


<div style="text-align: center;">  <b>ANUGRAHA VALVE CASTINGS LIMITED</b>  391/2, S.G.PUDUR, ARASUR VILLAGE, COIMBATORE – 641 407, INDIA  PH : 91-422-2360124, 2360910, FAX : 91-422-2360026, E-Mail – anugraha@anugrahavalvecastings.com </div>													
THE QUALITY MANAGEMENT SYSTEM ISO 9001:2015 IS CERTIFIED BY :						LLOYD'S, U.K., CERTIFICATE No:MUM6017688 & TUV NORD, GERMANY,CERTIFICATE NO.44 100 084158							
Approved acc.to AD2000 Merkblatt W0 & Certified acc.to PED (2014/68/EU) by certification body for Pressure Equipment of TUV Nord systems(notified body, reg. no.:0045)													
<b>INSPECTION CERTIFICATE/DOCUMENT (EN 764-5) AS PER EN10204.3.1</b>													
Foundry		Name Anugraha Valve Castings Limited				Address Coimbatore, India				Trade Mark A			
Inspection certificate		Certificate No: LE/9975				Date of delivery: 04.05.2019				With consent of: TUV NORD			
		for : 1.0619/WCB/WCC								Qualification No: 07 203 1409 WP 1091/17			
Purchaser		LESER GmbH & Co. K.G, Hamburg											
		Purchase order No: 4500243807				Date of issue: 27.02.2019							
Article		Pos.No Item											
		20 INLET BODY 4"/D=130/PN40/#300 - (118.A000.0024) - 10000167366-01 - (167366)											
Material designation		WCC ASME Section II A, SA-216				Edition/Addenda:							
		WCB ASME Section II A, SA-216				ref.to							
		1.0619 DIN EN 10213				LESER Work Standard (LDeS) 3289.07							
Requirements		LDeS_3289.07-EN, LDeS_3290.04-EN These LESER Work Standards cover all requirements for above mentioned materials and additional requirements given in PED (Pressure Equipment Directive 2014/68/EU): ASME Code:Section VIII + Section IIA SA216: AD-2000-Merkblatt:A4, W5,W10,HP2/1; DIN EN 10213,1559-1, 1559-2, DIN 1690 Part 10; BNIF359-01; MSS SP 55; NACE MR0175/ISO15156, MR0103; SEW110;TRD: 103,110											
List of Delivery		Pos.No Number of Pieces LESER Article number Unit Weight Heat No. Test No											
		See Annexure											
Chemical composition Required		Pos.No C Si Mn S P Cr * Ni * Mo * V * Cu * CE Total *											
Min.		0.18 0.30 0.50 - - - - - - - - - -											
Max.		0.23 0.60 1.20 0.020 0.030 0.30 0.40 0.12 0.03 0.30 0.43 1.00											
Actual value		See Annexure											
Mechanical properties		Pos.No Rp Yield Strength 0.2% (N/mm²) Rm Tensile Strength (N/mm²) A5 Elongation After fracture(%) Z Reduction of area (%) Hardness (HBW) (ASTM A370) KV (J) Impact value Charpy-V, (J) ISO-148-1/SA370											
Required		275 485 22 35 - min,avg,27J at 20°C ø											
Min.		- 600 - - 237 1 2 3 Avg											
Max.													
Actual value		See Annexure											
Heat treatment		Pos.No Normalized Temperature Hold Time Cooling media											
		Normalising Heated to 900°C To 940°C Soaked and Cooled in Air Soaking Time See Annexure											
Supplementary information		CEV: %C+%Mn/6+(%Cr+%Mo+%V)/5+(%Ni+%Cu)/15, Declared that the castings are free from radioactive contamination.											
Quality Level		The casting conforms to requirements of EN10213/ASME SA216, quality level "D" according to DIN 1690 Part-10										<input checked="" type="checkbox"/> fulfilled	
		BN IF 359-01 (as specified in LDeS_3290.04-EN)										<input checked="" type="checkbox"/> fulfilled	
		The castings conforms to NACE STANDARD MR0103-2015.										<input checked="" type="checkbox"/> fulfilled	
		MSS-SP-55.											
		Tensile test carried out at Room Temperature, Mechanical properties are represented from separately casted test bar (Keel Block) as per Fig.1 of ASTM A1067.										<input checked="" type="checkbox"/> fulfilled	
Visual inspection and dimension check		Without objections										<input checked="" type="checkbox"/> fulfilled	
Assessment		Castings fulfil the requirements of LDeS_3289.07-EN, LDeS_3290.04-EN										<input checked="" type="checkbox"/> fulfilled	
Inspection representative		Stamp 04.05.2019 Date of validation Name : S.PADMAVATHY Official position : MANAGER-QA											
LESER internal entries		Check of this certificate by LESER QM		Cert. No:		Code-No:		Approved:		Date:		The entries of this certification are complete. <input type="checkbox"/> fulfilled	
		Ordering by LESER customer		LESER-Order-No		Cust. TAG - No:						The requirements of LDeS_3289.07-EN, LDeS_3290.04-EN as well as AD-2000 W5 and ASME Code VIII are fulfilled. <input type="checkbox"/> fulfilled	

**ANUGRAHA VALVE CASTINGS LIMITED**  
391/2, S.G.PUDUR, ARASUR VILLAGE, COIMBATORE - 641 407, INDIA.  
**ANNEXURE to Inspection Certificate No: LE/9975 DT : 04.05.2019**

Heat No	QTY	Delivery No	Weight (kgs)	C	Si	Mn	S	P	Cr	Ni	Mo	V	Cu	CE	TOTAL	SOAK ING TIME1	Y.S(MPa) 0.2% RP	T.S(MPa) RT	%E (60MM)	RIA	Hardness (HBW)	SIZE : 10X10X55mm, Test Temperature & Specification	1	2	3	Avg
CD9967	5	819001057	176.50	0.194	0.43	0.94	0.012	0.017	0.061	0.078	0.005	0.000	0.011	0.370	0.155	4.30	348.84	546.16	32.17	62.10	156	AT 20°C Min.Avg 27J	120	128	114	120.7
CD9963	1	819001057	35.30	0.188	0.47	0.98	0.012	0.019	0.074	0.100	0.006	0.002	0.014	0.375	0.196	5.30	348.84	542.63	32.33	63.82	153	AT 20°C Min.Avg 27J	70	80	76	75.3

S.PADMAVATHY  
MANAGER-QA  
WORKS INSPECTOR

This Certificate was issued by DP-equipment and is valid without signature

**ANUGRAHA VALVE CASTINGS LIMITED - UNIT -I**S.F No.391/2, Sengoda Gounden Pudur, Arasur Village,  
Coimbatore 641407, India.

Email:anugraha@anugrahavalvecastings.com

Page:1 of 1

**MAGNETIC PARTICLE INSPECTION REPORT ACC. TO EN10204;3.1**

Customer : LESER GMBH & CO.KG  
Report No. : 819001057  
Date : 04.05.2019

Item : INLET BODY 4"/D=130/PN40/#300 ( 118.A000.0024 )  
Drawing No. : 10000167366-01  
PO No. & Date : 4500243807 & 27.02.2019  
Specification : EN10213 GP240GH 1.0619-07+A1:2016/ASME SA216M Gr.WCB/WCC-17  
Procedure Ref : DIN EN ISO 9934-1  
Stage of Test : AFTER HEAT TREATMENT  
Type of Equipment : ELECTROMAGNETIC CRACK DETECTOR  
Equipment Manufacturer : K. ELECTRONICS MUMBAI  
Test Method : WET FLUORESCENT  
Magnetic Powder Colour : FLUORESCENT YELLOW GREEN  
Trade Name : SUPER MAGNA LY 2500  
Batch no. & Date : 183513-31.08.2018  
Wet Particle Conditioning Agent : SUPER MAGNA LY 2500  
Conditioning Agent Batch No. : 183513-31.08.2018  
Bath Concentration : BEFORE TESTING CHECKED  
Settling Volume(0.10 to 0.40 ml) : .30 ml  
Accepted Standard : DIN 1690 PART-2  
Surface Condition : UN MACHINED  
Current : HWDC  
Magnetization : CIRCULAR  
Magnetization Type : HEAD SHOT  
Number of Turns : -  
Lighting Equipment : BLACK LIGHT SYSTEM ZB-100F  
Exposure (UV-Meter / Exposure Intensity) : 1250 µW/CM²  
Identification No. : AS/QA/022  
Calibration (Due on) : 13.05.2019  
Lighting Equipment : MAGNAFLUX (VISIBLE WHITE LIGHT METER)  
Model No. : 622338  
Serial No. : 207021  
Ambient Visible White Light Intensity (20 LUX max) : 15 LUX  
Identification No. : AS/QA/023  
Calibration (Due on) : 26.05.2019

SL No.	Heat No.	Quantity	Marking	Remarks
1	CD9967	5	MT	--
2	CD9963	1	MT	--

Prod Spacing : --  
Magnetizing Current : 4200 AMPS  
Area Coverage : ALL ACCESSIBLE AREA  
Description on Indication : NO SIGNIFICANT INDICATION  
Demagnetization : NOT DONE  
Result : ACCEPTABLE TO DIN 1690 PART-2 QUALITY LEVEL MS3.

Customer / External  
Inspection Agency

G.Navaladiyan  
MT LEVEL-II  
Operator

R.Ramesh Kumar  
LPT & MT LEVEL-II  
NDT Incharge