



JAYASWAL NECO INDUSTRIES LIMITED

(STEEL PLANT DIVISION)

SILTARA INDUSTRIAL GROWTH CENTRE, RAIPUR (C.G.)

Ph.: +91-7721-264241/263, Fax No.: +91-7721-264279/264240

TEST CERTIFICATE

NO: BMSBB56

QA/RM/F10

CUSTOMER : FORGE INDIA PVT.LTD. DISTT-SOLAN (HP)
 SPECIFICATION : FI/TDC/S-002.ISSUE NO.1
 REV No / REF NO : 00.
 HEAT NO : MB06343
 GRADE : 20MNCR5
 SECTION(MM) : 75RCS
 REDUCTION RATIO : 11.1
 INPUT SIZE (MM) : 250 X 250
 PROCESS ROUTE : BF/EDF/LRF/VD/CCM/SEN/M'EMS/AMLC

INVOICE NO :
 TRUCK NO :
 DATE : 23/02/2018
 NO OF PCS / BNDL : SAMPLE TC
 QUANTITY (MT) :
 COLOUR CODE : RED+BLUE DOT
 SUPPLY CONDITION : AS ROLLED
 MULTIPLE LENGTH : 5-6MTR.

1. CHEMICAL COMPOSITION % (Ladle/Product)

	%C	%Mn	%P	%S	%Si	%Cr	%Ni	%Mo	%Pb	%Cu	%Sn	%V	%Ti	%B	%Al	%Ca
CUST. MIN	0.170	1.100	--	--	0.150	1.000	--	--	--	--	--	--	--	--	0.020	--
SPEC. MAX	0.220	1.400	0.025	0.035	0.400	1.300	--	--	--	--	--	--	--	--	0.040	--
ACTUAL	0.180	1.230	0.015	0.026	0.190	1.230	0.017	0.002	--	0.006	0.004	0.004	0.0020	0.0003	0.027	0.0023

2. MECHANICAL PROPERTIES

SPECIFIED

ACTUAL

YS : --
 UTS : --
 ELONGATIONS(5.65Sg.rt.A) % : --
 REDUCTION AREA % : --
 IMPACT VALUE : --
 HARDNESS(BHN/HRB/HRC) : 220BHN MAX. 180/200 BHN

3. METALLURGICAL PROPERTIES

MICRO STRUCTURE : P+F PEARLITE+FERRITE
 GRAIN SIZE(ASTM E112/IS:4748) : 6/8 6.5/7.5
 TOTAL DECARB (MM) SAEJ419 : 1.0%OF DIA 0.38MM PARTIAL
 INCL RATINGS(ASTM E-45/IS:4163)

SAMPLE TC
 Material has been sent to Mrs. *Forge*
 India Pvt.Ltd.
 200309 23/02/18 Qty 15.180
 vide Invoice No. *DL*
 Pick No. PB2325307
 For Jayaswal Neco Industries Ltd. (Ldh.)
Singh
 Joint Secretary

SPECIFIC REQUIREMENT

THIN : THICK : THIN : THICK : THIN : THICK : THIN : THICK :

A-2.0/1.5 ; B-2.0/1.5 ; C-2.0/1.0 ; D-2.0/1.0

ACTUAL

1.5 ; 0.0 ; 0.5 ; 0.0 ; 0.0 ; 0.0 ; 1.5 ; 0.0

MACRO ETCH TEST (ASTM E - 381) : C2R2S2 MAX. BETTER THAN C2R2S2.

4. D. I. VALUE (J406)

JOMINY REQUIREMENT : 4/16"-34/38HRC

HARDENABILITY IS:3848/A255-02

DIST-INCH/MM :

4/16" :

VALUES(HRC):

38.00 :

5. GAS LEVEL (PPM) SPECIFIED MAX

O2: 20.0

N2: 70-80

H2: 2.0

GAS LEVEL (PPM) ACHIEVED

O2: 15.0

N2: 80.0

H2: 1.6

6. REMARKS

100% SPARK/SPECTRAL/MOBILE SPECTRO TEST :OK
 STEP DOWN TEST :OK
 UPSET TEST :NA
 100% UT & MPI TEST OK.