



Office & Work :
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INSPECTION CERTIFICATE

F-QA-611

Customer : **JC VALVULAS INDIA PVT LTD**

Material Spec. : **ASTM A216 Gr. WCB - 21**

THIS CERTIFICATE HAS BEEN PREPARED AS PER EN 10204 : 2005 (Type 3.1)

Melting Media : **Air Melting Through Electric Induction Furnace**

Mfg. Process : **Investment Casting By Lost Wax Process**

Heat Treatment : **1) Quenching : Heated at 920 °C for 2 Hr. and Water Quench. 2) Tempering : Heated at 675 °C for 4 Hr. and Furness Cool.**

TC No. : **GT -0817 - WCB**

Invoice No. : **GT -0817**

Date : **06/02/2023**

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Spectro Chemical Analysis

HEAT NO.	C %	Si %	Mn %	S %	P %	Cr %	Ni %	Mo %	Cu %	V %	CE %
MIN											
MAX	0.250	0.600	1.000	0.035	0.035	0.500	0.500	0.200	0.300	0.030	0.430
52F2	0.177	0.381	0.900	0.016	0.019	0.086	0.039	0.009	0.061	0.002	0.353
60F2	0.175	0.391	0.890	0.020	0.024	0.082	0.070	0.007	0.070	0.004	0.351
71F2	0.186	0.473	0.940	0.021	0.026	0.148	0.103	0.011	0.062	0.004	0.386

Mechanical Properties

HEAT NO.	Tensile Strength		Yield Strength (0.2% Offset)		%Elongation (G.L. 25mm)	Reduction of Area %	Impact Test (10mm X 10mm X 55mm) CVN 2mm et -20 °C In Joule				
	KSI	MPa	KSI	MPa							
MIN	70.00	485.00	36.00	250.00	22.00	35.00	27.0				
MAX	95.00	655.00					1	2	3	27.0	
52F2	76.07	524.60	45.31	312.48	36.40	55.91	36.0	50.0	54.0	46.6	
60F2	77.26	532.85	48.49	334.42	36.96	56.82	52.0	42.0	56.0	50.0	
71F2	76.63	528.51	46.40	319.97	36.96	56.96	46.0	52.0	52.0	50.0	

Hardness Test

Hardness (BHN)

237
147
147
147

Dispatch Detail

Sr. No.	Description / Drawing No. - Revision No.	Cust. Part ID	Heat No.	Dispatch Quantity	PO No.	Actual Code	Pun. on Casting
1	2" (DN50) FIG-530 BODY #300, Drg. No. : 0530050CNCM-5	C0530A050M	52F2	1	JCRM-2223000509		
2	2" (DN50) FIG-530 BODY #300, Drg. No. : 0530050CNCM-5	C0530A050M	60F2	1	JCRM-2223000509		
3	3/4" (DN20) FIG-515 BODY #150, Drg. No. : 0515020CNCM-F85	C0515A020M	71F2	40	JCRM-2223000509		

Special Note

Marking on Casting :
• Heat No. punch on Casting.
• Foundry Logo.

JC Valvulas India Pvt. Ltd.
Chennai, Tamil Nadu, India
Verified & Accepted
Q.A.

Total Quantity : 42

Total Quantity : 42

We, hereby certify that the items mentioned above are Manufactured, Stamped, Tested and Inspected in accordance with applicable material specifications ASTM A 2 6 G.

WCB - 21 and was found to meet the requirements.

• Certified that above mentioned casting is free from Radioactive Contamination.

• Visual Inspection of castings carried out as per MSS SP 55-2011, ASTM A987-08 (Reapproved 2018) Level-III & QCP (P-QC-06) & found satisfactory.

• Mechanical Test Specimens prepare & tested accordingly ASTM A370 -21

• Casting conforms to NACE MR 0175/2015, ISO 15156 : 2015 & NACE MR 0103 : 2015.

• Approved & Certified according to PED 2014/68/EU - Annexure 1 Chapter 4.3 & AD 2000 - Merkblatt WO by Notified body for pressure equipment directive of TUV NORD SYSTEMS GMBH & CO. KG (Notified Body No. 0045)

For, Microfusion Cast & Alloys

(M)

Jignesh Patel
Authorised By