



INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

ISO 9001:2008-TUV NORD REG.No-44100011170-E3 EXPIRY DATE : 21.01.2016	INVOICE NUMBER / MTR NO. DATE	995145/ 24 11.09.2015
AD 2000 MERKBLATT WO-072031423 WP 1022/14 Q AS PER W2/W9/W10 EXPIRY DATE FEBRUARY 2017	MATERIAL SPECIFICATION	ASTM A182/A182M- 14B / ASME SA182/SA182M - 13
PED 97/23/EC QMS REG.NO.072021423 WZ 1022/14 Q EXPIRY DATE: FEBRUARY 2017	PURCHASE ORDER NO. DESCRIPTION	1404/15-II STAINLESS STEEL FORGED FLANGES

CHEMICAL ANALYSIS

Sr.No	Item Description	Dimension Specification	Heat No	Qty	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%Ti	%N
124	316/316L 1-1/2" SWRF 150# S40S	B16.5	99568	71.000	0.0290	1.550	0.520	0.0220	0.0360	16.730	10.060	2.020	0.0030	0.07000
125	316/316L 1-1/2" SWRF 150# S80S	B16.5	99568	5.000	0.0290	1.550	0.520	0.0220	0.0360	16.730	10.060	2.020	0.0030	0.07000
126	316/316L 3/4" WNRF 150# S10S	B16.5	99568	5.000	0.0290	1.550	0.520	0.0220	0.0360	16.730	10.060	2.020	0.0030	0.07000
127	316/316L 12" SORF 150#	B16.5	35804	6.000	0.0240	1.520	0.370	0.0210	0.0350	16.720	10.030	2.020	0.0020	0.07900
128	316/316L 2" THRF 150#	B16.5	99513	54.000	0.0290	1.680	0.400	0.0210	0.0350	16.770	10.060	2.030	0.0030	0.06800
129	316/316L 1" THRF 150#	B16.5	99483	160.000	0.0210	1.600	0.370	0.0200	0.0380	16.810	10.100	2.040	0.0020	0.08000

MECHANICAL PROPERTIES

Sr.No	Heat No.	Tensile Strength	Proof Stress Rp=0.2 %	Proof Stress Rp=1.0%	% Elongation	% Reduction of	Hardness	IMPACT TEST-CHARPY V-NOTCH AT +20 DEG. C (JOULES)			
		(MPa)	(MPa)	(MPa)	LO=4D	Area		BHN	1	2	3
124	99568	576.960	280.250	331.870	57.70	68.66	161.0	180.0	179.0	192.0	184.0
125	99568	576.960	280.250	331.870	57.70	68.66	161.0	180.0	179.0	192.0	184.0
126	99568	576.960	280.250	331.870	57.70	68.66	161.0	180.0	179.0	192.0	184.0
127	35804	545.690	246.210	293.470	57.60	69.94	150.0	181.0	175.0	169.0	175.0
128	99513	566.490	249.160	297.830	57.80	69.98	154.0	184.0	174.0	181.0	180.0
129	99483	563.650	249.090	304.660	59.20	69.35	151.0	184.0	176.0	202.0	187.0

NACE CERT
MELTING PROCESS
HEAT TREATMENT
DIMENSIONS
SURFACE QUALITY
PMI
INTER GRANULAR CORROSION TEST
MICRO OBSERVATION
RADIOACTIVITY TEST
REMARKS

MATERIAL CONFORMS TO NACE MR 0175 / ISO 15156 - 2009 & NACE MR 0103 - 2012
INDUCTION / AOD (IRS) / CONCAST
SOLUTION ANNEALED AT 1080°C AND WATER QUENCHED
CONFORM WITH THE SPECIFICATION (100% INSPECTED)
SATISFACTORY
NO OBJECTION(100% TESTED WITH MOBILE SPECTRO)
PASSED IGC TEST IN ACCORDANCE WITH ASTM A262 PRACTICE E
NO CARBIDE PRECIPITATION OBSERVED ON GRAIN BOUNDARIES
ALL THE ABOVE MATERIAL IS TESTED FOR RADIOACTIVITY AND FOUND WITH IN THE LIMIT OF BACKGROUND RADIATION
NO WELD REPAIR WAS PERFORMED & ALL THE ITEMS ARE FREE OF WELD REPAIR
FREE FROM MERCURY CONTAMINATION

WE CERTIFY THAT THE MATERIAL DESCRIBED ABOVE HAS BEEN TESTED AND COMPLIES WITH THE ORDER/CONTRACT AND IS OF INDIAN ORIGIN



MANUFACTURER'S SYMBOL

WORKS INSPECTOR