

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

CUSTOMER	:FORGE INDIA PVT.LTD. DISTT-SOLAN (HP)	INVOICE NO	: 262085	QA/RM/F10
SPECIFICATION	:FI/TDC/S-002,ISSUE NO.1	TRUCK NO	:CG04JC-2818	
REV.No / REF NO	:00,	DATE	:28/02/2018	
HEAT NO	:D 59219	NO OF PCS / BNDL	:63PS/03BL.	
GRADE	:20MNCR5	QUANTITY (MT)	: 5.160	
SECTION(MM)	:50DIA	COLOUR CODE	:RED+BLUE DOT	
REDUCTION RATIO	:16.5	SUPPLY CONDITION	:AS ROLLED	
INPUT SIZE (MM)	:180 X 180	MULTIPLE LENGTH	:XL=605MM	
PROCESS ROUTE	:BF/EDF/LRF/VD/CCM/SEN/M'EMS/AMLC			

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	0.170	1.110	0.017	0.023	0.220	1.010	0.017	0.002	--	0.007	0.004	0.004	0.0020	0.0004	0.024	0.001

2. MECHANICAL PROPERTIES

	SPECIFIED	ACTUAL
YS	--	--
UTS	--	--
ELONGATIONS(5.65S _q .rt.A) %	--	--
REDUCTION AREA %	--	--
IMPACT VALUE	--	--
HARDNESS(DHN/HRB/HRC)	220BHN MAX.	160/180 DHN

3. METALLURGICAL PROPERTIES

MICRO STRUCTURE	: P+F	FERRITE+PEARLITE
GRAIN SIZE(ASM E112/IS:4748)	: 6/8	6.5/7.5
TOTAL DEARB (MM) SAEJ419	: 1.0%OF DIA	0.27MM PARTIAL
INCL RATINGS(ASM E-45/IS:4163)		

SPECIFIC REQUIRMENT

ACTUAL

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				
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.
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4. D. I. VALUE (J406)	: --
JOMINY REQUIREMENT	: 4/16"=33/37
HARDENABILITY IS:384B/A255-02	: --

DIST-INCH/MM	: 4/16"
VALUES(HRC)	: 34.50

5. GAS LEVEL (PPM) SPECIFIED MAX	: O2: 20.0	N2: 70-80	H2: 2.0
GAS LEVEL (PPM) ACHIEVED	: O2: 17.4	N2: 72.0	H2: 1.8

6. REMARKS

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

