

Particulars  
General

Specification for 3T EOT crane for Hollow Insulator Grinding Bay

Capacity	3 Metric Tonne
Type	Double Girder Overhung with 4 wheels, crane with motorised cross travel long travel and hoist as per specification below with control panel
Application	Indoor Loading & Unloading
Area Classification	Safe
Specification & Class	M5 as per IS:3177-1999

Speed

Cross Travel Speed	15 / 5mts/min
Long Travel Speed	25 / 6.25mts/min
Main Hoist Speed	Main 4-5mts/min Micro 0.4-0.5mtrs/min

Dimension

Crane Span	approx. 19 mts (span to match existing girder & rails, supplier to measure the existing dimensions and suitably manufacture)
Lift Height	approx. 8.5mts

Mechanical & Structural

Gear Boxes	Bidders to provide details of Gear Box Construction
Cross Travel & Long Travel Wheels	Single flanged taper thread wheels machined out of EN-8 forging, hardened to and mounted on antifriction bearing . (wheel hardness to be lower than that of rail hardness)
Sheaves	Cast Steel as per IS:1030 Gr2
Buffers	Rubber buffers shall be provided for long travel & Cross Travel motions
Platform	2 short platform on drive side to be provided
LT wheels & Total weight	Bidders to provide Total weight of the crane, LT wheel load & LT wheel base

Electrical

Power Supply	415 Volts AC, 3 phase 50 Hz
Control Voltage	230V 1 phase AC (alternatively 110V 1 phase AC)
Motors	Squirrel cage induction motor with IP-55 protection, Class F insulation, Crane Duty 4 pole. Bidders <sup>to</sup> specify ratings.
Cable Type	PVC armoured cables with solid copper conductor
Cross Travel Cabling	Through PVC Flexible trailing cable arrangement running on 'T' track
Variable Frequency Drive	Optional for Cross travel motor & Long travel motor. For hoist only geared train (2 separate motors for macro & micro) to be offered.
DSL system	Already existing, supplier has to supply current collector to match existing bus bar

Hook, Drum, Brake & Rope

Hook Type	Single Shank 'C' type, Hook shall be provided with safety latch as per IS3835
Wire Rope	Fibre Core, 6 x 36 construction wire rope as per IS 2266. Bidder to indicate technical specification of rope offered.
Rope Drum	The length of the drum shall be designed such that, while in fully hoisted state, atleast 4 grooves are still open. Similarly, when fully lowered, the drum shall have atleast 4 grooves rope wrapped in.
Brake	Bidders to provide details of braking system
No of Falls	4

operation

Operation	1. Through independent movable pendent push button station 2. Alternatively Hand held radio remote to be quoted as optional item
Collision	Due to existance of another crane on the same girder, anti collision system based on limit switch

Others

End Carriages	Fabricated out of rolled steel channels
Lubrication	Group lubrication with hand grease gun
Painting	The complete crane structure shall be applied with 2 coats red oxide followed by two coats of synthetic enamel paint. Colour : YELLOW. Bidders to quote with RAL number

Preferred Makes

Motors	NGEF, Bharat Bijlee, Siemens, Kirloskar, ABB, CGL
Wire Rope	Usha Martin Black
Brake	Pethe, EMCO
Gear Boxes	Elcon, Shanti, Premium
Bearings	SKF, FAG, NTN
Limit Switches	Bhartia Cutler hammer, Jai Balaji
Hook	EEK, FTC, Smriti Forge

General Requirements

Warranty	12 months from the date of successful commissioning
Service	Bidders to have service backup facility in Bangalore. Bidders to confirm of providing service during emergency within 24 Hrs.

ಶ್ರೀ. ಶ್ಯಾಮಸುಂದರ್, ಎಂ.ಪ್ರ.ಜಿ.ಉತ್ಪಾ.  
A.B. SHYAMASUNDAR, DGM/Ins.Prodn.  
BHEL - EPD, Bangalore-560 012

ಶ್ರೀ. ಮುರಲಿಹಾರ್, ಸಿ.ಆರ್.ಎಂ.ಎಂ.ಎಂ.ಎಂ.  
ಸಿ. ಮುರಲಿಹಾರ್, ಎಂ.ಇಂಜಿನಿಯರ್/ವೆಕ್ಸ  
S. MURALIHAR, Sr. Engineer/WEX  
BHEL - EPD, Bangalore - 560 012

References	List of clients wherein similar or higher capacity crane supplied in past 2 years to be provided along
Catalogue / Technical Brochure	To be provided along with technical bid <i>with Tech bid.</i>
Company Profile	Brief company profile along with the facilities and product range shall be provided along with technical bid. The financial statement of the company for last 3 years shall also be provided.
Erection & Commissioning	Scope of supplier. If quoted separately, to be indicated in the technical bid.

#### Qualification Criteria

1. Only OEM or the authorized dealer/chanel partners are to quote.
2. They should have supplied a minimum of 5 similar type & capacity (or higher capacity) cranes in the last 5 years.
3. Bidders has to produce successful working certificate of a similar type & capacity cranes(or higher capacity) for a period of last 5 years
4. Spares and service backup shall be available in Bangalore

*[Signature]*

*[Signature]*

ಎ.ಬಿ. ಶಶಿಶಂಕರ್, ಎಂ.ಇ.ಡಿ. / ಎಂ.ಪಿ.ಡಿ.  
 ಎ.ಬಿ. ಶಶಿಶಂಕರ್, ಎಂ.ಇ.ಡಿ. / ಎಂ.ಪಿ.ಡಿ.  
 A.B. SHASHANKAR, DGM/Ins.Prodn.  
 BHEL - EPD, Bangalore-560 012

*[Signature]*

*[Signature]*  
 ಎಂ.ಎ. ಮುರಲಿಧರ, ಎಂ.ಇ.ಡಿ. / ಎಂ.ಪಿ.ಡಿ.  
 ಎಂ.ಎ. ಮುರಲಿಧರ, ಎಂ.ಇ.ಡಿ. / ಎಂ.ಪಿ.ಡಿ.  
 S. MURALIDHARA, Sr. Engr. Ins.Prodn.  
 BHEL - EPD, Bangalore - 560 012