

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,
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 http://www.pantech-group.com



Approval No.:
 ISO9001-0047465

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



INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

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

Certificate No : PSA2-28081
 Date : 15/06/2022

PO No.	Invoice No.	Product Specification		Dimensional & Inspection Specification						Delivery Condition			
		ASTM A312/A312M - 21 / ASME SA312/SA312M - 21	ASTM A999/A999M - 18/ ASME SA999/SA999M - 21	B 36.19M-2018 & B36.10M-2018 / ASME SECTION II PART A-2021	ASTM A999/A999M - 18/ ASME SA999/SA999M - 21	Solution Treated, Plain Ends Square Cut	Solution Treated, 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	Corrosion Test		Pressure / Hold	Result				
LG056-10	4 inch Sch 40S x 6M	TP 304/304L	4	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD			
LG111-10	4 inch Sch 40S x 6M	TP 304/304L	11	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD			
LG113-10	4 inch Sch 40S x 6M	TP 304/304L	10	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD			
LG114-10	4 inch Sch 40S x 6M	TP 304/304L	10	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD			
LG149-10	4 inch Sch 40S x 6M	TP 304/304L	15	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	Remarks	
									YS (ksi / MPa)	TS			E (%)
Max	0.035	1.00	2.00	0.045	0.030	20.00	11.00	-	-	-	-	-	-
Min	-	-	-	-	-	18.00	8.00	-	-	205	515	35	90
Heat No.													
LG056-10	0.027	0.33	1.18	0.031	0.001	18.18	8.02	< 0.01		348	663	55	82
LG111-10	0.028	0.36	1.13	0.029	0.002	18.11	8.03	< 0.01		371	663	53	77
LG113-10	0.028	0.33	1.10	0.031	0.001	18.15	8.01	< 0.01		350	669	53	78
LG114-10	0.026	0.43	1.17	0.031	0.001	18.11	8.02	< 0.01		359	665	48	80
LG149-10	0.023	0.39	1.17	0.030	0.002	18.07	8.02	< 0.01		342	642	54	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 REQUIREMENT: CONFORMS TO ASTM A370 - 12a STANDARD, SPECIMEN GAUGE WIDTH 19.2MM FOR T 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 15136-2015 & NACE-MR0105-2015
 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

REQUIREMENTS (REFERENCE TO ASTM E245-98 (Reapproved 2003)[†] REQUIREMENTS (REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.8.4. PROCEDURE ACC. TO CLAUSE 22.3.9)

(Signature)
 Head of Quality Assurance





MILL TEST CERTIFICATE

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Cert. No.: PC004871



Certified to NSF/ANSI 61



Approval No.: ISO9001-0047465



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 Pipe

Certificate No : PSA2-28080
Date : 15/06/2022

PO No.	Invoice No.	Product Specification		Dimensional & Inspection Specification										Delivery Condition	
		ASTM A312/A312M - 21 / ASME SA312/SA312M - 21	ASTM A999/A999M - 18 / ASME SA999/SA999M - 21	B 36.19M-2018 & B36.10M-2018 / ASME SECTION II PART A-2021	Non Destructive Test					Inter-Granular Corrosion Test		Hydrostatic Test		Dimensional /PMI/ Visual Inspection	
Heat No.	Size	Grade	Quantity (Length)	Eddy Current	Flattening	Tensile Test ¹		YS (ksi / MPa)	TS	E (%)	Hardness, HRB	Remarks	Pressure / Hold	Result	
						Cr	S								P
LG081-10	1 1/2 inch Sch 40S x 6M	TP 304/304L	3	PASSED	PASSED	18.00	0.030	11.00	8.00	205	515	35	2500 PSI, 5s	PASSED	GOOD
LG137-10	1 1/2 inch Sch 40S x 6M	TP 304/304L	61	PASSED	PASSED	18.16	0.002	8.03	< 0.01	368	688	49	2500 PSI, 5s	PASSED	GOOD
LG148-10	1 1/2 inch Sch 40S x 6M	TP 304/304L	6	PASSED	PASSED	18.12	0.002	8.03	< 0.01	400	707	53	2500 PSI, 5s	PASSED	GOOD
JG090-10	2 1/2 inch Sch 40S x 6M	TP 304/304L	38	PASSED	PASSED	18.16	0.002	8.03	< 0.01	386	696	51	2500 PSI, 5s	PASSED	GOOD
LG016-10	2 1/2 inch Sch 40S x 6M	TP 304/304L	12	PASSED	PASSED	18.01	0.001	8.04	< 0.01	344	664	59	2500 PSI, 5s	PASSED	GOOD
Chemical Composition (%)															
Specification		C	Si	Mn	P	S	Cr	Ni	Pb						
Max		0.035	1.00	2.00	0.045	0.030	20.00	11.00	-						
Min		-	-	-	-	-	18.00	8.00	-						
Heat No.		0.023	0.39	1.11	0.031	0.002	18.16	8.03	< 0.01	205	515	35	2500 PSI, 5s	PASSED	GOOD
LG081-10		0.023	0.33	1.14	0.033	0.002	18.12	8.03	< 0.01	368	688	49	2500 PSI, 5s	PASSED	GOOD
LG137-10		0.023	0.39	1.11	0.031	0.002	18.16	8.03	< 0.01	400	707	53	2500 PSI, 5s	PASSED	GOOD
JG090-10		0.023	0.45	1.16	0.030	0.001	18.01	8.04	< 0.01	344	664	59	2500 PSI, 5s	PASSED	GOOD
LG016-10		0.020	0.36	1.15	0.026	0.002	18.15	8.07	< 0.01	342	630	53	2500 PSI, 5s	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 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 15136-2015 & NACE-MR0103-2015

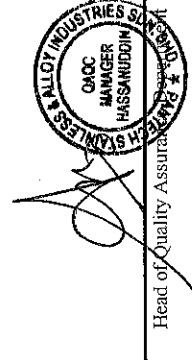
HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

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

*2: NH: Non-Hydrostatically Tested

EDDY CURRENT ACCORDING TO ASTM E426-98 (Reapproved 2003) *1 REQUIREMENTS (REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.9)



Head of Quality Assurance



MILL TEST CERTIFICATE

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



Cert. No.: PCD04871



Certified to NSF/ANSI 61



Approval No.: IS09001-0047465

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



Sarabandya Perkkiamatoo Air Negara
NO. SIIL PENDAFTARAN: SPAN/89/300-10/553/A/W-1

INSPECTION DOCUMENT: EN 10204: 2004-Type 3.1

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

Certificate No : PSA2-28078
Date : 15/06/2022

PO No.	Invoice No.	Product Specification		Dimensional & Inspection Specification				Delivery Condition			
		ASTM A312/A312M - 21 / ASME SA312/SA312M - 21	ASTM A999/A999M - 18 / ASME SA999/SA999M - 21	B 36.19M- 2018 & B36.10M-2018 / ASME SECTION II PART A-2021	Solution Treated, Pickled-Passivated, Plain Ends Square Cut	Hydrostatic Test	Result	Dimensional /PMI/ Visual Inspection			
Heat No.	Size	Grade	Quantity (Length)	Non Destructive Test			Inter-Granular Corrosion Test	Pressure / Hold	Result		
				Eddy Current	Flattening	PASSED					
LG133-10	1 1/2 inch Sch 40S x 6M	TP 304/304L	32	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD	
LG137-10	1 1/2 inch Sch 40S x 6M	TP 304/304L	11	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD	
LG148-10	1 1/2 inch Sch 40S x 6M	TP 304/304L	67	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD	
LG016-10	2 1/2 inch Sch 40S x 6M	TP 304/304L	12	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD	
LG088-10	2 1/2 inch Sch 40S x 6M	TP 304/304L	38	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	GOOD	
Specification		Chemical Composition (%)									
Max	C	Mn	P	S	Cr	Ni	Pb	Tensile Test ¹		Hardness, HRB	Remarks
Mfn	0.035	2.00	0.045	0.030	20.00	11.00	-	YS	TS		
Heat No.	-	-	-	-	18.00	8.00	-	205	515	35	90
LG133-10	0.025	1.16	0.033	0.002	18.14	8.02	< 0.01	372	701	52	77
LG137-10	0.023	1.14	0.033	0.002	18.12	8.03	< 0.01	400	707	53	78
LG148-10	0.023	1.11	0.031	0.002	18.16	8.03	< 0.01	386	696	51	81
LG016-10	0.020	1.15	0.026	0.002	18.15	8.07	< 0.01	342	630	53	77
LG088-10	0.027	1.12	0.035	0.002	18.05	8.04	< 0.01	325	613	53	78

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

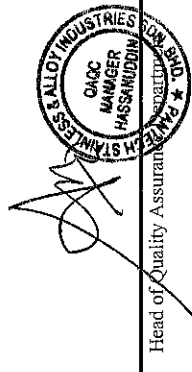
HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

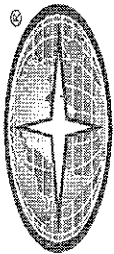
*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

*2: NH: Not Hydrostatically Tested

WELDED BY ELECTRIC FUSION WELDING WITH PROCESS WITH NO FILLER METAL



Head of Quality Assurance



MILL TEST CERTIFICATE

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



Cert. No.: PC004871



Certified to NSF/ANSI 61



Approval No.: ISO9001-0047465



MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3.
 PED CERTIFICATE NO.: 0343/PED/MUM/1110606/1

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

Certificate No : PSA2-28077
 Date : 15/06/2022

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

PO No.	Invoice No.	Product Specification		Dimensional & Inspection Specification										Delivery Condition	
		ASTM A312/A312M - 21 / ASME SA312/SA312M - 21	ASTM A999/A999M - 18/ ASME SA999/SA999M - 21 B 36.19M- 2018 & B36.10M-2018 / ASME SECTION II PART A-2021	Quantity (Length)	Non Destructive Test			Inter-Granular Corrosion Test		Hydrostatic Test		Dimensional /PMI/ Visual Inspection		Solution Treated, Pickled-Passivated, Plain Ends Square Cut	
Heat No.	Size	Grade	C	Si	Mn	P	S	Cr	Ni	Pb	Tensile Test ¹		E	Hardness, HRB	Remarks
											YS	TS			
KG458-10	1 1/2 inch Sch 40S x 6M	TP 304/304L	0.035	0.35	1.12	0.032	0.002	18.08	8.05	< 0.01	205	515	35	81	
LG013-10	1 1/2 inch Sch 40S x 6M	TP 304/304L	0.025	0.36	1.20	0.032	0.002	18.16	8.05	< 0.01	387	678	52	84	
LG057-10	1 1/2 inch Sch 40S x 6M	TP 304/304L	0.022	0.41	1.14	0.031	0.002	18.13	8.01	< 0.01	385	677	53	81	
LG070-10	1 1/2 inch Sch 40S x 6M	TP 304/304L	0.022	0.35	1.15	0.029	0.002	18.12	8.01	< 0.01	359	670	52	84	
LG083-10	1 1/2 inch Sch 40S x 6M	TP 304/304L	0.024	0.38	1.14	0.027	0.001	18.25	8.03	< 0.01	378	696	50	84	
Chemical Composition (%)															
Specification															
Max															
Min															
Heat No.															
KG458-10															
LG013-10															
LG057-10															
LG070-10															
LG083-10															

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 T ABOVE, T INCLUDE AND BELOW DIRECT TEST FROM PIPE LONGITUDINAL DIRECTION, GAUGE LENGTH 12" (300mm)

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

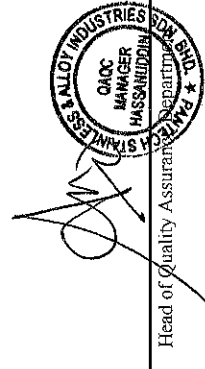
HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

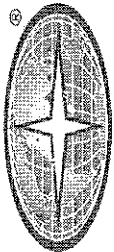
*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

*2: Ni: Not Hydrostatically Tested

EDDY CURRENT ACCORDING TO ASTM E426-98 (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



MILL TEST CERTIFICATE

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



Approval No.:
IS09001-0047465

MATERIAL MANUFACTURER APPROVAL ACCORDING TO
PED 2014/68/EU, ANNEX 1, PARA 4.3,
PED CERTIFICATE NO.:
0343/PED/MUM/1110606/1



INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

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

Certificate No : PSA2-28074
Date : 15/06/2022

PO No.	Invoice No.	Product Specification		Dimensional & Inspection Specification				Delivery Condition																																																																																																										
		ASTM A312/A312M - 21 / ASME SA312/SA312M - 21	ASTM A999/A999M - 18 / ASME SA999/SA999M - 21 B 36.19M- 2018 & B36.10M-2018 / ASME SECTION II PART A-2021	Quantity (Length)	Non Destructive Test		Inter-Granular Corrosion Test	Hydrostatic Test	Dimensional /PMI/ Visual Inspection																																																																																																									
Heat No.	Size	Grade	Eddy Current	Flattening	Pressure / Hold	Result	Result	Result																																																																																																										
LG072-10	2 inch Sch 40S x 6M	TP 304/304L	PASSED	PASSED	2500 PSI, 5s	PASSED	PASSED	GOOD																																																																																																										
LG125-10	2 inch Sch 40S x 6M	TP 304/304L	PASSED	PASSED	2500 PSI, 5s	PASSED	PASSED	GOOD																																																																																																										
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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 1/8 INCH 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

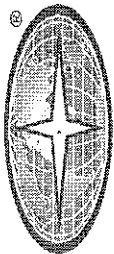
CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

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

EDDY CURRENT ACCORDING TO ASTM E426-98 (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)

*2: NH: Non Hydrostatically Tested

OAC
MANAGER
HASSANUDDIN
H STAINLESS & ALLOY INDUSTRIES SDN BHD
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: +607-231 8888 Fax: +607-251 9959 Website: www.pantechgroup.com
http://www.pantech-group.com



Cert. No.: PC004871



Certified to
NSF/ANSI 61



Approval No.:
ISO9001-0047465



Suruhanjaya Perkhidmatan Air Negara
NO. 3/JIL PENDAFATARAN : SPAN/BN/300-10/553/A/M-1

MATERIAL MANUFACTURER APPROVAL ACCORDING TO
PED 2014/68/EU ANNEX 1, PARA 4.3,
PED CERTIFICATE NO. :
03/03/PED/MUM/1110006/1

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

Certificate No : PSA2-27940
Date : 12/05/2022

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

PO No.	Invoice No.	Product Specification	Dimensional & Inspection Specification										Delivery Condition																																																																																																																			
			ASTM A312/A312M - 21 / ASME SA312/SA312M - 21					ASTM A999/A999M - 18 / ASME SA999/SA999M - 21 B 36.19M-2018 & B36.10M-2018 / ASME SECTION II PART A-2021																																																																																																																								
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JSA434-02112	3 1/2 inch Sch 40S x 6M	TP 304/304L	11	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	2500 PSI, 5s	GOOD	GOOD																																																																																																																				
KG322-10	3 1/2 inch Sch 40S x 6M	TP 304/304L	14	PASSED	PASSED	PASSED	PASSED	2500 PSI, 5s	PASSED	2500 PSI, 5s	GOOD	GOOD																																																																																																																				
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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 12" (300mm)

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

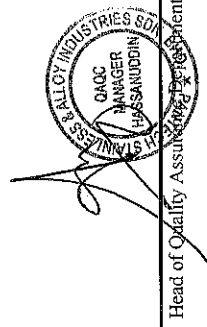
HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

*1: YS: YIELD STRENGTH 1S: TENSILE STRENGTH I E: ELONGATION

EDDY CURRENT ACCORDING TO ASTM E425-98 (Reapproved 2003) *2: NI: 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)

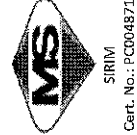


Head of Quality Assurance Department



MILL TEST CERTIFICATE

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



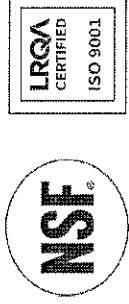
Cert. No.: PC004871

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



Struktur Baja, Peleburan Baja, Akr. Keras
 NO. SUL. PENDAFTARAN: SPAN/8P/300-10/553/A/M-1

Approved No.:
 ISO9001-0047465



Certified to
 NSF/ANSI 61

MATERIAL MANUFACTURER APPROVAL ACCORDING TO
 PED 2014/68/EU, ANNEX 1, PARA 4.3.
 PED CERTIFICATE NO.:
 0343/PED/MUM/11.0006/1

Certificate No : PSA2-27931
 Date : 12/05/2022

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

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

PO No.	Invoice No.	Product Specification	Dimensional & Inspection Specification						Delivery Condition																																																																									
			ASTM A312/A312M - 21 / ASME SA312/SA312M - 21	ASTM A999/A999M - 18 / ASME SECTION II PART A-2021	B 36.19M-2018 & B36.10M-2018 / ASME SECTION II PART A-2021	Inter-Granular Corrosion Test	Hydrostatic Test	Dimensional / PMI/ Visual Inspection																																																																										
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KG399-10	1 1/2 inch Sch 40S x 6M	TP 304/304L	61	Eddy Current	PASSED	PASSED	PASSED																																																																											
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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 15156-2:2015 & NACE-MR0103-2015

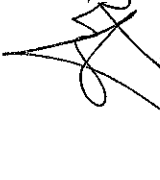
HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIALS HEAT ANALYSIS

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

*2: NH, Non Hydrostatically Tested

EDDY CURRENT ACCORDING TO ASTM E456-98 (Reapproved 2003)⁴ REQUIREMENTS (REFERENCE TO ASTM A999/A999M-12 REQUIREMENTS, DISCONTINUITY ACC. TO CLAUSE 22.3.8.4, PROCEDURE ACC. TO CLAUSE 22.3.9)


 DACC
 MANAGER
 HASSAMUDDIN
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 Head of Quality Assurance Department