

INSPECTION CERTIFICATE

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

Certificate No.
1020332040-006-01-01
 Date : 2020/07/19



SPECIFICATION

Manuf No.	1020332040-006		
Description	CLASS 150 CAST STAINLESS STEEL BALL VALVE FLANGED ENDS		
Figure	150UTB<ZOP01>4		
Size	4	inch(B)	
Quantity	2		
Valve No.			
Item No.	6		
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

MATERIAL TEST RESULT

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1020332040-006-01-01-Z1

Date : 2020/07/19



Figure	150UTB<ZOP01>4	Valve No.	
Material	ASTM A 351 Gr. CF8	Item No.	6
Charge No.	Display No.	Name of Parts	
1 K05SN1		BODY	
2 K05SJ1		BODY	
3 K02VN1		BODY CAP	
4 K034P1		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	0.06	1.05	1.41	0.006	0.029	8.3	18.3	0.03								
2	0.06	0.95	1.41	0.006	0.030	8.2	18.3	0.04								
3	0.05	1.01	1.41	0.006	0.030	8.3	18.2	0.17								
4	0.05	0.98	1.26	0.005	0.025	8.3	18.3	0.07								
Element																
Spec.																
1																
2																
3																
4																

TENSION TEST

IMPACT TEST

Item			Tensile str.	Yield str.	Elongation				
Unit			MPa	MPa	%				
Spec.			Min	Min	Min				
1			571	322	57				
2			571	321	60				
3			630	353	54				
4			612	337	55				

Item									
Unit									
Spec.									
1									
2									
3									
4									

HEAT TREATMENT °C

Spec.	Min 1040° C WQ
1	ST:1080° C*110min WQ
2	ST:1080° C*110min WQ
3	ST:1080° C*110min WQ
4	ST:1080° C*110min 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

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.
JOB NAME	
JOB No.	
P.O.No.	APO-2004-0009
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Certificate No.
1020332040-006-01-01-Z2

Date : 2020/07/19



Figure	150UTB<ZOP01>4	Valve No.	
Material	ASTM A 351 Gr. CF8	Item No.	6
Charge No.	Display No.	Name of Parts	
1 JA03		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	0.06	0.90	0.62	0.007	0.026	8.3	18.6	0.20								
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			563	288	57				
3									
4									

Item									
Unit									
Spec.									
1									
2									
3									
4									

HEAT TREATMENT °C

Spec.	Min 1040° C WQ	
1	ST:1100° C*110min 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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MATERIAL TEST RESULT

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Figure	150UTB<ZOP01>4	Valve No.	
Material	ASTM A276 TYPE304	Item No.	6
Charge No.	Display No.	Name of Parts	
1	6C130010	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	1.82	0.020	0.024	0.47	8.08	18.58								
2															
3															
4															

TENSION TEST

IMPACT TEST

Item			Tensile str.	Yield str.	Elongation	Reduction			
Unit			MPa	MPa	%	%			
Spec.			Min	Min	Min	Min			
1			730	627	38	66			
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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