00	-	-	-	-	90		
FEA142-02-182CR	0.030	1.00	2.00	0.045	0.030	20.00	11.00	-	205	515	28	-		
FEA142-02-112CR	0.015	0.40	1.05	0.039	0.002	18.17	8.04	< 0.01	365	638	57	83	PASSED	
FEA142-02-182CR	0.015	0.40	1.05	0.039	0.002	18.17	8.04	< 0.01	365	638	57	83	PASSED	

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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
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[Signature]
Head of Quality Assurance




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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-4110
Date: 25 Sept 2020

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition			
APO-2009-0109	L000010409	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
BDA172-01-112ER	2" X 1 1/2"	SCH 10s	ECC-REDUCER	8	WP304/304L-W	PASSED	-
CBA105-01-112ER	2" X 1 1/2"	SCH 10s	ECC-REDUCER	2	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	-	
BDA172-01-112ER	0.017	0.32	1.39	0.024	0.007	18.13	8.05	< 0.01	-	359	644	61	80	PASSED
CBA105-01-112ER	0.029	0.35	1.79	0.034	0.002	18.10	8.10	< 0.01	-	370	638	53	80	PASSED

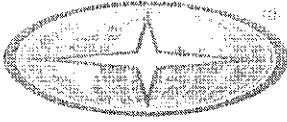
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Handwritten signature and stamp of the QA/QC Manager, Hassanuddin, Head of Quality Assurance Department.



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INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

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

Certificate No: PSA2-FT-4115
Date: 12 Oct 2020

PO No.	Invoice No.	Product Specification	Dimension & Inspection Specification	Delivery Condition		
APO-2006-0147	L000010437	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
JOA001-01-102LR	3/4"	SCH 10s 90° LR ELBOW	1000	WP304/304L-S	PASSED	-

Specification	Chemical Composition (%)									Tensile Test ^{*1}			Hardness (HRB)	Inter-granular corrosion test
	C	Si	Mn	P	S	Cr	Ni	Pb	YS	TS	E			
	(KSI / MPa)	(%)	(HRB)											
Max	0.030	1.00	2.00	0.045	0.030	20.00	11.00	-	-	-	90	PASSED		
Min	-	-	-	-	-	18.00	8.00	205	515	28	-			
Heat No.	0.027	0.34	1.09	0.033	0.001	18.15	8.10	< 0.01	252	599	56		77	

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NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS AOD: VOID

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
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[Signature]
Head of Quality Assurance Department