

URANIUM CORPORATION OF INDIA LIMITED
JADUGUDA MINES

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Public Tender No. : PUR/2/RC/Rubber Lining System/1242
Item : Rate contract for Rubber Lining System.

FOR TURAMDIH MILL.

The Mill is provided with rubber liners in the shell and metal liners in the ends. The lifter bars to be used for holding the shell liners as well as for lifting the grinding media for proper operation of Mills. The Rod mill is used for wet grinding of fine ore feed of less than 1" size. A slurry density of 75-80% (w/w) is maintained in the rod mill for proper grinding of feed ore. pH of slurry is around 7.5-8.5. High Chrome Grinding Rod of 100mm dia and hardness of 275 BHN is used as grinding media in the Rod mills & high chrome grinding balls are used in Ball Mills. Work index of the complete grinding circuit comprising of Rod mill, Ball Mill and hydro cyclone is about 10-14 KWH/T.

SL.NO.	MATERIAL DESCRIPTION
1	Rod Mill (A) Ø 2.5m x 4.0m long (FFE marked now FLSmidth)
2	Rod Mill (B) Ø 2.5m x 4.0m long (FFE marked now FLSmidth)
3	Rod Mill (C) Ø 2.7m x 4.0m long (MBE make)
4	Ball Mill (A) Ø 3.1m x 5.0m long (FFE marked now FLSmidth)
5	Ball Mill (B) Ø 3.1m x 5.0m long (FFE marked now FLSmidth)
6	Ball Mill (C) Ø 3.2m x 5.0m long (MBE make)
7	Lime Stone Mill Ø 1.9m x 3.5m long (FFE marked now FLSmidth)
8	Magnetite Ball Mill Ø 2.134 Mtr. x 4.572 Mtr. (MBE make)

MATERIAL QUALITY:

- a) High pressure moulded wear resistant rubber lining equivalent to Tega quality 61 60 002 or equivalent.
- b) Lifter bars should be chamfered at one side. 23°
- c) Fastening system: The intermediate liners are hold down by means of lifter bars at the edges. The lifter bars are fastened to the mill by means of clamps (which slide into the groove provided at the underside of the lifter bars), washers and nuts. The fastening system must be leak proof and 'unbrako/TVS' make only.

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RATING PARAMETERS :

Sl . No.	Mill Type & Size	Rod Mill(A/B) Ø2.5 mX4.0m Long	Rod Mill(C) Ø2.7 mX4.0m Long	Ball Mill (A/B) Ø3.1mx5.0 m Long	Ball Mill (C) Ø3.2 mx5.0 m Long	Lime Stone Ball Mill Ø1.9 mx5.0 m Long	Magnetite Ball Mill Ø2.134 mx4.572 m Long
1.	Mill Head Inclination	23°	11.5°	22.5°	11.5°	22.5°	
2.	Mill Speed	18.58 rpm	17.8 rpm	18.42 rpm	17.8 rpm	23.6 rpm	22 rpm
3.	Feed Material	Uranium Ore	Uranium Ore	Uranium Ore Fines	Uranium Ore Fines	Lime Stone	Magnetite
4.	Feed Size	(-) 25mm	(-)25mm	(-)1.0mm	(-)1.0 mm	(-)20mm	(-)200Mesh (65% Passing)
5.	Product Size	(-)1.0mm	(-)1.0mm	(-)200 mesh (80%Passing)	(-)200 mesh (80%Passing)	(-)200 mesh (75%Passing)	(-)325 Mesh (90% Passing)
6.	Type of Discharge	Overflow	Overflow	Overflow Discharge	Overflow Discharge	Overflow Discharge	Overflow Discharge
7.	Type of Grinding	Wet	Wet	Wet, Closed Circuit	Wet, Closed Circuit	Wet, Closed Circuit	Wet, Closed circuit
8.	BWI of Ore	11.5 KWH/MT	11.5 KWH/MT	11.5 KWH/MT	11.5 KWH/MT	12 KWH/MT	17.2 KWH/MT
9.	Specific Gravity of Material	2.8	2.8	2.8	2.8	2.8	2.83
10.	Capacity	68MTPH	68MTPH	68MTPH	68MTPH	3.5 MTPH	11.0 TPH
11.	Top Size of Grinding Media	Ø100 mm	Ø100 mm	Ø40 mm	Ø40 mm	Ø40 mm	Ø40mm
12.	Material of Grinding media	High carbon forged steel rods	High carbon forged steel rods	High Chrome Balls	High Chrome Balls	High Chrome Balls	High Chrome Balls
13.	Motor Power	260KW	260KW	650KW	650 KW	160 KW	225 KW
14.	%Charge Volume	30%	30%	30-35%	30-35%	30%	30%
15.	Temperature	Below 70°	Below 70°	Below 70°	Below 70°	Below 70°	Below 70°C
16.	pH value	7.5 -8	7.5-8	7.5-8	7.5-8	7.8-8	2-9

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FOR JADUGUDA MILL.

The Mill is provided with rubber liners in the shell and metal liners in the ends. The lifter bars to be used for holding the shell liners as well as for lifting the grinding media for proper operation of Mills. The Rod mill is used for wet grinding of fine ore feed of less than 1" size. A slurry density of 75-80% (w/w) is maintained in the rod mill for proper grinding of feed ore. pH of slurry is around 4.0-8.0. High Chrome Grinding Rod of 100mm dia and hardness of 275 BHN is used as grinding media in the Rod mills & high chrome Grinding Balls are used in Ball Mills. Work index of the complete grinding circuit comprising of Rod mill, Ball Mill and hydro cyclone is about 10-14 KWH/T.

SL.NO.	MATERIAL DESCRIPTION
1	Rod Mill Ø 9' x 16' long (GEC make)
2	Rod Mill Ø 8' x 12' long (MBE make)
3	Ball Mill Ø 2900mm x 4572mm long (MBE make)
4	Ball Mill Ø 2900mm x 4572mm long 500TPD (MBE make)
5	Lime Stone Mill Ø 6' x 7 ½' long (MBE make)
6	Magnetite Mill Ø 1200mm x 2700mm long (L&T Sala make)
7	Rubber Screen Panel (Deck size: 2500 x 6000 mm, Panel size:1200 x 1220mm, Thickness : 45 mm, MOC: Rubber with all fixing bolt & nut).

MATERIAL QUALITY:

- d) High pressure moulded wear resistant rubber lining equivalent to Tega quality 61 60 002 or equivalent.
- e) Lifter bars should be chamfered at one side.
- f) Fastening system: The intermediate liners are held down by means of lifter bars at the edges. The lifter bars are fastened to the mill by means of clamps (which slide into the groove provided at the underside of the lifter bars), washers and nuts. The fastening system must be leak proof and 'unbrako/TVS' make only.

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RATING PARAMETERS:

Sl . No.	Mill Type & Size	Rod Mill Ø9'X16' Long	Rod Mill(C) Ø8'X12' Long	Ball Mill Ø2900 mmx4572 mm Long	Ball Mill Ø2900 mmx4572mm Long 500TPD	Lime Stone Ball Mill Ø6'x7½' Long	Magnetite Ball Mill Ø 1200mm x 2700 mm Long	Screen Panel for Vibrating Screen Size: 1200x1220 mm
1.	Mill Speed	11.69 rpm	16.47 rpm	17.81 rpm	17.8 1rpm	23.6 rpm	29 rpm	
2.	Feed Material	Uranium Ore	Uranium Ore	Uranium Ore Fines	Uranium Ore Fines	Lime Stone	Magnetite	Uranium Ore
3.	Feed Size	(-) 25mm	(-)25mm	(-)1.0mm	(-)25 mm	(-)20mm	(-)200Mesh	(-)200 mm
4.	Product Size	(-)1.0mm	(-)1.0mm	(-)200 mesh (80%Passing)	(-)200 mesh (80%Passing)	(-)200 mesh (75%Passing)	(-)350 Mesh (97% Passing)	(-)25mm after screen
5.	Type of Discharge	Grid discharge	Overflow	Overflow Discharge	Overflow Discharge	Overflow Discharge	Overflow Discharge	Vibrating Screen
6.	Type of Grinding	Wet	Wet	Wet, Closed Circuit	Wet, Closed Circuit	Wet, Closed Circuit	Wet, Closed circuit	
7.	BWI of Ore	11.5 KWH/MT	11.5 KWH/MT	11.5 KWH/MT	11.5 KWH/MT	19 KWH/MT	11.5 KWH/MT	11.5 KWH/T
8.	Specific Gravity of Material	2.8	2.8	2.8	2.8	3.2	2.83	2.8
9.	Capacity	48 TPH	44 TPH	44 TPH	25 TPH	3.5 TPH	1.5 TPH	250 TPH
10.	Top Size of Grinding Media	Ø100 mm	Ø100 mm	Ø40 mm	Ø100 mm	Ø40 mm	Ø30mm	Not applicable
11.	Material of Grinding media	High carbon forged steel rods	High carbon forged steel rods	High Chrome Balls	High Chrome Balls	High Chrome Balls	High Chrome Balls	Not applicable
12.	Motor Power	335KW 720 rpm	250KW 960 rpm	450KW 960 rpm	450 KW 1500 rpm	160 KW	60 KW/ 1420 rpm	30KW 1420rpm
13.	% Charge Volume	30%	30%	30-35%	30-35%	30%	30%	
14.	Temperature	Below 70°	Below 70°	Below 70°	Below 70°	Below 70°	Below 70°C	Below 50°C
15.	pH value	6.5 -8	6.5-8	6.5-8	6.5-8	6.5-8	4-6	6.5 -8