

# INSPECTION CERTIFICATE

MESSRS	UNIMECH ENGINEERING (M) SDN. BHD.
DELIVER To	
JOB NAME	
JOB No.	
P.O.No.	APO-2004-0010
PRODUCT CODE	

Certificate No.  
1020330662-001-01-01

Date : 2020/07/03



### SPECIFICATION

Manuf No.	1020330662-001
Description	10K DUCTILE IRON GLOBE VALVE SCREWED ENDS
Figure	10SJ1/2
Size	1/2 inch(B)
Quantity	36
Valve No.	
Item No.	3
Kiki No.	

### MAIN PARTS

No.	Name of parts	Material
001	BODY	Gr. 60-40-18
002	BONNET	Gr. 60-40-18

### TEST

Pressure test	Judge.	Inspection fluid and pressure		
Shell	Good	Hydro	2.1	MPa
	Good	Air	1.4	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

REPRESENTATIVE TEST BY HYDRAULIC SHELL TEST HAS BEEN PERFORMED

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 Witnessed by

*R. Miyagawa*  
**KITZ CORPORATION**  
 QC Manager

# MATERIAL TEST RESULT

MESSRS	UNIMECH ENGINEERING (M) SDN. BHD.
JOB NAME	
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1020330662-001-01-01-Z1

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Figure	10SJ1/2	Valve No.	
	Material ASTM A 395 Gr. 60-40-18	Item No.	3
	Charge No.	Display No.	Name of Parts
1	138		BODY
2	13F		BONNET
3			
4			

**CHEMICAL COMPOSITION %**

Element	C	Si	P	Mn											
Spec.	Min 3.00	*Max 2.50	Max 0.080												
1	3.61	2.59	0.021	0.26											
2	3.61	2.60	0.019	0.29											
3															
4															
Element															
Spec.															
1															
2															
3															
4															

**TENSION TEST**

**IMPACT TEST**

Item			Tensile str.	Yield str.	Elongation				
Unit			MPa	MPa	%				
Spec.			Min 415	Min 275	Min 18				
1			430	281	21				
2			430	282	21				
3									
4									

Item	Hardness	Microstructure							
Unit	HBW	%							
Spec.	143 187	Min 90							
1	143	90							
2	143	90							
3									
4									

**HEAT TREATMENT °C**

Spec.				
1				
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**

\* Every 0.01% P reduction enables 0.08% Si increase each within the maximum 2.75%.  
 EN10204 Type 2.2

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 Reviewed by

*R. Miyazawa*  
**KITZ CORPORATION**  
 QC Manager