



**CHANDAN STEEL LIMITED**  
(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)  
ISO 9001 : 2015 CERTIFICATE No. 04 100 011022

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L/c. No. : ---  
L/c. Date: ---

**WORKS:** Plot No. 35, G. I. D. C., Umbergaon  
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**INSPECTION CERTIFICATE 3.1**  
ACCORDING TO EN 10204

<b>ALLIED STAINLESS GROUP</b> 7200 Mykawa Road Houston, Texas 77033 Phone: 800-969-5565	Test Certificate No.	: EXP/22-23/00471 -01
	Date of Issue	: 31.07.2022
	P. O. No.	: PO40063
	Invoice No. & Date	: EXP/22-23/00471 Dtd.31.07.2022

**ITEM DESCRIPTION**  
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES

Sr.No.	ARTICLE NO.	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
41	4L1BR3	CH-17152	128	40	672.30	F304/304L	3" BLRF 150 LBS	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
56	4L1L4	CH-17165	330	40,127 & 128	1894.70	F304/304L	4" LJFF 150 LBS	
30	4L1SR4	CH-17164	150	94	836.00	F304/304L	4" SORF 150 LBS	
10	4L1WRA5	CH-17001	11	96	92.22	F304/304L	5" WNRF 150 LBS 10S	
21	4L1WRS1.5	CH-16231	162	96	294.53	F304/304L	1-1/2" WNRF 150 LBS 40S	

**CHEMICAL COMPOSITION (Weight %)**

Sr.No.	ARTICLE NO.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
41	4L1BR3	0.027	0.44	1.65	0.034	0.006	18.25	-	8.10	-	-	0.077	-
56	4L1L4	0.020	0.47	1.81	0.037	0.010	18.35	-	8.10	-	-	0.085	-
30	4L1SR4	0.021	0.41	1.66	0.036	0.006	18.08	-	8.10	-	-	0.063	-
10	4L1WRA5	0.023	0.63	1.66	0.031	0.001	18.05	-	8.05	-	-	0.073	-
21	4L1WRS1.5	0.024	0.43	1.73	0.035	0.009	18.34	-	8.03	-	-	0.065	-

**MECHANICAL PROPERTIES**

Sr.No.	ARTICLE NO.	0.2% Yield Strength N/mm <sup>2</sup> (R <sub>p0.2</sub> )	Tensile Strength N/mm <sup>2</sup> (R <sub>m</sub> )	Elongation %	Reduction of Area %	Hardness (H.B.W.)
41	4L1BR3	266	570	57	72	173-175
56	4L1L4	256	557	55	69	162-166
30	4L1SR4	269	576	53	67	168-172
10	4L1WRA5	254	563	56	71	163-167
21	4L1WRS1.5	270	571	58	75	164-168

**Remarks:**

- The material is solution annealed at minimum 1050°C and water quenched.
- Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
- PMI test 100% satisfactory.
- Inter-Granular Corrosion Test as per ASTM A262-15(2021) (Pr.E):- Satisfactory.
- The material conforms to ASTM A 182 - 20, ASME SA 182 - 21 & Dimension confirms to ASME B16.5 - 20 Specification.
- Visual and Dimensions inspection done and found satisfactory.
- The material conforms to NACE MR0175/ISO 15156-3:2015 & NACE MR0103-2015.
- The steel making is by Chandan Steel Limited, India.
- Country of Melt - INDIA.



*V. Y. Narayanan*

**V. Y. NARAYANAN**  
SR. MANAGER Q. A.

We hereby certify that, the material described herein,  
and supplied are in compliance with the requirements of the order.