

Oliver Valves Ltd, Parkgate Industrial Estate, Haig Road, Knutsford, Cheshire, WA16 8DX, United Kingdom
Telephone: +44 (0)1565 632636

Pressure Test Certificate, Certificate of Material Conformity and Conformity to NACE Specifications MR0175/ISO 15156 & MR0103(Latest Revision)

To: AL ZERWA TRADING CO LLC **Date:** 05/11/2024
P.O. Box No : 64916
Umm Ramool
Nr. Dubai Duty Free W/H
Al Rashidiya
Dubai
UAE

Customer Order Ref: 7809/24
Oliver Valves Ref: 96707 **Item:** 1
Oliver Product Description: 2 VALVE MANIFOLD - MALE X FEMALE ENG032
Quantity: 100
Product Type No: G12MFS/NA

We hereby certify that the equipment has been manufactured and tested strictly in accordance with your order requirements, Oliver Valves ISO 9001 Quality Management System and has satisfactorily passed our standard works inspection and pressure tests.

For a minimum period of 2 minutes, the pressure retaining shell was subjected to an internal water pressure of 9000 psi

For a minimum period of 2 minutes, the seat(s) was subjected to an internal water pressure of 6600 psi

Further to this, a low-pressure air test was performed at 80 psi for a minimum period of 2 minutes.

Acceptance Criteria, as detailed in the test procedure, Result: Passed.

The equipment standard working pressure is 6000 psi

The equipment conforms in all respects with the requirements of specifications NACE MR0175/ISO 15156 & MR0103(latest rev), pressure containing and wetted parts.

The Oliver Valves recordable traceable code(s) for the equipment is/are recorded below or attached for reference.

Body= AGN1334 SRC200

Signature: 

For and on behalf of Oliver Valves Ltd

Name: Charles Bradburn

Position: Documentation Controller

Date: 05/11/2024

SR CRAFT

CERTIFICATE OF CONFORMITY AS PER ISO 10474 3.1. And EN 10204 3.1

Certificate No	SRC/24/ 200	Part number	201 G12MFS
Order No	IP00027313/7 IP00026969/5 IP00027313/8 IP00027313/9 IP00027401/3	Heat No	S 30433
Our Reference	2324 / 242510085/091/099	Quantity	2319 Kgs (SQ 31.75MM)
Date	28.06.2024/14.07.2024	Specification No	ASTM A182 / ASTM A276 / ASTM A479 /AISI 316 / AISI 316 L

Material Documentation:

The below mentioned documents are enclosed with this certificate.

Document Title	Reference number	Reference date
Raw material Processor / Stockist Certificate	TC222535	20/04/2024
Mill Test Certificate	TC222535	20/04/2024
Independent Test house report (if applicable)	TRC-39842-1 TRC-39842-1-2	08/03/2024
Ultrasonic Test report (If applicable)	Apr-24	09/04/2024
Coating cert (if applicable)	-	-

Special Conditions / Processing Details

In accordance with NACE MR01-75 latest revision. Released to ENG 032,Revision 17.
100% PMI verified in Bar and confirms SS316 grade

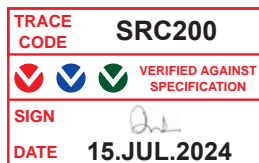
Concessions Agreed : -

"Certified that the supplies / services detailed hereon have been inspected and tested in accordance with the conditions, requirements of the contract or purchase order and, unless otherwise noted below, conform in all respects to the specification(s) / drawing(s) relevant thereto. The material is free from radioactive contamination.

V. Jeeva

Quality Representative
(V.JEEVA)

TRACE CODE
SRC 200



Certificate Type : EN 10204/3.1

Our Sales OrderNo	OA-MN-LO-2324-00724	Invoice No.	BSR-2425-00030	Certificate No.	TC222535
Customer Order No.	SRC/23-24/PO/41	Invoice Date	20/04/2024	Date	20/04/2024

Customer	SR CRAFT D-62, Developed Plot Estate, Thuvakudi, Tiruchirappalli Trichy - 620015, Tamil Nadu, India	Trade Mark	
		Inspector's Mark :	

Material Details		Stainless Steel Square Bar Solution Annealed Cold Drawn & Polished			
Steel Grade	316/316L/UNS31603	Shape	Square Bar	Size	31.75 MM
Heat No.	S-30433	Tolerance	h 11	Length Of Bars	3.00-3.20 MTR
Net Weight	2.319 MT	Number Of Bars	92	Melting Process	EF - AOD - MEMS
Bundle Nos	4SQ24-00277, 4SQ24-00280, 4SQ24-00281, 4SQ24-00282				
Requirements	ASTM A 182 / A 182 M:2024 NACE MR0103/ISO17945:2015	ASTM A 276:2024 NACE MR0175/ISO15156:2020	ASTM A 479:2023 NORSOK M-630	DIN EN 10088-3:2023	

Chemical Analysis %

Element	C	Si	Mn	P	S	Cr	Ni	Mo									
Min						16.0000	10.0000	2.0000									
Max	0.0300	1.0000	2.0000	0.0450	0.0300	18.0000	14.0000	3.0000									
Melt	0.0230	0.3000	1.5300	0.0420	0.0240	16.8200	10.0500	2.0800									

Mechanical Properties

	YS/(Rp 0.2%) (N/mm2) ASTM A 370	UTS (N/mm2) ASTM A 370	% Elongation 4D ASTM A 370	% Reduction Area ASTM A 370	Hardness (BHN) ASTM A 370	Charpy Impact V Notch (Longitudinal) (Joules)				
						Temp .Deg (C)	1	2	3	Avg.
Min.	345.00	515.00	35.00	50.00						
Max.					237.00	(C)	1	2	3	Avg.
Results	525.60	642.69	40.76	71.92	217.00					

Heat Treatment :

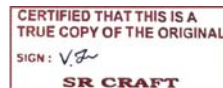
Solution Annealed @ 1050° C Soaking for 1"/ hr & Water Quenched.

Remarks

- * Country Of Origin Of Goods - India
- * Free from Radioactivity - verified through Gamma Ray Spectrometer
- * No Mercury contamination
- * Micro & Macro Test - Satisfactory
- * No welding has been performed on the material
- * Heat Treatment furnace calibrated as per API 6A Appendix-M
- * Specimen Size for UTS - 12.50 mm / 0.50 inch dia.
- * Visual & Dimensional Inspection - OK
- * Material Identification tested through X-Ray based portable Spectrometer
- * IGC Test:ASTM A 262:2015 Practice E No Fissure / crack under 20X
- * Ultrasonic Test:ASTM A 388 2019: No recordable indication

- * Heat Treatment furnace calibrated as per "API 6D 24th Edition : Annex-F"
- * Grain Size : 7.00
- * Yield Stress : 76.23 KSI
- * Tensile Strength : 93.21 KSI
- UT Check Criteria 100 % Back Wall + 18 DB
- * Five Sample Of Hardness : 94, 95, 95, 96, 97, HRB
- * Material As Per Oliver Spec. ENG032 Rev. 17
- * Process route:- "Billet/Hot rolled/Cold Drawn"
- * Five Sample of Hardness: Less Than 20 HRC
- * Billets Size : 120x120 mm

TRACE CODE:SRC 200



We confirm that the material is manufactured & supplied in accordance to the Purchase Order

Ambica Steels Limited

QA Head/NDT Inspector
AMBICA STEELS LIMITED

Regd. Office : C-54/1 Wazirpur Industrial Area, New Delhi 110052, India. Works:: 51/2, Site IV, Sahibabad Industrial Area, Ghaziabad, 201010, UP

Works : Plot No.32, Site II, Loni Road Industrial Area, Ghaziabad, 201007, UP. Ph:91-120-41893000, Fax: 91-120-418399

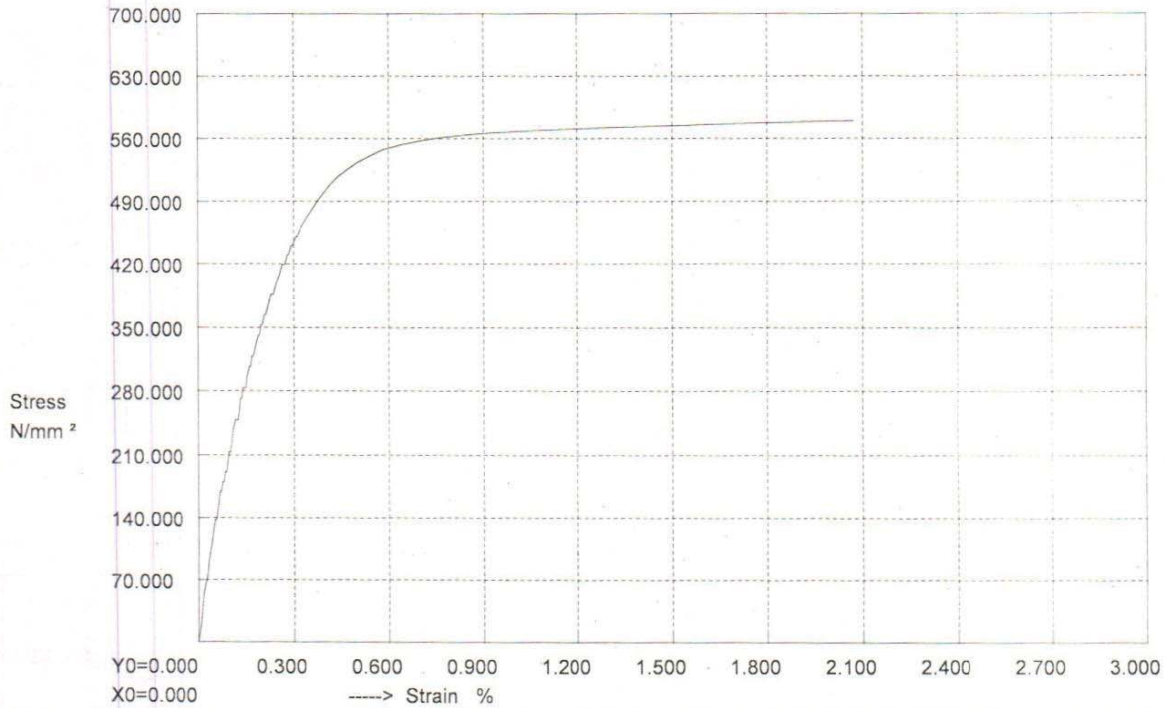
Test Certificate

Name of Company : AMBICA STEELS LTD.
 Address : GHAZIABAD
 To : Ambica Steel Ltd
 Address : site no 2, Mohan Nagar, Industrial Area, Sahibabad
 Sample Identification : BC22-2324-03294-316L-S-30433-31.75SQR-OLIVER
 Machine : FIE Make Universal Testing Machine, UTE-40

Input Data : File Name : BC22-2324-03294-316L-S-30433-31.75SQR-OLIVER , Record No. : 1 , Date : 11/04/2024
 : Sample Type -- Round Solid Bar Area : 122.297 mm²
 : Diameter = 12.476 mm Final Dia : 6.61 mm
 : Ext. Gauge Length: 25 mm, Speciman Gauge Length: 50 mm, Final Gauge Length: 70.38 mm
 : Test Speed : 8 mm/min

Results of : Extension Test
 Maximum Force (Fm) : 78,600.000 N
 Tensile Strength (Rm) : 642.698 MPa ✓
 Elongation : 40.760 % ✓
 Reduction in Area (Z) : 71.929 % ✓
 Proof Stress (Rp0.2) : 525.6062 MPa ✓

Graph : Stress Vs Strain



For AMBICA STEELS LTD.



1- BHN - 223, 224, 215, 215, 214, 215, 224, 217,
 205, 221,
 2- HRC - 15, 16, 17, 17, 13, 14, 16, 17, 15, 13,
 3 HRB - 97, 97, 95, 95, 95, 95, 97, 96, 94, 96

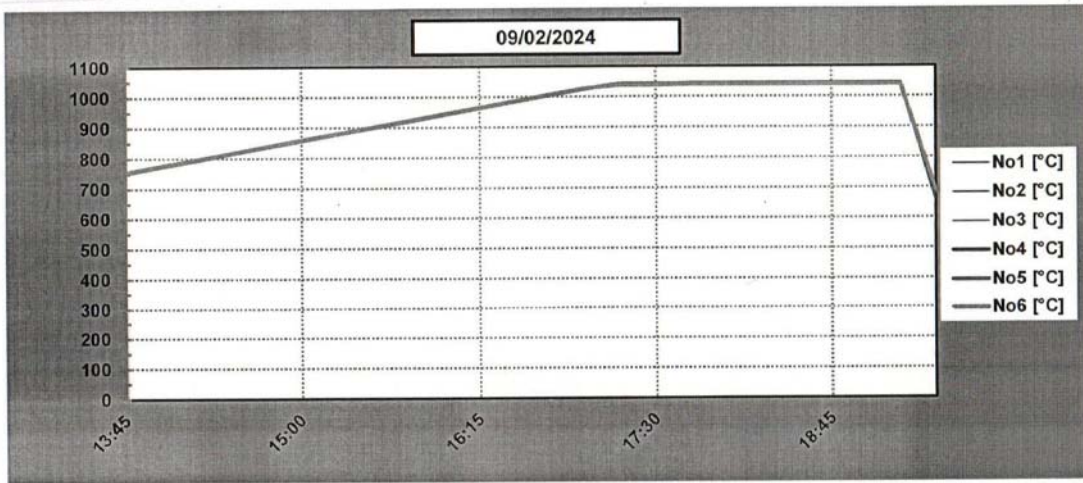
TRACE CODE: SRC 200

S. Gupta
 11/04/24
 (U. P. P. W. S. N. M.)
 D. J. L.

CERTIFIED THAT THIS IS A
 TRUE COPY OF THE ORIGINAL
 SIGN: *V. J.*
 SR CRAFT

HT Batch Details:

- 1) Log Sheet No.- HT-02539
- 2) HT Job Card No.- HT-2324-16875
- 3) Customer- SR CRAFT



Grade: 316 L

Heat No: S-30433

Order Size: 31.75 mm Sq.

Process Cycle- Solution Annealed @ 1040° C Soaking for 1"/hr & Water Quenched.

TRACE CODE:SRC 200

S. Gupta
11/4/2024
G. Gupta
OVER



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SIGN: *VJ*
SR CRAFT





Ambica Steels Limited

ULTRASONIC TESTING REPORT

Report No	Apr-24	UT M/C Model	DS-324
Customer	SRC	M/C Calibration Date	22/01/25
Purchase Order	SRC/23-24/PO/41	Temperature	Normal
Date	09/04/24	Calibration Block	V1 Block
Couplant	Oil	Scanning Area	100% - Full Length
HT condition	Solution Annealed	UT Done	ASTM A388
Section	31.75MM SQ	Testing / Acceptance	as per ENG102 Latest Rev
Insepection Stage	Final stage	Cable Type	Coaxile common cable
Material Type	Austenitic Stainless Steel Bars	Over Lap	15%

Heat Batch Card No.	Grade	Heat No.	Size (mm) / Section	Probe Dia / Frequency	Inspection Qty	Accepted Qty	NOT OK QTY	Ref Gain	Scanning Gain	Observation
22-2324-03294	316L	S-30433	31.75 SQ	10mm/4MHz	92	92	Nil	34db	34db+6db	No Recordable indication Observed
Total					92	92	0			

UT Performed By - Level II	Approved by Quality Head
	
Mr. Balveer Singh	Mr. Nitin Gaur

TRACE CODE:SRC 200

S. Kapil Rishi
11/4/24.
(S. KAPIL RISHI NATH)
OVL

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 SIGN: V.S.
SR CRAFT



Test Report

TC681524000026103F

Customer: M/s. Oliver Valves India Pvt Ltd No:6, First Cross Street, SIDCO Industrial Estate, Ambattur ,City:Chennai ,600098	Report No.:	TRC-39842-1
	Report Date:	08-03-2024
	Customer Ref. No.:	Q0706/24/F
	Ref. Date	06-03-2024
	Sample Received Date:	07-03-2024
	Date Of Completion:	08-03-2024

Samples drawn by Customer

Sample Description: Square Sample, Size: 31.75mm X 100mm, Heat No: S-30433, Batch Card No: 22-2324-03296, ID: F, Grade: SS316L, RM Supplier: Ambica Steel, Oliver Spec: ENG032 Rev.17, QTC Stamped By: OVIL

Discipline : Chemical, Group : METALS & ALLOYS

SPECTRO CHEMICAL ANALYSIS

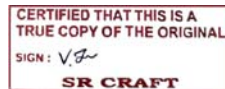
Test Method : ASTM E1086:2022

Verified By: T K MURUGAN

Tested on : 07-03-2024

Test Parameters	Result	Requirement
% Carbon	0.018	0.030 max.
% Silicon	0.326	1.00 max.
% Manganese	1.559	2.00 max.
% Phosphorus	0.043	0.045 max.
% Sulphur	0.022	0.030 max.
% Chromium	16.654	16.00-18.00
% Molybdenum	2.073	2.00-3.00
% Nickel	10.119	10.00-14.00
% Nitrogen	0.044	0.10 max.

Remark: The material conforms to Oliver Specification ENG032 Revision 17 with respect to test/s carried out



For MICROLAB



P.L. Saravanan
Head, Chemical Department
and Q.M

Authorized Signatory

----- End of Test Report -----

TRACE CODE:SRC 200

NOTE : This report relates only to the particular sample submitted for test * Any correction is not attested shall invalidate this certificate * Sample will be destroyed after 15 days from the date of testing unless instructed otherwise * Any complaints about this report should be communicated in writing within 7 days of this report * This report not to be produced wholly or in parts and cannot be used as an evidence in a court of law and shall not be used in advertising Media without prior permission in writing * Sample description is not verified in all cases and is given as described by the customers * Sample are not drawn by us unless otherwise stated * Laboratory reports the statements of Conformity to material specification as per Decision Rule 1, Non Conformity as per Decision Rule 4 & For Rule 2 & 3 Customer provides feedback.





Test Report

TC681524000026104F

Customer: M/s. Oliver Valves India Pvt Ltd No:6, First Cross Street, SIDCO Industrial Estate, Ambattur ,City:Chennai ,600098	Report No.:	TRC-39842-1-2
	Report Date:	08-03-2024
	Customer Ref. No.:	Q0706/24/F
	Ref. Date	06-03-2024
	Sample Received Date:	07-03-2024
	Date Of Completion:	08-03-2024

Samples drawn by Customer

Sample Description: Square Sample, Size: 31.75mm X 100mm, Heat No: S-30433, Batch Card No: 22-2324-03296, ID: F, Grade: SS316L, RM Supplier: Ambica Steel, Oliver Spec: ENG032 Rev.17, QTC Stamped By: OVIL

Discipline : Chemical, Group : CORROSION TESTING

INTERGRANULAR CORROSION TEST (PRACTICE-E)

Test Method : ASTM A262:2015 (2021)

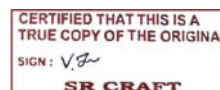
Verified By: N THINESH KANNAN

Tested on : 07-03-2024 to 08-03-2024

Test Parameters	Result
Sensitization Temp	Specimen was sensitized at 675°C for 1 hour
Test Solution	Copper – Copper Sulfate – 16% Sulfuric Acid
Test Specimen Size (mm)	L:91.25 x W:23.48 x Thk:9.81
Total Surface Area of the specimen (cm ²)	65.3610
Start of Boiling	07.03.2024 (05.00 pm)
End of Boiling	08.03.2024 (09.00 am)
Duration of Test	16 Hours
Bend Test	1T / 180 Degree
Evaluation	No Cracks and No Intergranular Fissures Observed at 20x Magnification
Photographs	The Macro photograph is enclosed



TRACE CODE:SRC 200



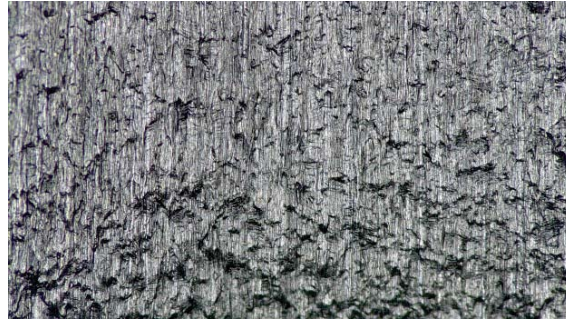
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TC681524000026104F

TRC-39842-1-2 Dt- 08-03-2024



20X

For MICROLAB

K. Mathan Kumar
Head, Corrosion & Polymer Department

Authorized Signatory

----- End of Test Report -----

TRACE CODE:SRC 200

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SIGN: *V.J.*
SR CRAFT



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ECHO INSTITUTE OF NDT

Certificate

Mr. BALVEER SINGH

of AMBICA STEELS LTD.

Is hereby certified to **NDT Level - II**

in **Ultrasonic Testing**

Having fulfilled the certification and demonstrated proficiency by successfully passed the examination in according with the requirements of **SNT TC-1A-2016 ASNT**



Certificate No. : UT - II - 07

Training Hours : 40 hours

Date of Issue : 18.05.2019

NDT Experience : 09 years

Date of Expiry : 17.05.2022

Qualification : B.Sc.

Marks

Exam	Theory	Practical	Specific	Composite
May-2019	82%	88%	80%	83%

First Renewal	Second Renewal
Validity:- UP to 16.05.2025	Validity:-

Eye Vision

Examination	Near Vision	Colour Vision
17.05.19	J-2	Normal

Roop Chand Sharma
ASNT NDT Level-III
Certificate No:-173585



COURSE DIRECTOR

EMPLOYER

Roop Chand Sharma
ASNT NDT Level-III
Certificate No:-173585

EXAMINER