



Since 1992

**KISCO**  
NERVES OF STEEL**TEST CERTIFICATE**

AS PER EN-10204-3.1

Doc.no.:F-QCD-16		<b>TEST CERTIFICATE</b> AS PER EN-10204-3.1		T.C. NO.:- RND/1186											
Issue no.:1.0				DATE:- 09.01.2025											
Date: 01.08.2013															
Approved By:M.R.															
CUSTOMER:- S.S.B. ENGINEERS (P) LTD		GRADE :- S690QL	Inv. No. SA24-01377		Inv. Dt. 23/01/2025										
P.O. No. & Dt. 2024-25N 55 Dt. 15.11.2024		Mfg. Route EF + LRF + VD, Fully Killed Bottom Poured Ingot		Supply Conditions Rolled + Peeled											
Product ROLLED BAR															
Feasibility No. KCIL/22-23/1005, Rev. No.3 Dt. 28.08.2023															
ITEM DESCRIPTION															
Heat No.	Size As per {IS: 3739 Gr-2}	No. Of Pcs.	Qty In MT.	Remarks											
K24-1454	126 MM DIA	02	1.120												
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	Chemical Composition confirming to the specification.														
MECHANICAL PROPERTIES (On H&T Sample Only)															
Test piece location 12.5 mm from surface	Tensile Strength (Mpa)	Yield Strength (Mpa)	% Elongation	R.A	Hardness (BHN)	Impact (CVN) Longitudinal @ -40 °C									
SPEC. MIN.	710	630	14	-	-	30J Min.									
SPEC. MAX.	900	-	-	-	-										
Achieved	824.52	742.49	22.8	-	-	124	126	130	Avg. 126.6J						
Jominy Hardenability						RAW MATERIAL DETAIL									
Distance in mm	-	-	-	-	-	INGOT SIZE					-				
Spec. MIN.	-	-	-	-	-	REDUCTION RATIO					-				
Spec. MAX.	-	-	-	-	-										
Achieved	-	-	-	-	-										
NON DESTRUCTIVE TESTING															
Ultrasonic Testing				Dye Penetrant Testing				Magnetic Particle Inspection				Mixup Test			
Ref. Std.	ASTM A388, Probe: ø24mm, 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				7.0		.....		Better than C2 R2 S2		Decarburization Depth					
THIN 0.5 - - 1.0															
THICK - - - 0.5															
IDENTIFICATION DETAIL		Heat No., Grade, & Size marked on bars/bundles				Colour Code				ORANGE-GREY-PINK					
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.				S.S.B. ENGINEERS (P) LTD				KISCO CASTINGS (INDIA) LIMITED			

**KISCO CASTINGS (INDIA) LIMITED**

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