



BALKRISHNA
STEEL FORGE PVT. LTD.

Works :
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MANUFACTURING TEST CERTIFICATE

CERTIFICATION AS PER EN 10204: 3.1

TC NO. BF/09489

DT. 05.01.2019

CUSTOMER NAME :- M/S. NORCA INDUSTRIAL COMPANY, LLC-USA

INV. NO./EC NO.- 2015

Dt: 05.01.2019

P.O. No.	502/005141				P.O. DT.	04.09.2018										
Sr. No.	DESCRIPTION				P.O. SR NO.	INV. NO.	SR	QTY	MATERIAL	MILL HEAT NO.	H.L. NO.	DIMENSION STD				
1	1"	150#	BLD	RF	1	1	1060	ASTM-A105-18	806900	806900	ASME B16.5-17					
2	3"	300#	BLD	RF	8	3	1	ASTM-A105-18	070904	BKS/03523	ASME B16.5-17					
3	3"	300#	BLD	RF	8	3	5	ASTM-A105-18	06/03	06/03	ASME B16.5-17					
4	3"	300#	BLD	RF	8	3	113	ASTM-A105-18	112135	112135	ASME B16.5-17					
5	3"	300#	BLD	RF	8	3	5	ASTM-A105-18	070904	070904	ASME B16.5-17					
6	6"	150#	SO	PF	47	6	4	ASTM-A105-18	100116	100116	ASME B16.5-17					
Chemical Composition		C%	Mn%	P%	S%	Si%	Cu%	Ni%	Cr%	Mo%	V%	Nb%	N%	CE.		
Std. Reqmnt.		MIN.	0.60	0.035	0.040	0.35	0.40	0.40	0.30	0.12	0.08	0.02	-	0.47		
MAX.		0.25	1.65	0.035	0.040	0.35	0.40	0.40	0.30	0.12	0.08	0.02	-	0.47		
Check Analysis	806900	0.21	0.94	0.027	0.015	0.17	0.01	0.01	0.01	0.00	0.00	0.00	-	0.37		
	070904	0.23	0.92	0.020	0.018	0.24	0.08	0.02	0.02	0.01	0.00	0.00	-	0.40		
	06/03	0.21	0.92	0.024	0.021	0.28	0.05	0.03	0.05	0.00	0.01	0.00	-	0.38		
	112135	0.19	1.04	0.022	0.020	0.27	0.07	0.02	0.02	0.00	0.00	0.00	-	0.37		
	100116	0.21	0.94	0.025	0.028	0.15	0.08	0.02	0.01	0.00	0.00	0.00	-	0.38		
MECHANICAL PROPERTIES		U.T.S. N/mm2	Y.S.(0.2% Offset) N/mm2	ELONGATION% MIN.	REDUCTION IN AREA% MIN.	HARDNESS (HV)	HEAT TREATMENT DETAILS				IMPACT ENERGY ABSORBED AT °C					
Std. Requirement		485	250	22%	30%	137 TO 197					Specimen (J)			Avg.(J)		
Requirement		MIN.	MIN.	MIN.	MIN.						1	2	3			
Result	806900	521.35	333.13	31.80	57.00	146-159	AS FORGED				-	-	-	-		
	BKS/03523	509.70	345.10	33.00	72.10	143-156	AS FORGED				-	-	-	-		
	06/03	532.04	313.69	32.40	62.40	146-159	AS FORGED				-	-	-	-		
	112135	499.79	320.08	33.40	72.40	143-156	AS FORGED				-	-	-	-		
	070904	504.22	336.51	35.00	66.30	143-156	AS FORGED				-	-	-	-		
	100116	514.94	332.34	29.00	53.00	146-159	AS FORGED				-	-	-	-		
Identification		Size, Pressure Rating, Type, Nominal Bore, SA/A105 N, B 16, Heat Lot No., INDIA														
Remark:-		<ul style="list-style-type: none"> Materials Was manufactured, sampled, Tested and Inspected in accordance with specification(s) solely by the manufacturer listed herein and was found to meet the requirements. No weld repair was performed. Materials is free of mercury and radioactive contamination. Test Bar used - Round L=4D. The Raw material for above item is manufactured/procure from Indian mill 														
		We hereby certify that the above mentioned items conform to requirements of - ASTM A-105-18 / ASME SA 105 & NACE MR0175 / ISO 15156 -15														

6" 150# FS/O FLANGE--FLAT FACE--

Heat #: 100116

(Metallurgist)

FLB:12 REV:00 Dt: 01.11.17

Stock 4709895 05/20/2019



MATCONOR MN150FSF13 6IN 150LB SLI
ON WELD FLANGE FF

Baldev
QA HEAD