



**CHANDAN STEEL LIMITED**  
(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001:2008 CERTIFICATE No. 04 100 011022-E3  
AD 2000 - MUMBAI ATT NO - REGN.No. 07 202 1423 WP 1261/12  
PED 97/23/EC - CERTIFICATE No. 07 202 1423 WZ 126V12

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L/c. No. : —  
L/c. Date: —

**INSPECTION CERTIFICATE 3.1**  
**ACCORDING TO EN 10204**

ALLIED FITTING CANADA, 172 TURBO DRIVE, SHERWOOD PARK, AB T8H2J6	Test Certificate No. : EXP/0891-12/2012-13 Date of Issue : 29.01.2013 P. O. No. : 090612ACIS Invoice No. & Date : EXP/0891/2012-13 Dtd. 29.01.2013
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**ITEM DESCRIPTION**  
**STAINLESS STEEL FORGED & FULLY MACHINED FLANGES**

Sr.No	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
1	12/1370	34	3 & 11	51.48	316/316L	1" BLRF 300 LBS	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
2	12/1371	55	3	91.85	316/316L	1 1/2" BLRF 150 LBS	
3	12/1476	21	3, 41 & 42	362.88	316/316L	4" WNRF 600 LBS STD	
4	12/1308	11	3 & 42	169.62	316/316L	4" SORF 600 LBS	
5	12/1411	65	3 & 42	66.95	316/316L	1" BLRF 150 LBS	

**CHEMICAL COMPOSITION (Weight %)**

Sr.No	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
1	0.028	0.60	1.59	0.043	0.013	16.76	2.03	10.08	-	-	0.0480	-
2	0.026	0.45	1.54	0.036	0.018	17.05	2.07	10.05	-	-	0.0600	-
3	0.029	0.46	1.47	0.040	0.026	16.85	2.02	10.05	-	-	0.0460	-
4	0.030	0.54	1.62	0.045	0.022	16.85	2.02	10.02	-	-	0.0540	-
5	0.028	0.44	1.79	0.040	0.015	17.15	2.01	10.02	-	-	0.0420	-

**MECHANICAL PROPERTIES**

Sr.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 (B. H. N. )
1	309	595	58	76	179-183
2	324	620	56	72	166-170
3	334	578	58	66	170-176
4	264	570	50	65	162-166
5	297	608	55	70	179-183

**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.
- Micro Structure Reveals Austenitic grains with annealing twins and is free from carbide precipitation ( At 500 X ).
- Inter-Granular Corrosion Test as per ASTM A - 262 - 70 (Pr.E) satisfactory.
- The material conforms to ASTM A 182 - 11/ ASME SA 182 - 10 & Dimension confirms to ANSI B16.5 - 09 Specification.
- Visual and Dimensions inspection 100% satisfactory.
- The material conforms to NACE MR 0175 / ISO 15156-1:2009 (E).



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

*[Signature]*  
**B.S. RAUTELA**  
**WORKS INSPECTOR.**

Stock 4725113 01/30/2020  
 SS FLANGE 1 - 1/2 IN 150# 316 SS BLIND  
 FLANGE IMPORT