

MILL TEST CERTIFICATE

CERTIFICATE ACCORDING TO EN 10204 : 3.1

PURCHASER NAME :		TEST CERTIFICATE No.:	3417/2023
PURCHASER ORDER No. :	380761-01HOU	TEST CERTIFICATE Date :	31.03.2024
WORK ORDER No. :	LBST/WO/EXP/23-24/54	INVOICE NO:	LBSTEXP23240138
NAME OF STEEL SUPPLIER :	RASHTRIYA ISPAT NIGAM LIMITED, VISAKHAPATNAM, A.P, INDIA	INVOICE Date :	31.03.2024
STEEL MAKING METHOD :	BOF-LF/IRUT-CCM-ROUND, Fully Killed.		
PROCESS OF PIPE MANUFACTURE :	CDS / CS / PIPES		
MANUFACTURE PROCESS ROUTE :	PM-HI-STP-CD-HT-Finishing-NDT-P&F-Dispatch.	CUSTOMER UID NO	PO. SL. NO. 1

SPECIFICATION & GRADE :		ASTM A106B ASME SA106B ASTM A53B ASME SA53B NACE MR0175/MR0103 ISO 15156									
Sr. No.	LBST HEAT NO	SUPPLIER HEAT NO	SIZE				Quantity		General		
			OD (INCH)	ID (INCH)	WT (INCH)	Length (FEET)	Nos.	FEET.	MT.	End Condition	Coating
1	23D03512	23D03512	1.05" X 0.154" X 19 Feet Long.				1055	20045.00	-	Plain End, Square with Chamfer	Durable Black Coating

CHEMICAL COMPOSITION (%) [Testing method : ASTM E 415 (2021)]													
Sr. No.	HEAT NO	REQUIRED	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Cu	%Mo	%V	%C.E
1	23D03512	Min.	-	0.29	0.10	-	-	-	-	-	-	-	-
		Max.	0.30	1.06	-	0.035	0.035	0.40	0.40	0.40	0.15	0.08	-
	L / A	0.16	0.67	0.11	0.012	0.020	0.007	0.000	0.000	0.000	0.000	0.000	0.273
	P1 / A	0.17	0.67	0.12	0.012	0.021	0.008	0.006	0.005	0.005	0.005	0.002	0.281
	23D03512	P2 / A	0.17	0.66	0.12	0.013	0.021	0.009	0.007	0.006	0.007	0.002	0.284

MECHANICAL PROPERTIES [Testing method : ASTM A370 (2023)]										
Sr. No.	HEAT NO	REQUIRED	YIELD STRENGTH (PSI)	TENSILE STRENGTH (PSI)	ELONGATION (%)	HARDNESS (HRB)	IMPACT TEST at -56°C,	BEND TEST	FLARING TEST	GRAIN SIZE
G.L. = 50 mm, Tubes tested in Full section										
		Min	35000	60000	30	-	5 Joule average value & 4 Joule single value	-	-	-
		Max	-	-	-	99	-	-	-	-
1	23D03512		46220	71801	49.00	69 - 71	21.33 Joule average value(Three specimen value 21J, 23 J & 20J)	OK	NA	7.0

NON-DESTRUCTIVE TEST						SURFACE QUALITY			
Sr. No.	HEAT NO	STRAIGHTNESS	HYDRO-STATIC TEST as Per ASTM A530 (100%)	E.C.T. as Per ASTM E-309 (100%)	U.T. AS PER ASTM E-213 (100%)	VDI	IN SIDE / OUT SIDE	RA VALUE	PMI (100%)
1	23D03512	Satisfactory	2500 PSI, OK	OK	NA	Satisfactory	Satisfactory	NA	Satisfactory

Heat Treatment : Heat Treated Above 650°C (1200°F)
 MARKING: **Lalbaba** / CDS / ASTM A106B ASME SA106B ASTM A53B ASME SA53B NACE MR0175/MR0103 ISO 15156 / OD 1.05",XS/SCH 80 X WT 0.154" X LG 19' / HEAT NO. 23D03512 / NDE / HYD 2500 PSI / PO NO. 380761-01HOU / MADE IN INDIA

REMARKS: 1. All materials are Lead (Pb) & Mercury (Hg) Free.
 2. Country of manufacturer- India & country of melt source - India.
 3. We hereby certify that the material herein described has been Manufactured, Sample tested & Inspected in accordance with above standard, specification & P.O requirement & result found satisfactory.
 4. Impact test carried out in mother hollow tube 68.00 x 4.25 mm with refer to sub size specimen 10 x 2.5 x 55 (mm) "V" notch, 2.00 mm depth at -56°C temperature & result found satisfactory.
 5. No Weld repairs performed.

Legends : 1. L/A - Ladle Analysis, 2. P1/A - Product Analysis One, 3. P2/A - Product Analysis Two, 4. CDS= Cold Drawn Seamless, 5. CS = Carbon Steel, 6. PM - Piercing Mill, 7. HI - Hollow Inspection, 8. STP - Surface Treatment Plant, 9. CD= Cold Drawn, 10. HT - Heat Treatment, 11. NDT - Non Destructive Testing, 12. VDI= Visual Dimension Inspection, 13. P&F - Packing & Forwarding.

For, **LAL BABA SEAMLESS TUBES PVT. LTD.**

ISSUED BY:  Kousik Hazra ENGINEER (QA/QC)	 	 Prajeet Puri Sr. Manager (QA/QC)
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LAL BABA SEAMLESS TUBES PRIVATE LIMITED

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