



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@partechssalloy.com

<http://www.pantech-group.com>

<http://www.paritech-group.com>

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1



ISO 9001

SIRIM
Cert. No.: PP087201

Cert. No.: KLR 6012814

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

Certificate No.: PSA2-23136
Date: 07/12/2018

[illegible]

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 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

EDDY CURRENT ACCORDING TO ASTM E26-98 (Reapproved 2003)^{e1} REQUIREMENTS (REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.8.4, PROCEDURE ACC. TO CLAUSE 22.3.9).

#2: NH: Not Hydrostatically Tested

Head of Quality Assurance Department





Date : 17/01/2019

PED CERTIFICATE NO.:
0038/PED/MUM/1110006/1





MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)
(A MEMBER OF PANTTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

KAWASAN PERINDUSTRIAN PASIR GUDANG, ZON I2B, 81700 PASIR GUDANG
JOHOR DARUL TAKZIM, MALAYSIA
Tel: +607-2518888 Fax: +607-2519999 Email: info@pantechsteel.com
http://www.pantech-group.com

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1



SIRIM
Cert. No.: PR087201



Cert. No.: KLR 6012814

ISO 9001
PED CERTIFICATE NO.:
0036/PED/MUM/1110006/1



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

Certificate No.: PSA2-23282
Date : 17/01/2019

PO No.		Invoice No.		Product Specification				Dimensional & Inspection Specification				Delivery Condition			
APO-1812-0016		L000008636		ASTM A312/A312M - 16a / ASME SA312/SA312M - 15				ASTM A999/A999M - 16/ ASME SA999/SA999M - 15 B 36.19M-85 & B36.10M-04				Solution Treated, Pickled-Passivated, Plain Ends Square Cut			
Heat No.	Size	Grade	Quantity (Length)	Non Destructive Test		Inter-Granular Corrosion Test	Hydrostatic Test		Dimensional /PMI/ Visual Inspection						
				Eddy Current	Flattening		Pressure / Hold	Result							
HSA297-02112	8 inch Sch 10S x 6M	TP 304/304L	2	PASSED	PASSED	PASSED	1100 PSI, 5s	PASSED	GOOD						



MILL TEST CERTIFICATE

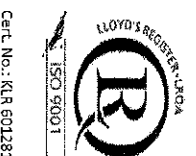
PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

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

KAVASAN PERINDUSTRIAN PASIR GUDANG, ZON 12B, 81700 PASIR GUDANG
PTD 204534, JALAN PLATINUM UTAMA
JOHOR DARUL TAKZIM, MALAYSIA
Tel: +607-2518888 Fax: +607-2519999 Email: info@pantechstainless.com
http://www.pantech-group.com

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

SPAN
Suruhanjaya Perkhidmatan Air Negeri
NO. SULI PENDAFTARAN: SPAN/KP/A/00883-2011



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

Certificate No : PSA2-23279
Date : 17/01/2019

PO No.		Invoice No.		Product Specification				Dimensional & Inspection Specification				Delivery Condition				
APO-1812-0015		L000008633		ASTM A312/A312M - 16a / ASME SA312/SA312M - 15				ASTM A999/A999M - 16/ ASME SA999/SA999M - 15 B 36.19M-85 & B36.10M-04				Solution Treated, Pickled-Passivated, Plain Ends Square Cut				
Heat No.	Size	Grade	Quantity (Length)	Non Destructive Test			Inter-Granular Corrosion Test	Hydrostatic Test		Dimensional /PMI/ Visual Inspection						
				Eddy Current	Flattening	Pressure / Hold		Result								
HYA035-01112	4 inch Sch 10S x 6M	TP 304/304L	30	PASSED	PASSED	PASSED	PASSED	1600 PSI, 5s	PASSED	GOOD						
YA048-01112	4 inch Sch 10S x 6M	TP 304/304L	70	PASSED	PASSED	PASSED	PASSED	1600 PSI, 5s	PASSED	GOOD						
HSA287-01112	12 inch Sch 10S x 6M	TP 304/304L	5	PASSED	PASSED	PASSED	PASSED	NH	-	GOOD						
Specification		Chemical Composition (%)										Tensile Test ¹		Hardness, HRB	Remarks	
		C	Si	Mn	P	S	Cr	Ni	Pb							
												YS	TS			E
												-(ksi / MPa)				(%)
Max		0.035	1.00	2.00	0.045	0.030	20.00	11.00	-	-	-	90				
Min		-	-	-	-	-	18.00	8.00	-	-	-	-				
Heat No.		-	-	-	-	-	-	-	-	-	-	-				
HYA035-01112		0.024	0.47	1.53	0.037	0.002	18.10	8.00	< 0.10	205	515	35	80			
YA048-01112		0.013	0.41	1.53	0.034	0.001	18.20	8.10	< 0.10	258	650	56	82			
HSA287-01112		0.024	0.51	1.12	0.030	0.001	18.05	8.18	< 0.10	269	655	54	84			
										330	617	56				

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 A262-10 PRACTICE E
HARDNESS ACCORDING TO NACE-AR0173-2015 / ISO 15156-2:2015 & NACE-AR0103-2015
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 E326-98 (reapproved 2003) REQUIREMENTS (REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.4, PROCEDURE ACC. TO CLAUSE 22.3.9)

Held of Quality Assurance Department





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,
JOHOR DARUL TAKZIM, MALAYSIA
Tel: +607-2518888 Fax: +607-2519999 E-mail: info@pantechssnly.com
http://www.pantech-group.com

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

SPAN
SPECIALIZED PERFORMANCE AIR NEGATIVE
NO. SILL PENDAFARAN: SPAN/KP/A/00883-2011



SIRIM
Cert. No.: PPO67201

Cert. No.: KLR 6012814
PED CERTIFICATE NO.:
0038/PED/MUM/1110006/L



Customer : Umimech Engineering (M) SDN BHD
Product : Welded Austenitic Stainless Steel Pipe

Certificate No: PSA3-11511
Date : 17/01/2019

PO No.		Invoice No.		Product Specification				Dimensional & Inspection Specification				Delivery Condition	
AP0-1812-0015		L000008637		ASTM A312/A312M - 16a / ASME SA312/SA312M - 15				ASTM A999/A999M - 16/ ASME SA999/SA999M - 15 B 36.19M-85 & B36.10M-04				Solution Treated, Pickled-Passivated, Plain Ends Square Cut	
Heat No.	Size	Grade	Quantity (Length)	Non Destructive Test			Inter-Granular Corrosion Test	Hydrostatic Test		Dimensional / PMI/ Visual Inspection			
				Eddy Current	Flattening	PASSED		Pressure / Hold	Result				
HSA345-01113	1 1/2 inch Sch 10S x 6M	TP 316/316L	50	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD				



MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)
(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

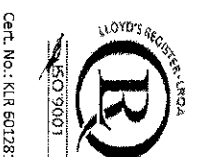
PTD 20434, JALAN PLATINUM UTAMA,
KAWASAN PERINDUSTRIAN PASIR GUDANG, ZON 12B, 81700 PASIR GUDANG
JOHOR DARUL TA'ZIM, MALAYSIA
Tel: +607-2518888 Fax: +607-2519999 Email: info@pantechssb.com
http://www.pantech-group.com

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

SPAN
SUKSESANJAYA PANTENING & PAINTING AIR MERSA
NO. SUK. PENDAFTARAN: SPAN/KP/A/00083-2011



SIRIM
Cert. No.: PM087201



Cert. No.: KLR 6012814
PED CERTIFICATE NO.:
0038/PED/MUM/1110006/1

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

Certificate No: PSA2-23153
Date : 12/12/2018

PO No.		Invoice No.	Product Specification				Dimensional & Inspection Specification				Delivery Condition	
APO-1812-0015		L000008526	ASTM A312/A312M - 16a / ASME SA312/SA312M - 15				ASTM A999/A999M - 16/ ASME SA999/SA999M - 15 B 36.19M-85 & B36.10M-04				Solution Treated, Pickled-Passivated, Plain Ends Square Cut	
Heat No.	Size	Grade	Quantity (Length)	Non Destructive Test			Inter-Granular Corrosion Test	Hydrostatic Test		Dimensional /PMI/ Visual Inspection		
				Eddy Current	Flattening			Pressure / Hold	Result			
HEA253-01112	1 1/2 inch Sch 10S x 6M	TP 304/304L	61	PASSED		PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD		
HEA256-01112	1 1/2 inch Sch 10S x 6M	TP 304/304L	2	PASSED		PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD		
HSAS29-02112	1 1/2 inch Sch 10S x 6M	TP 304/304L	26	PASSED		PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD		
HSAS30-03112	1 1/2 inch Sch 10S x 6M	TP 304/304L	111	PASSED		PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD		
HSAS33-03112	10 inch Sch 10S x 6M	TP 304/304L	8	PASSED		PASSED	PASSED	NH	-	GOOD		
Specification		Chemical Composition (%)									Remarks	
		C	Si	Mn	P	S	Cr	Ni	Pb			
Max		0.035	1.00	2.00	0.045	0.030	20.00	11.00	-		90	
Min		-	-	-	-	-	18.00	8.00	-			
Heat No.												
HEA253-01112	0.020	0.35	0.87	0.047	0.001	18.35	8.08	< 0.10	296	643	48	83
HEA256-01112	0.017	0.39	0.69	0.040	0.003	18.23	8.11	< 0.10	300	641	50	83
HSAS29-02112	0.016	0.38	0.95	0.031	0.002	18.18	8.06	< 0.10	257	689	46	83
HSAS30-03112	0.016	0.10	1.05	0.030	0.001	18.15	8.13	< 0.10	258	680	48	82
HSAS33-03112	0.024	0.38	1.01	0.032	0.001	18.13	8.08	< 0.10	257	696	50	84



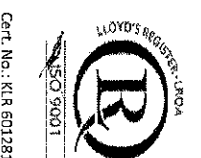
MILL TEST CERTIFICATE

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JHDOR DARUL TAKZIM, MALAYSIA
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http://www.pantech-group.com

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

SPAN
Suruhanjaya Perkhidmatan Air Negara
NO. SILL PENDAFATARAN: SPAN/KP/A/00883-2011



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

Certificate No: PSA2-23154
Date : 12/12/2018

PO No.	Invoice No.	Product Specification	Dimensional & Inspection Specification				Delivery Condition			
AP0-1812-0015	L000008526	ASTM A312/A312M - 16a / ASME SA312/SA312M - 15	ASTM A999/A999M - 16/ ASME SA999/SA999M - 15 B 36.19M-85 & B36.10M-04				Solution Treated, Pickled-Passivated, Plain Ends Square Cut			
Heat No.	Size	Grade	Quantity (Length)	Non Destructive Test		Inter-Granular Corrosion Test	Hydrostatic Test		Dimensional /PMI/ Visual Inspection	
HYA011-01112	10 inch Sch 10S x 6M	TP 304/304L	2	Eddy Current PASSED	Flattening PASSED	PASSED	Pressure / Hold NH	Result -	GOOD	
Specification										
	C	Si	Mn	P	S	Cr	Ni	Pb	Tensile Test ¹ YS TS E (ksi / MPa) (%) Hardness, HRB	
Max	0.035	1.00	2.00	0.045	0.030	20.00	11.00	-		
Min	-	-	-	-	-	18.00	8.00	-		
Heat No.	-	-	-	-	-	18.00	8.10	-		
HYA011-01112	0.019	0.56	1.57	0.033	0.001	18.00	8.10	-		
									</	

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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 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

*2: NH: Not Hydrostatically Tested

EDDY CURRENT ACCORDING TO ASTM E264-98 (Reapproved 2003) ¹ REQUIREMENTS REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.4, PROCEDURE ACC. TO CLAUSE 22.3.9)

Head of Quality Assurance Department

