



MILL TEST CERTIFICATE

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

KAWASAN PERINDUSTRIAN PASIR GUDANG, ZON 12B, 81700 PASIR GUDANG
PTD 204334, JALAN PLATINUM UTAMA,
JOHOR DARUL TAKZIM, MALAYSIA
Tel: +607-2518888 Fax: +607-2519999 E-mail: info@pantechsteel.com
http://www.pantech-group.com



Cert. No.: ISO9001-0047465
PED CERTIFICATE NO.:
0038/PED/MUM/1110006/1



SIRM
Cert. No.: PP087201



Suruhanjaya Perkhidmatan Awam
NO. SULU PENDAFTARAN: SPAN/PP/A/00883-2011

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

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

Certificate No : PSA2-24942
Date : 05/08/2020

PO No.	Invoice No.	Product Specification	Dimensional & Inspection Specification		Delivery Condition																																																																																																																										
APO-2007-0064	L000010127	ASTM A312/A312M - 19 / ASME SA312/SA312M - 19	ASTM A999/A999M - 18/ ASME SA999/SA999M - 19 B 36.19M-04 & B36.10M-04		Solution Treated, Pickled-Passivated, Plain Ends Square Cut																																																																																																																										
Heat No.	Size	Grade	Quantity (Length)	Non Destructive Test		Dimensional / PMI/ Visual Inspection																																																																																																																									
JGA084-01112	1 1/2 inch Sch 40S x 6M	TP 304/304L	50	Eddy Current	Flattening	Hydrostatic Test Pressure / Hold																																																																																																																									
JSA428-01112	1 1/2 inch Sch 40S x 6M	TP 304/304L	11	PASSED	PASSED	2500 PSI, 5s																																																																																																																									
ISA411-01112	4 inch Sch 40S x 6M	TP 304/304L	13	PASSED	PASSED	2500 PSI, 5s																																																																																																																									
JGA076-01112	4 inch Sch 40S x 6M	TP 304/304L	4	PASSED	PASSED	2500 PSI, 5s																																																																																																																									
JSA419-02112	4 inch Sch 40S x 6M	TP 304/304L	1	PASSED	PASSED	2500 PSI, 5s																																																																																																																									
<table border="1"> <thead> <tr> <th rowspan="2">Specification</th> <th colspan="6">Chemical Composition (%)</th> <th rowspan="2">Hardness, HRB</th> <th rowspan="2">Remarks</th> </tr> <tr> <th>C</th> <th>Si</th> <th>Mn</th> <th>P</th> <th>S</th> <th>Cr</th> <th>Ni</th> <th>Pb</th> </tr> </thead> <tbody> <tr> <td>Max</td> <td>0.035</td> <td>1.00</td> <td>2.00</td> <td>0.045</td> <td>0.030</td> <td>20.00</td> <td>11.00</td> <td>-</td> <td>-</td> <td>-</td> <td>90</td> <td></td> </tr> <tr> <td>Min</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>18.00</td> <td>8.00</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td></td> </tr> <tr> <td>Heat No.</td> <td>0.017</td> <td>0.45</td> <td>1.55</td> <td>0.030</td> <td>0.001</td> <td>18.10</td> <td>8.00</td> <td>< 0.10</td> <td>205</td> <td>515</td> <td>35</td> <td></td> </tr> <tr> <td>JGA084-01112</td> <td>0.019</td> <td>0.52</td> <td>1.57</td> <td>0.029</td> <td>0.002</td> <td>18.10</td> <td>8.00</td> <td>< 0.10</td> <td>372</td> <td>657</td> <td>50</td> <td></td> </tr> <tr> <td>JSA428-01112</td> <td>0.020</td> <td>0.46</td> <td>1.16</td> <td>0.028</td> <td>0.001</td> <td>18.20</td> <td>8.02</td> <td>< 0.10</td> <td>387</td> <td>706</td> <td>52</td> <td></td> </tr> <tr> <td>ISA411-01112</td> <td>0.020</td> <td>0.48</td> <td>1.16</td> <td>0.028</td> <td>0.001</td> <td>18.20</td> <td>8.02</td> <td>< 0.10</td> <td>352</td> <td>662</td> <td>54</td> <td></td> </tr> <tr> <td>JGA076-01112</td> <td>0.014</td> <td>0.46</td> <td>1.12</td> <td>0.028</td> <td>0.001</td> <td>18.04</td> <td>8.04</td> <td>< 0.10</td> <td>347</td> <td>665</td> <td>58</td> <td></td> </tr> <tr> <td>JSA419-02112</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>337</td> <td>651</td> <td>51</td> <td></td> </tr> </tbody> </table>							Specification	Chemical Composition (%)						Hardness, HRB	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.	0.017	0.45	1.55	0.030	0.001	18.10	8.00	< 0.10	205	515	35		JGA084-01112	0.019	0.52	1.57	0.029	0.002	18.10	8.00	< 0.10	372	657	50		JSA428-01112	0.020	0.46	1.16	0.028	0.001	18.20	8.02	< 0.10	387	706	52		ISA411-01112	0.020	0.48	1.16	0.028	0.001	18.20	8.02	< 0.10	352	662	54		JGA076-01112	0.014	0.46	1.12	0.028	0.001	18.04	8.04	< 0.10	347	665	58		JSA419-02112									337	651	51	
Specification	Chemical Composition (%)							Hardness, HRB	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.	0.017	0.45	1.55	0.030	0.001	18.10	8.00	< 0.10	205	515	35																																																																																																																				
JGA084-01112	0.019	0.52	1.57	0.029	0.002	18.10	8.00	< 0.10	372	657	50																																																																																																																				
JSA428-01112	0.020	0.46	1.16	0.028	0.001	18.20	8.02	< 0.10	387	706	52																																																																																																																				
ISA411-01112	0.020	0.48	1.16	0.028	0.001	18.20	8.02	< 0.10	352	662	54																																																																																																																				
JGA076-01112	0.014	0.46	1.12	0.028	0.001	18.04	8.04	< 0.10	347	665	58																																																																																																																				
JSA419-02112									337	651	51																																																																																																																				

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 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

*2: NI: Not Hydrostatically Tested

EDDY CURRENT ACCORDING TO ASTM E245-98 (Reapproved 2003) *1 REQUIREMENTS (REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.8.4, PROCEDURE ACC. TO CLAUSE 22.3.9)



Head of Quality Assurance Department



MILL TEST CERTIFICATE

PANTECH STEEL & ALLOY INDUSTRIES SDN. BHD. (733428 W)
(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@pantechsteel.com
http://www.pantech-group.com



Cert. No.: ISO9001-0047465
PED CERTIFICATE NO.:
0058/PED/MUM/1110006/1



SIRM
Cert. No.: PPO87201



SPAN
NC. SILIL PENDAFTARAN: SPAN/KP/A/00883-2011

INSPECTION DOCUMENT: EN 10204:2004 Type 3.1

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

Certificate No : PSA2-25152
Date : 21/09/2020

PO No.	Invoice No.	Product Specification		Dimensional & Inspection Specification				Delivery Condition					
		ASTM A312/A312M - 19 / ASME SA312/SA312M - 19	ASTM A999/A999M - 18 / ASME SA999/SA999M - 19	B 36.19M-04 & B36.10M-04	Solution Treated, Pickled-Passivated, Plain Ends Square Cut	Hydrostatic Test Pressure / Hold	Inter-Granular Corrosion Test	Dimensional / PMI/ Visual Inspection					
Heat No.	Size	Grade	Quantity (Length)	Eddy Current	Flattening	Non Destructive Test	Pressure / Hold <td>Result <td>Dimensional / PMI/ Visual Inspection</td> </td>	Result <td>Dimensional / PMI/ Visual Inspection</td>	Dimensional / PMI/ Visual Inspection				
JGA095-01112	1 inch Sch 40S x 6M	TP 304/304L	2	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD				
JGA126-01112	1 inch Sch 40S x 6M	TP 304/304L	91	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD				
JGA127-01112	1 inch Sch 40S x 6M	TP 304/304L	89	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD				
Chemical Composition (%)													
Specification Max Min Heat No.	C	Si	Mn	P	S	Cr	Ni	Pb	Tensile Test ^{*1}				
	0.035	1.00	2.00	0.045	0.030	20.00	11.00	-	YS - (KSI) / (MPa)	TS	E (%)	Hardness, HRB	Remarks
JGA095-01112	0.019	0.39	1.17	0.027	0.002	18.00	8.00	-	205	515	35	90	
JGA126-01112	0.019	0.39	1.17	0.027	0.002	18.15	8.02	< 0.01	392	702	50	88	
JGA127-01112	0.019	0.39	1.17	0.027	0.002	18.15	8.02	< 0.01	396	681	51	87	
						18.15	8.02	< 0.01	385	688	51	85	

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-MR0175-2015 / ISO 15156-3015 & NACE-MR0103-2015

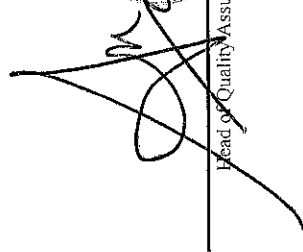
HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

*2: NEL: Not Hydrostatically Tested

EDDY CURRENT ACCORDING TO ASTM E26-98 (Reapproval 2003) *1 REQUIREMENTS (REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.8.4, PROCEDURE ACC. TO CLAUSE 21.3.9)


 OACC
 MANAGER
 PASSPORT
 HEAD 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,
 KAWASAN PERINDUSTRIAN PASTIR GUDANG, ZON 12B, 81700 PASTIR GUDANG
 JOHOR DARUL TAKZIM, MALAYSIA
 Tel: +607-2518888 Fax: +607-2519999 E-mail: info@pantechgroup.com
<http://www.pantech-group.com>



Cert. No.: ISO9001-0047465
 PED CERTIFICATE NO.:
 0038/PED/NUM/1110006/1



SIRIM
 Cert. No.: PP087201



Kumpulan Perkhidmatan Air Negara
 NO. SULL PENDAFTARAN: SPAN/KP/A/00883-2011

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

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

Certificate No : PSA2-25058
 Date : 26/08/2020

PO No.	Invoice No.	Product Specification	Dimensional & Inspection Specification	Delivery Condition							
APO-2007-0154	L000010234	ASTM A312/A312M - 19 / ASME SA312/SA312M - 19	ASTM A999/A999M - 18/ASME SA999/SA999M - 19 B 36.19M-04 & B36.10M-04	Solution Treated, Pickled-Passivated, Plain Ends Square Cut							
Heat No.	Size	Grade	Quantity (Length)	Non Destructive Test							
JGA125-01112	3 inch Sch 40S x 6M	TP 304/304L	38	Eddy Current PASSED Flattening PASSED							
Chemical Composition (%)											
Specification	C	P	S	Cr	Ni	Pb	YS	TS	E	Hardness, HRB	Remarks
Max	0.035	0.045	0.030	20.00	11.00	-	-	-	-	-	-
Min	-	-	-	18.00	8.00	-	205	515	35	90	-
Heat No.	0.022	0.027	0.002	18.30	8.02	< 0.10	346	652	52	81	-
Inter-Granular Corrosion Test					Flattening	Inter-Granular Corrosion Test	Hydrostatic Test	Pressure / Hold	Result	Dimensional / PMI/ Visual Inspection	
PASSED					PASSED	PASSED	2500 PSI, 5s	PASSED	PASSED	GOOD	

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 TO CONFORM 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 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 MATERIAL'S HEAT ANALYSIS
 *1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION
 EDDY CURRENT ACCORDING TO ASTM F426-98 (Reapproved 2003) *2: NI: Not Hydrostatically Tested

REQUIREMENTS (REFERENCE TO ASTM A999/A999M-18 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.8.4. PROCEDURE ACC. TO CLAUSE 22.3.9)

Signature of QACC Manager
 QACC MANAGER
 PANTECH INDUSTRIES SDN. BHD.
 KUALA LUMPUR, MALAYSIA

Head 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,
KAWASAN PERINDUSTRIAN PASIR GUDANG, ZON 12B, 81700 PASIR GUDANG
JOHOR DARUL TAKZIM, MALAYSIA
Tel: +607-2519888 Fax: +607-2519999 E-mail: info@pantechsteel.com
http://www.pantech-group.com



Cert. No.: ISO9001-0047465
PED CERTIFICATE NO.:
0058/PED/MUM/1110006/1



SIRM
Cert. No.: PP087201



Kementerian Perdagangan, Air, Negeri
NO. SUKSES PENDAFTARAN: SPAN/KP/A/00883-2011

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Certificate No : PSA2-25056
Date : 26/06/2020

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

PO No.	Invoice No.	Product Specification	Dimensional & Inspection Specification										Delivery Condition	
			ASTM A999/A999M - 18/ ASME SA999/SA999M - 19 B 36.19M-04 & 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	Remarks			
				Eddy Current	Flattening	Corrosion Test		Pressure / Hold	Result		Hardness, HRB			
IGA019-01112	1/2 inch Sch 40S x 6M	TP 304/304L	4	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD				
IGA020-01112	1/2 inch Sch 40S x 6M	TP 304/304L	4	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD				
IGA022-01112	1/2 inch Sch 40S x 6M	TP 304/304L	34	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD				
JGA085-01182	1/2 inch Sch 40S x 6M	TP 304/304L	13	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD				
JGA087-01112	1/2 inch Sch 40S x 6M	TP 304/304L	41	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD				
Chemical Composition (%)														
Specification	C	Si	Mn	P	S	Cr	Ni	Pb	Tensile Test ¹		Hardness, HRB			
Max	0.035	1.00	2.00	0.045	0.030	20.00	11.00	-	YS (ksi / MPa)	TS	E (%)			
Mtn	-	-	-	-	-	18.00	8.00	-	-	-	-	90		
Heat No.	-	-	-	-	-	-	-	-	205	515	35	-		
IGA019-01112	0.024	0.46	1.44	0.026	0.003	18.29	8.02	< 0.10	384	646	60	86		
IGA020-01112	0.025	0.45	1.40	0.026	0.003	18.27	8.03	< 0.10	351	621	53	82		
IGA022-01112	0.021	0.37	1.41	0.029	0.003	18.45	8.02	< 0.10	390	628	59	83		
JGA085-01182	0.023	0.45	1.36	0.030	0.001	18.25	8.03	< 0.10	414	653	58	84		
JGA087-01112	0.027	0.45	1.40	0.030	0.001	18.22	8.02	< 0.10	400	653	55	83		

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 REQUIREMENTS: 1. 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 1.2" (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

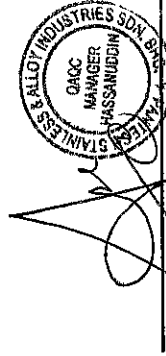
HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIALS HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

EDDY CURRENT ACCORDING TO ASTM E126-98 (Reapproved 2003)² REQUIREMENTS (REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.8.4, PROCEDURE ACC. TO CLAUSE 22.3.9)

*2: NI: Not Hydrostatically Tested



Head of Quality Assurance Department



MILL TEST CERTIFICATE

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

KAWASAN PERINDUSTRIAN PASIR GUDANG, ZON 12B, 81700 PASIR GUDANG
JOHOR DARUL TAKZIM, MALAYSIA
Tel: +607-2518888 Fax: +607-2519999 E-mail: info@pantechsteelloy.com
http://www.pantech-group.com

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1



Cert. No.: ISO9001-0017465
PED CERTIFICATE NO.:
0038/PED/MUM/1110006/1



SIRIM
Cert. No.: PP087201



KAWASAN PERINDUSTRIAN PASIR GUDANG, ZON 12B, 81700 PASIR GUDANG
NO. SUKUL PENDAFTARAN: SPAN/KP/A/00883-2011

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

Certificate No : PSA2-25219
Date : 24/09/2020

PO No.	Invoice No.	Product Specification	Dimensional & Inspection Specification		Delivery Condition							
			ASTM A312/A312M - 19 / ASME SA312/SA312M - 19	ASTM A999/A999M - 18/ ASME SA999/SA999M - 19 B 36.19M-04 & B36.10M-04								
APO-2009-0020	L000010392				Solution Treated, Pickled-Passivated, Plain Ends Square Cut							
Heat No.	Size	Grade	Quantity (Length)	Non Destructive Test	Hydrostatic Test	Dimensional / PMI/ Visual Inspection						
JSA426-02112	1 1/2 inch Sch 40S x 6M	TP 304/304L	61	Eddy Current PASSED Flattening PASSED	Pressure / Hold 2500 PSI, 5s PASSED	GOOD						
Chemical Composition (%)												
Specification	C	Si	Mn	P	S	Cr	Ni	Pb	Tensile Test ¹		Hardness, HRB	Remarks
	0.035	1.00	2.00	0.045	0.030	20.00	11.00	-	YS -	TS -		
Max	-	-	-	-	-	18.00	8.00	-	205	515	35	90
Min	-	-	-	-	-	18.04	8.00	< 0.01	392	687	49	83
Heat No.												
JSA426-02112												

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: CONFORM 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 MATERIALS HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

*2: NRE: Not Hydrostatically Tested

REQUIREMENTS (REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.3.4, PROCEDURE ACC. TO CLAUSE 22.3.9)

HEAD OF QUALITY ASSURANCE DEPARTMENT

Signature of Head of Quality Assurance Department
QAQC MANAGER
ASSARUDIN



MILL TEST CERTIFICATE

PANTECH STAIN S & 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: +607-2511888 Fax: +607-2519999 E-mail: info@pantechsteel.com
http://www.pantech-group.com

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1



Cert. No.: ISO9001-0047465

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



SIRM
Cert. No.: PP087201



Syarafina Engineering Air Negara
NO. 5111 PANDAFARAN: SPAN/KP/A/00683-2011

Certificate No : PSA2-25218
Date : 24/09/2020

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

PO No.	Invoice No.	Product Specification		Dimensional & Inspection Specification										Delivery Condition	
		ASTM A312/A312M - 19 / ASME SA312/SA312M - 19	ASTM A999/A999M - 18 / ASME SA999/SA999M - 19	Non Destructive Test		Inter-Granular Corrosion Test		Hydrostatic Test		Dimensional / Visual Inspection		Solution Treated, Pickled-Passivated, Plain Ends Square Cut			
Heat No.	Size	Grade	Quantity (Length)	Eddy Current	Flattening	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	Pressure / Hold	Result	Dimensional / Visual Inspection	
HYA037-02112	1 1/4 inch Sch 40S x 6M	TP 304/304L	13	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD	
IYA097-01112	1 1/4 inch Sch 40S x 6M	TP 304/304L	2	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD	
JGA061-01112	1 1/4 inch Sch 40S x 6M	TP 304/304L	2	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD	
JGA062-01112	1 1/4 inch Sch 40S x 6M	TP 304/304L	44	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD	
JG006-10	1 1/2 inch Sch 40S x 6M	TP 304/304L	61	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD	
Specification		Chemical Composition (%)													
Max	C	Si	Mn	P	S	Cr	Ni	Pb	Tensile Test ¹		Hardness, HRB		Remarks		
Min	0.035	1.00	2.00	0.045	0.030	20.00	11.00	-	YS	TS	E	90			
Heat No.	-	-	-	-	-	18.00	8.00	-	205	515	35				
HYA037-02112	0.017	0.38	1.56	0.027	0.002	18.20	8.00	< 0.01	409	642	48				
IYA097-01112	0.018	0.38	1.58	0.031	0.005	18.10	8.00	< 0.01	367	649	53				
JGA061-01112	0.020	0.41	1.07	0.031	0.003	18.37	8.05	< 0.01	417	689	55				
JGA062-01112	0.020	0.41	1.07	0.031	0.003	18.37	8.05	< 0.01	415	680	52				
JG006-10	0.019	0.39	1.19	0.031	0.001	18.25	8.01	< 0.01	352	671	47				

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 19.28MM FOR 1" ABOVE, 1" INCLUDE AND BELOW DIRECT TEST FROM PIPE. LONGITUDINAL DIRECTION, GAUGE LENGTH 1" (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 MATERIALS (HEAT ANALYSIS)

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

††: NH: Not Hydrostatically Tested

‡: REQUIREMENTS (REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.8.4. PROCEDURE ACC. TO CLAUSE 22.3.9)

Signature of Head of Quality Assurance
Head of Quality Assurance