

INSPECTION CERTIFICATE

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

Certificate No.
1020332040-002-01-01

Date : 2020/07/17

KITZ

SPECIFICATION

Manuf No.	1020332040-002
Description	CLASS 150 CAST STAINLESS STEEL BALL VALVE FLANGED ENDS
Figure	150UTB<ZOP01>1
Size	1 inch(B)
Quantity	12
Valve No.	
Item No.	2
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.
1020332040-002-01-01-Z1

Date : 2020/07/17



Figure	150UTB<ZOP01>1	Valve No.	
Material	ASTM A 351 Gr. CF8	Item No.	2
Charge No.	Display No.	Name of Parts	
1 S04Y1		BODY	
2 S03L1		BODY	
3 D03P081	D03P081	BODY CAP	
4 D05J171	D05J171	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	0.04	1.10	0.53	0.010	0.032	8.5	18.5	0.10								
2	0.04	0.98	0.64	0.004	0.031	8.6	18.5	0.24								
3	0.05	1.10	0.98	0.007	0.031	8.0	18.4	0.10								
4	0.05	1.08	1.03	0.003	0.031	8.2	18.5	0.17								
Element																
Spec.																
1																
2																
3																
4																

TENSION TEST

IMPACT TEST

Item			Tensile str.	Yield str.	Elongation				
Unit			MPa	MPa	%				
Spec.			Min	Min	Min				
1			533	278	45				
2			563	286	50				
3			568	343	44				
4			630	292	43				

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* 1.5h WQ	
3	ST:1100° C*100min WQ	
4	ST:1100° C*100min 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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1020332040-002-01-01-Z2

Date : 2020/07/17



Figure	150UTB<ZOP01>1	Valve No.	
Material	ASTM A 351 Gr. CF8	Item No.	2
Charge No.	Display No.	Name of Parts	
1 X05CU1		BALL	
2			
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	0.05	0.79	0.80	0.006	0.034	8.4	18.4	0.13								
2																
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			551	253	55				
3									
4									

Item									
Unit									
Spec.									
1									
2									
3									
4									

HEAT TREATMENT °C

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

REMARKS

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MATERIAL TEST RESULT

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Figure	150UTB<ZOP01>1	Valve No.	
Material	ASTM A276 TYPE304	Item No.	2
Charge No.	5Z965210	Display No.	
		Name of Parts	STEM
1			
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	1.82	0.029	0.024	0.44	8.11	18.51									
2																
3																
4																

TENSION TEST

IMPACT TEST

Item			Tensile str.	Yield str.	Elongation	Reduction				
Unit			MPa	MPa	%	%				
Spec.			Min	Min	Min	Min				
			515	205	30	40				
1			741	626	42	68				
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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