

MATERIAL TEST RESULT

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

Certificate No.
1020330282-019-01-01-Z1

Date : 2020/06/05



Figure	150SPB1	Valve No.	
	Material ASTM A 395 Gr. 60-40-18	Item No.	19
	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	HB	%							
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

 Reviewed by

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 QC Manager