Web Site www.sunflagsteel.com E-maii admin@sunflagsteel.com Regid Off (0712) 2524661 Works (07184) 285551 CIN : L27100MH1984PLC034003

SUNFLAG IRON & STEEL CO. LTD.

Regd Office: 33, Mount Road, Sadar, Nagpur - 440 001 Inc. Works: Bhandara Road, Bhandara - 441 905 (Maharashtra)

TEST CERTIFICATE

\$SB:20MNCR5B:A/C M/S HGL / 5157 21.09.2019 \$C %Mm %P %S %Si %	CUSTOMER SPECIFICATION NO. HEAT	CUSTOMER: SSB ENGINEERS (P) LID
20MICR5 RND-80 HALF BLUE+HALF 280×320 AS RO ORANGE CHEMICAL COMPOSITION CF %Cu %Ni %Mo %V %AN 650 650 650 650 650 650 650 650 650 650	GRADE SECTION IN GRADE COLOR CODE BLT/BLM SUPPLY CONDITION .	PROCESS ROUTE TC NO. :0180142 EAF-LHF-VD-CCM (M-EMS) - DATE

	-			-																				
100	SP-MIN			-					ACTUAL	-MAX		SP-MIN						ACTUAL		-MAX		SP-MIN		
			ATA		INCL								0	PS/YS				0.195	100	0.22		0.17		ő
	1		H B		NOISL			-	_	-	_	1	-		AS			1.380	,	1.40		1.00		177.70
-	1	:	T.	IS:4163	INCLUSION RATING (ASTM-E-45			_		-		-	0	UTS	ROLLED			0.015		1.40 0.025 0.035		1		d
	1	1	-}	3)	(ASTM									(F)	/ H		¥ N	0.025				0.020		Č
	_	F	J .		I-E-45			_	-	-			_		H.T.	TATATA	TANTO	0.270	2	0.40		ı		5
	1	þ	J	_	\									%RA		TA TAN	7	1.250		1.30	+.00	1 00		401
				(ASTM-E-112)	GRAIN SIZE			_	1	1	1	-	PY) ()	(120	MI	THURST PROPERTIES		0.150	02.0	0 25				*Cu
	S)			E-112)	SIZE			1		ı)	(IZOD/CHAR	IMPACT	TIES		0.195]1.380]0.015]0.025]0.270]1.250 0.150 0.110 0.070	0.20		1			%N1
				QUALITY	SURFACE				1						HARI		0.0.0	0 070	0.10	0 10	1			%Mo
				YTI	ACE	META		208	0.57	340	1		,	(BHN)	HARDNESS				,		,			٧%
				HARDNESS	OUENCH	LLURG								VALUE	דכ		0.026		0.050		0.020			%A1
		С		NESS	NCH	METALLURGICAL PROPERTIES	-		+		1	1		VALUE	2		-		1				9	%Pb
		dA				ROPER	1,1		ı		1	+	t				_		1		1			%Ti
1	+		$\frac{1}{2}$	C	11	TIES	40.04		- 48		- 43	+			┨		1		,		1		1	% B
		dB+dC			TICCOSES		13.0 44.0	2	48.0 45.0	_	43.0 40.0	+			\dashv		0.002		0.03		ı			nS%
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ı	_	D					- 42.0		- 44.0	+	ا م م	+		76	\dashv		1		1					&As
	-	FULL		ECARBI			0 40.0					-		7	\dashv	OT	-			1			-	%Ca
		PARTIAL		JRIZAT			0	1						J10	THE THITTOE	ATATO A	0.000	0.00	0 006				5	42.%
_	-	I TOTAL		DECARBURIZATION (MM)			38.0		- 41.0	38.0	_			J11	ALUE	77.7	1		1	,			9	90
	AS			M) MA	$\frac{1}{1}$				ı	,				J13									1	dN%
	ASTM-E-381	RESULTS		MACRO ETCH			34.0	00.0	39.0	34.0)			J15			1	+	1	+		1.	田 内 内	%02
1	381	rs		TCH		0	32.0	-	37 0	32.0)			020	\neg		10	-	20	+	1			
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		(RATTO	REDUCTION		0000	36.0 34.0 32.0 31.0 30 0	+	34 0	30.0)			000	\neg		0.00		2.0		1		ppm	ZH%
_			-		-	1	_	T,		Ĺ	-	1					-	_		_	_			-

REMARKS: 100% SPARK/SPECTRAL: OK. U.S.T. (100%): OK.M.P.T. (100%): OK.

Ses

fyrthat the material described above conforms to the specs.

0.000

0.29

0.29

ClR1S1 C2R2S2

17.83

6:1

For Sunflag Iron & Steel Co. Ltd

7/7.5

CTUAL

K4=14 IR-DIN50602 AL/N2 = 2.04 CU+10SN= 0.176 M.S.=F+P+TRACES OF BAINITE

Mr. Samadhan Jadhav

A Mishoo

