

# NORMA (INDIA) LIMITED

(AN ISO 9001:2015 CERTIFIED COMPANY)

48 Site IV industrial Area, Sahibabad, Ghaziabad-201010 (U.P) INDIA.

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## Works Test Certificate

(AS PER EN 10204:3.1)

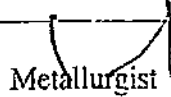
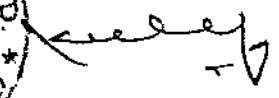
NORMA/LAB NO-180/21-22		INVOICE NO. E 2209		DATE: 07.04.2021	
P. Order. No:	P1026453	Customer:	SERVICE METAL PRODUCTS CO. U.S. A	Forging specification	ASTM A105- 2021 ASME SA105-2019
Component	3"-150# SOFF FLG			Steel Supplier	P.G.I. Pvt. Ltd.
Drawing No.				Mill Heat No.	16/47
Machining STD	ANSI B16.5- 2017 ASME B16.5-2017	Quantity: -	225Nos.		

### TEST RESULTS

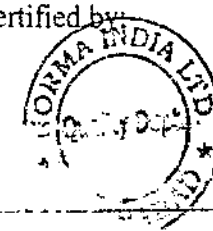
NORMA HEAT NO: **1695**

### CHEMICAL COMPOSTION

### MECHANICAL PROPERTIES.

Elements %	Specified Composition	Actual		PROPERTIES	SPECIFIED	OBTAINED	Specified carbon as per Purchase Order 0.25max. Serrated face as per MSS-SP-6 With in limit of 125-250AARH  Supply Condition: Fully Finished.  CARBON EQUIVALENT (CE) CE = C + Mn + Cr+Mo+V + Ni+Cu 6 5 15
		NORMA LAB	MILL T.C.				
Carbon	0.35max.	0.20	0.21	Yield Strength (mpa)	250.00 min.	348.26	
Manganese	0.60-1.05	1.18	1.18				
Silicon	0.10-0.35	0.26	0.25	Tensile Strength (mpa)	485.00 min.	576.44	
Sulphur	0.040max.	0.007	0.009				
Phosphorous	0.035max.	0.019	0.021	%Elongation in 50mm / 4D	22.00 min	32.24	
Chromium	0.30max.	0.070	0.060				
Nickel	0.40max.	0.020	0.030	Hardness HB.	197. max.	149-159	MARKING AS PER MSS-SP-25-2008 3"-150 SA/A105 1695 B16.5 NORMA INDIA.03/2021
Copper	0.40max.	0.012	0.010				
Molybdenum	0.12max.	0.008	0.010	% Reduction of Area	30.00 min.	65.39	Checked by:  Metallurgist
Vanadium	0.080max.	0.002	0.006				
Carbon Equivalent (CE)	0.470max.	0.410	0.420	*As per ASTM A105 Table 1 Note: For each reduction of 0.01% below the specified carbon maximum(0.35%),an increase of 0.06% manganese above the specified maximum (1.05%) will be permitted up to maximum 1.65%.			Certified by:  Quality Control Manager

Remarks: We here by certify that the material described here in has been tested in accordance with the applicable specifications referred above and meets the requirements as per EN10204:3.1-2004, NACE MR0103-15, NACE MR0175-15/ ISO15156-2. All material supplied is certified to be free of mercury contamination, No weld repair performed. Raw material used is fully killed and fine grain practice. Country of Origin/Melt: INDIA.



3" 150# A/SA105 SLIP ON FLG FF B16.5

Heat #: 1695

Stock 4709893 10/21/2021



MATCONOR MN150FSF10 3IN 150LB SLIP ON WELD FLANGE FF