



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

ISO 9001 : 2008 - CERTIFICATE No. 44 100 011022-E3  
AD 2000 - MERKBLATT W0 - REGN.No. 07 202 1423 WP 1261 09  
PED 97/23/EC - CERTIFICATE No. 07 202 1423 WZ 1261/09



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E-mail : exports@chandansteel.net

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

F824 QC 09 / 00 / 09.01.2009

**MILL TEST CERTIFICATE**  
ACCORDING TO EN 10204-3.1

<b>VAN LEEUWEN STAINLESS BV</b> INDUSTRIEWEG 26 4153 BW BEESD, POST BOX : 19 4153 ZG BEESD, THE NETHERLANDS	Test Certificate No.: EXP/0735-74/2009-2010 Date of Issue : 27.02.2010 P.O. No. & Date : 911123, Dt. 20.11.2009 Invoice No. & Date : EXP/0735/2009-10 Dtd. 27.02.2010
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ITEM DESCRIPTION		Pcs.	Net Wt.
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES AS PER EN 10222 - 5 & EN 1092 - 1		22	70.40 Kgs.

Article No.	Heat No.	Grade EN/ASTM	Size	Process Route	
				Electric Induction Melting, A.O.D. Refining, Continuous Casting	
796.92.050	09/1590	1.4404/316L	DN 50 PN40 TYPE 05		

CHEMICAL COMPOSITION (Weight %)										
	C	Si	Mn	P	S	Cr	Mo	Ni	Ti	N
Results	0.020	0.42	1.71	0.045	0.021	16.91	2.113	10.08	-	0.0600

MECHANICAL PROPERTIES											
Heat Treatment	Yield Strength			Tensile Strength	Elongation	Reduction of Area	Hardness	Charpy (V) Impact Test at -196 °C (Joules)			
	Direction	2%(Rp0.2)	1%(Rp1.0)					(R <sub>m</sub> )	(G.L.=5D=50mm)	%	%
F/09/419	1	249	288	563	58.20	73.20	151-153	126	116	127	123.00

**Remarks:**

- The material is solution annealed at minimum 1040 °C and rapidly water quenched.
- The material is Free from Mercury contamination.
- Material is free from Radio-Active Elements and within the limit of Background Radiation.
- All raw material is fully killed steel.
- The material is free from welding.
- PMI test 100% satisfactory.
- Micro Structure Reveals twinned equiaxed grains of austenite and free from carbide precipitation found satisfactory.
- Grain size ASTM No. 5 - 6 of ASTM E112-96.
- Inter-Granular Corrosion Test as per ASTM A - 262 - 02a (Pr.E) & micro after IGC Pr. E found satisfactory.
- The material has been tested & confirms/complies as per EN 1092 - 1 : 2001, EN 10222 - 5 : 1999 & ASTM A182 - 08a Specification and purchase order and is of Indian origin.
- The material approved according to PED 97/23/EC.
- The material hardness conforms to NACE MR 0175 : 2003, & NACE MR 0103 : 2005 standards.
- Visual and Dimensions inspection 100% OK.

Box No.: 20

It is hereby certified that the above results are true and correct in every details.

*[Signature]*  
Mumbai IFI Office  
Lloyd's Register Asia

*[Signature]*  
**B. S. RAUTELA**  
MANAGER QUALITY ASSURANCE

ATTACHMENT TO  
LR CERTIFICATE BIS 0987264/1

**POS: 1**