



AISWARYA LAKSHMI ENGINEERING WORKS

(ISO 9001:2015 CERTIFIED COMPANY)

INSPECTION CERTIFICATE

(AS PER EN 10204 3.1)

CUSTOMER	JC VALVULAS INDIA PVT LTD., CHENNAI	OUR T.C No.	ALEW/GST/26-27 / 31 / 07
DRG No.	XEP-010-6803	DATE	20.04.2026
PART NAME	STEM DN10 6803 A182 GR.F316/F316L (D)	OUR INV No.	GST / 26-27 / 31
PART No.	XEP-010-6803-433	MILL TC No.	920027020/10
DRG REV No.	0	HEAT No.	FIC92
P.O.NO	JCCMP-2526-02449	QYT (NO' S)	50

ASTM A182/A182M-24A, Gr. F316 / F316L (DUAL)

CHEMICAL PROPERTIES

TEST REPORT NO: TR/25-26/40258-1 16-12-2025

%	C	Si	Mn	P	S	Cr	Ni	Mo	N
MIN						16.00	10.00	2.00	-
MAX	0.030	1.00	2.00	0.045	0.030	18.00	15.00	3.00	0.10
ACTUAL	0.015	0.484	1.766	0.033	0.005	16.476	10.23	2.023	0.054

MECHANICAL PROPERTIES

TEST REPORT NO: TR/25-26/40258-1 16-12-2025

PARAMETER %	MIN	MAX	ACTUAL
TENSILE STRENGTH IN Mpa	515	-	682
YIELD STRENGTH IN Mpa 0.2% OFFSET	205	-	591
ELONGATION IN GL OF 50mm%	30	-	47
REDUCTION IN AREA %	50	-	80
HARDNESS(BHN)	-	237	195

METALLURGICAL PROPERTIES

I.G.C	: NIL
IMPACT	: NIL
MICRO	: NIL
FERRITE	: NIL
HEAT TREATMENT	: SOLUTION ANNEALED @ 1050 C SOAKING TIME 1 Hrs/Inch THEN WATER QUENCHED

REMARKS:

- 1) We hereby certify that the items above have been tested and inspected in our presence in accordance with drawings and satisfy the requirements for "ASTM A182/A182M F316/F316L" The results comply with product description.
- 2) Materials Free From Radioactive contamination.
- 3) Visual and Dimensional Found satisfactory as per drawing.
- 4) Markings done according to MSS-SP-25.
- 5) No weld Repair Performed.
- 6) MARKING, PUNCH IDENTIFIED AS F316/F316L FIC92
- 7) Material is ultrasonically tested as per ASTM A388/388M & Found satisfactory
- 8) Material confirms to NACE MR0175/ISO - 15156- 2020 and NACE MR0103/ISO -17945 - 2016
- 9) JC MDS NO -JC-MDS-433 Rev. 8

WE HEREBY CERTIFY THAT THE ITEMS MENTIONED ABOVE HAVE BEEN TESTED, INSPECTED & FOUND TO BE IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS.

For AISWARYA LAKSHMI ENGINEERING WORKS

D. L. Thirumurugan

Mr.L.Thirumurugan
Quality Incharge



Address 132A, SIDCO INDUSTRIAL ESTATE, AMBATTUR, CHENNAI - 98. Email Id: alewchennai@gmail.com

JC Valvulas India Pvt. Ltd.
Chennai, Tamil Nadu, India
Verified & Accepted
Q.A. *R. D. K. J.*



Test Report

TC1472825000128623F

Customer: M/s. Aiswarya Lakshmi Engineering Works No. 132A, Sidco Industrial Estate, North Phase, Ambattur ,City: Chennai ,600098	Report No.:	TR/25-26/40258-1
	Report Date:	16-12-2025
	Customer Ref. No.:	790
	Ref. Date	06-12-2025
	Sample Received Date:	06-12-2025
	Date Of Completion:	16-12-2025

Samples drawn by Customer

Sample Description: Rod, Size: Dia 16.00mm, Material: ASTM A182/A182M-24C, Gr. F316/F316L (DUAL), Heat No: FIC92

Discipline : Chemical, **Group :** METALS & ALLOYS

SPECTRO CHEMICAL ANALYSIS

Test Method : JIS G 1253:2002 A-1:2013

Verified By: PAPPITHA

Tested on : 13-12-2025

Test Parameters	Result
% Carbon	0.015 ✓
% Silicon	0.484 ✓
% Manganese	1.766 ✓
% Phosphorus	0.033 ✓
% Sulphur	0.005 ✓
% Chromium	16.476 ✓
% Molybdenum	2.023 ✓
% Nickel	10.23 ✓
% Nitrogen	0.054 ✓

Remarks : The material conforms to ASTM A182/A182M-24c Grade F316/F316L with respect to test/s carried out



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.

Format No:MTPL/QMS/TR/03

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Chennai, Tamil Nadu, India
Verified & Accepted
Q.A.R. D. S. J.





TC1472825000128623F

TR/25-26/40258-1 Dt- 16-12-2025

Discipline : Mechanical, Group : MECHANICAL PROPERTIES OF METALS

TENSILE TEST Test Method : ASTM A370:24a

Verified By: SATHISH

Tested on : 10-12-2025

Test Parameters	Result
0.2% Proof Strength(N/mm ² or Mpa)	591 ✓
Ultimate Tensile Strength (N/mm ² or Mpa)	682 ✓
Elongation (%) 4D GL	47.0 ✓
Reduction of area (%)	80.0 ✓

Remarks :The material conforms to ASTM A182/A182M-24c Grade F316/F316L with respect to test/s carried out ✓

HARDNESS TEST Test Method : ASTM E10:2023

Verified By: SANTHOSH KUMAR.B

Tested on : 11-12-2025

Test Parameters	Result	Requirement
Diameter of the ball (mm).	5 ✓	
Test force (kgf).	750 ✓	
Brinell Hardness Value (HBW)	192, 195, 191 ✓	237 max. ✓

Remarks :The material conforms to Customer Specifications with respect to test/s carried out ✓

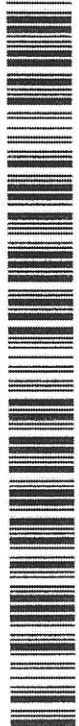
CHARPY IMPACT TEST Test Method : ASTM E23:25

Verified By: V PRABAKARAN

Tested on : 10-12-2025

Test Parameters	Result	Requirement
Test temperature (Degree Celcius)	20°C ✓	
Specimen size (mm)	10x10x55 ✓	
Notch Type	V ✓	
Striker Radius (mm)	8 ✓	
Absorbed energy (Joules) 1.	234 ✓	Single 75 min
Absorbed energy (Joules) 2.	232 ✓	
Absorbed energy (Joules) 3.	240 ✓	
Average values (Joules).	235.33 ✓	Average 100 min ✓

Remarks :The material conforms to Customer Specifications with respect to test/s carried out ✓



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