Lalbaba
Engineering Group

What is the Exploration & its Purpose?

Mineral exploration involves drilling beneath the surface to uncover the geological secrets below. This process utilizes a combination of pressure and high-speed rotation to penetrate rock formations. As the drill delves deeper, new drill pipes are attached to extend its length, a procedure that's repeated until the desired depth is reached. A method known as exploration diamond drilling is employed in the mining sector to investigate known ore deposits and prospective sites. This technique retrieves a slender core of rock, which geologists meticulously analyze. Through chemical assays and studies focused on petrology, structure, and mineralogy, these professionals can garner intricate details about the rock's type, mineral composition, and structural fabric.

Why Lal baba as first Choice for Exploration drill rods?

At Lalbaba, we take pride in possessing one of the most advanced drill rod manufacturing setups in India, distinctly setting us apart from other mills. Our dedication to precision is evident as we offer an impressive straightness ratio of 1:3000, a benchmark that few can match. Staying ahead of the curve, we have invested in the latest and most efficient TIR setup in the country. While many abide by the BS4019 standards demanding 7.5% eccentricity, we go a step further; each of our tubes boasts less than 5% eccentricity. This reduced eccentricity translates to superior rod rotational functionality, ensuring optimal performance. Many of our valued customers consistently praise the aesthetic quality of our tube surfaces. We are pleased to present an extensive range that includes drill rods, casing tubes, and couplings of various sizes.

S.No.	Item Description	OD (mm)	ID (mm)	Thickness (mm)
1	AQ Rod	44.58	34.95	4.82
2	BQ Rod	55.68	46.08	4.80
3	NQ Rod	69.98	60.20	4.89
4	HQ Rod	89.09	77.81	5.64
5	PQ Rod	114.49	102.98	5.76
6	BX casing	73.16	64.95	4.11
7	Bx coupling	73.16	60.46	6.35
8	NX casing	89.09	80.76	4.17
9	Nx coupling	89.09	76.39	6.35
10	RW casing	36.57	30.36	3.11
11	EW Casing	46.15	38.30	3.92
12	AW casing	57.28	48.55	4.37
13	BW Casing	73.16	60.46	6.35
14	NW Casing	89.09	76.25	6.42
15	HW Casing	114.49	101.41	6.54
16	NW L/H Rod	66.75	51.70	7.53
17	HQ Core Barrel	95.00	78.00	8.50
18	NQ Core Barrel	75.00	60.50	7.25
19	NQ Oversize / outer tube	73.15	60.45	6.35
20	NQ Inner tube	55.66	49.92	2.87
21	HQ Oversize / Outer Tube	92.00	78.00	7.00
22	HQ inner Rod	73.00	66.00	3.50

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Drill Rod Specification

Mechanical & Metallurgical							
Chemical Composition -		C	Mn	P & S	Si	Cr	MO
SAE 1541	Min %	0.36	1.35	-	0.05	-	-
	Max %	0.44	1.65	0.04	0.35	-	-
SAE 4130	Min %	0.28	0.40	-	0.15	0.8	0.15
	Max %	0.33	0.60	0.04	0.35	1.1	0.25
Tensile strength	Min 785N/mm2						
Yield Strength	Min 690N/mm2						
Elongation (50.8mmG.L)(min)	Min 15%						
Hardness	Min 230 BHN						
Condition	Stress relieved in atmosphere controlled furnace						
Residual Magnetisum	Max 15 Guass						
Hoop Stress (measured as per ASTM E1929-07)	Max acceptable hoop stress/residual stress - 80 Mpa (to be checked in 1 in 250 tubes)						
Decarburization on inside and outside surfaces	a)Total depth of decarburization ≤0.25mm as per ASTM E-1077 b) Complete decarburization ≤ 0.10mm as per ASTM E 1077						
Grain size	Ferrite grain size shall be 7 or finer according to ASTM E112						
NDT:	**Calibration reference standard:**						
Eddy Current Testing according to ASTM E309	External Longitudinal notch with depth of no more than 7.5% of wall thickness (maximum notch depth 0.80mm, minimum notch depth 0.30 mm) 0.30mm max width and one inch max length, made from the samechemistry and size of tubing. OR Drilled through wall radial holes. The diameter of the holes shall be 2.2mm						
Dimensional Inspection							
Tolerance on MID OD & MID ID	As mentioned against each size						
Straightness better than	1 in 3000						
Length Tolerance	(+5/-0mm)						
Eccentricity / Concentricity	Max 5%						
3 Point.TIR (Total - Indicator -Runout)	Fulcrum at 200mm from each end. TIR ≤ 1 mm at center, TIR ≤ 0.5mm at 20mm from each end						
Rust prevention coating	**Inside and outside surface of tubes will be coated with rust preventive oil**						
White non-erasable marking stenciled at two locations on each tube leaving atleast 250-300mm distance from each end.	LBST / LOGO / CDS / GRADE / OD x ID x Length / Heat No / NDE						
Inspection	"Inhouse. If required Customer can arrange third party inspection by Lloyds, BVIS..etc"						
Despatch Condition	Plastic end cap at each end of pipe & HDP cloth Wrapping						

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