



Since 1992

**KISCO**  
NERVES OF STEEL

Doc.no.:F-QCD-16		<h1>TEST CERTIFICATE</h1> <p>AS PER EN-10204-3.1</p>														
Issue no.:1.0																
Date: 01.08.2013																
Approved By:M.R.																
CUSTOMER:-	S.S.B. ENGINEERS (P) LTD				GRADE :-	S690QL				T.C. NO.:-	RND/1167					
						DATE:-		03.01.2025								
P.O. No. & Dt.	2024-25N 55 Dt. 15.11.2024				Inv. No.	SA244-01291				Inv. Dt.	07/01/2025					
Product	ROLLED BAR				Mfg. Route	EF + LRF + VD, Fully Killed Bottom Poured Ingot										
Feasibility No.	KCIL/22-23/1005, Rev. No.3 Dt. 28.08.2023				Supply Conditions	Rolled + Peeled										
ITEM DESCRIPTION																
Heat No.	Size		No. Of Pcs.		Qty in MT.		Remarks									
K24-1457	106 MM DIA		24		9.540											
CHEMICAL ANALYSIS %																
% ELEMENT	C	Mn	Si	S	P	Cr	Mo	Ni	Nb	Ti	Cu	B	V	Zr	N	
SPEC.	MIN.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	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.					
	MAX	900	-		-		-		-		184 180 184 Avg. 182.6J					
Achieved	835.56		751.41		21.72		-		-							
Jominy Hardenability										RAW MATERIAL DETAIL						
Distance in mm	-	-	-	-	-	-	-	-	-	INGOT SIZE						
Spec.	Min.	-	-	-	-	-	-	-	-							
	MAX	-	-	-	-	-	-	-	-	REDUCTION RATIO						
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				
Acceptance	4mm FBH on DGS Scale			Acceptance	...			Acceptance	....			100% Done & found Satisfactory				
Result	Found Satisfactory			Result	....			Result	....			Mobile Spectro				
METALLURGICAL TESTING																
INCLUSION RATING (ASTM E45)				GRAIN SIZE (ASTM E112)		MICRO STRUCTURE				MACRO (ASTM E381)		STEP DOWN TEST				
THIN	A	B	C	D	6.5-7.0						Better than C2 R2 S2		Decarburization Depth			
THICK	-	-	-	0.5												
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