

INSPECTION CERTIFICATE

MESSRS	UNIMECH ENGINEERING (M) SDN. BHD.
DELIVER To	
JOB NAME	
JOB No.	
P.O.No.	APO-2004-0009
PRODUCT CODE	

Certificate No.
1020332040-003-01-01
 Date : 2020/07/08

KITZ

SPECIFICATION

Manuf No.	1020332040-003
Description	CLASS 150 CAST STAINLESS STEEL BALL VALVE FLANGED ENDS
Figure	150UTB<ZOP01>11/2
Size	11/2 inch(B)
Quantity	8
Valve No.	
Item No.	3
Kiki No.	

MAIN PARTS

No.	Name of parts	Material
001	BODY	Gr. CF8
002	BODY CAP	Gr. CF8
003	STEM	TYPE304
004	BALL	Gr. CF8

TEST

Pressure test	Judge.	Inspection fluid and pressure	
Shell		Hydro	-
	Good	Air	2.9 MPa
Seat		Hydro	-
	Good	Air	0.6 MPa
Back seat		Hydro	-
		Air	-

Item	Judge.	Attached sheet
Material	Good	Material Test Result
Dimension	Good	
Visual	Good	
Operation	Good	

NONDESTRUCTIVE EXAMINATION

Type of examination and judgement	Attached sheet

REMARKS

 Witnessed by


KITZ CORPORATION
 QC Manager

We hereby certify that the articles listed above are satisfactory in accordance with the requirements of the standard and purchase order.

MATERIAL TEST RESULT

MESSRS	UNIMECH ENGINEERING (M) SDN. BHD.
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Certificate No.
1020332040-003-01-01-Z1

Date : 2020/07/08



Figure	150UTB<ZOP01>11/2	Valve No.	
	Material ASTM A 351 Gr. CF8	Item No.	3
	Charge No.	Display No.	Name of Parts
1	A018261		BODY
2	A019301		BODY
3	A01A411		BODY
4	S02C1		BODY CAP

CHEMICAL COMPOSITION %

Element	C	Mn	Si	S	P	Ni	Cr	Mo								
Spec.	Max	Max	Max	Max	Max	8.0	18.0	Max								
	0.08	1.50	2.00	0.040	0.040	11.0	21.0	0.50								
1	0.05	0.93	0.74	0.005	0.038	8.2	18.5	0.16								
2	0.06	0.93	0.75	0.005	0.039	8.2	18.5	0.17								
3	0.05	0.97	0.76	0.004	0.037	8.2	18.6	0.19								
4	0.04	0.98	0.60	0.006	0.032	8.6	18.4	0.13								
Element																
Spec.																
1																
2																
3																
4																

TENSION TEST

IMPACT TEST

Item			Tensile str.	Yield str.	Elongation				
Unit			MPa	MPa	%				
Spec.			Min	Min	Min				
1			528	257	50				
2			522	247	51				
3			532	263	51				
4			518	290	48				

Item									
Unit									
Spec.									
1									
2									
3									
4									

HEAT TREATMENT °C

Spec.	Min 1040° C WQ	
1	ST:1100° C*60min WQ	
2	ST:1100° C*60min WQ	
3	ST:1100° C*60min WQ	
4	ST:1080° C* 1.5h WQ	

N:Normalizing A:Annealing T:Tempering Q:Quenching AC:Air Cooling
 WQ:Water Quenching OQ:Oil Quenching WC:Water Cooling FC:Furnace Cooling ST:Solution Treatment

REMARKS

Reviewed by

KITZ CORPORATION
 QC Manager

MATERIAL TEST RESULT

MESSRS	UNIMECH ENGINEERING (M) SDN. BHD.
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1020332040-003-01-01-Z2

Date : 2020/07/08



Figure	150UTB<ZOP01>11/2	Valve No.	
	Material ASTM A 351 Gr. CF8	Item No.	3
	Charge No.	Display No.	Name of Parts
1	S01L1		BODY CAP
2	X03DU1		BALL
3			
4			

CHEMICAL COMPOSITION %

Element	C	Mn	Si	S	P	Ni	Cr	Mo								
Spec.	Max	Max	Max	Max	Max	8.0	18.0	Max								
	0.08	1.50	2.00	0.040	0.040	11.0	21.0	0.50								
1	0.04	1.13	0.62	0.012	0.034	8.6	18.8	0.12								
2	0.04	0.96	0.59	0.005	0.030	8.5	18.6	0.33								
3																
4																
Element																
Spec.																
1																
2																
3																
4																

TENSION TEST

IMPACT TEST

Item			Tensile str.	Yield str.	Elongation				
Unit			MPa	MPa	%				
Spec.			Min	Min	Min				
1			485	205	35				
2			537	278	51				
3			551	253	55				
4									

Item									
Unit									
Spec.									
1									
2									
3									
4									

HEAT TREATMENT °C

Spec.	Min 1040° C WQ
1	ST:1080° C* 1.5h WQ
2	ST:1080° C* 2h WQ
3	
4	

N:Normalizing A:Annealing T:Tempering Q:Quenching AC:Air Cooling
 WQ:Water Quenching OQ:Oil Quenching WC:Water Cooling FC:Furnace Cooling ST:Solution Treatment

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Figure	150UTB<ZOP01>11/2	Valve No.	
	Material ASTM A276 TYPE304	Item No.	3
	Charge No.	Display No.	Name of Parts
1	6D281304		STEM
2			
3			
4			

CHEMICAL COMPOSITION %

Element	C	Mn	P	S	Si	Ni	Cr									
Spec.	Max	Max	Max	Max	Max	8.00	18.00									
	0.08	2.00	0.045	0.030	1.00	11.00	20.00									
1	0.06	1.83	0.026	0.026	0.43	8.09	18.51									
2																
3																
4																
Element																
Spec.																
1																
2																
3																
4																

TENSION TEST

IMPACT TEST

Item			Tensile str.	Yield str.	Elongation	Reduction				
Unit			MPa	MPa	%	%				
Spec.			Min	Min	Min	Min				
1			750	655	37	67				
2										
3										
4										

Item										
Unit										
Spec.										
1										
2										
3										
4										

HEAT TREATMENT °C

Spec.	
1	ST:1040°C WQ
2	
3	
4	

N:Normalizing A:Annealing T:Tempering Q:Quenching AC:Air Cooling
 WQ:Water Quenching OQ:Oil Quenching WC:Water Cooling FC:Furnace Cooling ST:Solution Treatment

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