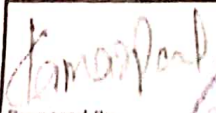





Since 1992

KISCO
NERVES OF STEEL

Doc No: T-SCG-16 Batch No: 10 Date: 01.06.2013 Approved By: M.R.		TEST CERTIFICATE AS PER EN 10204-3.1													
CUSTOMER: S.S.B. ENGINEERS (P) LTD		GRADE: 5690QL	T.C. NO.: RND/922	DATE: 05.10.2024											
P.O. No. & Dt: 2024-25N 45 Dt: 06.09.2024		Inv. No. SA244-00905	Inv. Dt. 11/10/2024												
Product: ROLLED BAR		Mfg. Route: EF + LRF + VD, Fully Killed Bottom Poured Ingot													
Feasibility No.: KCI/22-23/1005, Rev No 1 Dt: 28.08.2023		Supply Conditions: As Rolled													
ITEM DESCRIPTION															
Heat No. K24-1010	Size As per (IS: 3739 Gr-2) 110 MM DIA	No. Of Pcs. 25	Qty In MT 10.585	Remarks											
CHEMICAL ANALYSIS %															
% ELEMENT	C	Mn	Si	S	P	Cr	Mo	Ni	Nb	Ti	Cu	B	V	Zr	N
SPEC. MIN	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
SPEC. MAX	0.20	1.70	0.80	0.010	0.025	1.50	0.70	2.00	0.06	0.05	0.50	0.005	0.12	0.15	0.015
Achieved	0.19	1.27	0.29	0.001	0.019	1.06	0.34	1.79	0.01	0.002	0.11	0.0003	0.07	0.002	0.010
MECHANICAL PROPERTIES (on H&T Sample Only)															
Test piece location 12.5 mm from surface	Tensile Strength	Yield Strength	% Elongation	RA	Hardness (BHN)	Impact (CVN) Longitudinal @ -40 °C									
SPEC. MIN	710	630	14	-	-	30J Min.									
SPEC. MAX	900	-	-	-	-										
Achieved	816.85	689.49	19.78	-	-	132	136	138	Avg. 135.3J						
Jominy Hardenability						RAW MATERIAL DETAIL									
Distance in mm	-	-	-	-	-	INGOT SIZE									
Spec. MIN	-	-	-	-	-										
Spec. MAX	-	-	-	-	-	REDUCTION RATIO									
Achieved	-	-	-	-	-										
NON DESTRUCTIVE TESTING															
Ultrasonic Testing				Dye Penetrant Testing				Magnetic Particle Inspection				Mixup Test			
Ref. Std.	ASTM A388, Probe: $\phi 24$ mm, 2MHz			Ref. Std.	.....			Ref. Std.	.....			Spark test	100% Done & found Satisfactory		
Acceptance	4mm FBH on DGS Scale			Acceptance	...			Acceptance	.....			Mobile Spectro			
Result	Found Satisfactory			Result	.....			Result	.....					
METALLURGICAL TESTING															
INCLUSION RATING (ASTM E45)				GRAIN SIZE (ASTM E112)		MICRO STRUCTURE				MACRO (ASTM E381)		STEP DOWN TEST			
A B C D				6.5-7.0						Better than C2 R2 S2		Decarburization Depth			
THIN															
THICK															
IDENTIFICATION DETAIL				Heat No., Grade, & Size marked on bars/bundles				Colour Code				ORANGE-GREY-PINK - BLACK SPOT			
Result:		The supplied material is free from internal, surface defects & radioactive contamination													
We hereby certify that products has been manufactured,inspected and found acceptable as per customer requirements.															
Prepared By: 				Reviewed By: 											

KISCO CASTINGS (INDIA) LIMITED

CIN - U27100PB2012PLC036043 GST-03AAECK6712E1ZZ

