



Indian Institute of Technology Kanpur

Samtel Centre for Display Technologies

Enquiry No.: SCDT/FlexE/2016-17/26

Opening Date: 20/01/2017

Closing Date: 31/01/2017

Extended closing date: 07/02/2017

Quotations from prospective vendors are invited by Samtel Center for Display Technologies, IIT Kanpur for “**Hydraulic Three Roll Mill**”.

Description of instrument: Three roll mill has a 3 horizontal counter rotating rolls specially design for the dispersion of ink and paste. Dispersion is done by the differential speed of consecutive space between three rollers. The surface of the roller is supposed to be as smooth as possible to avoid the inhomogeneity in the ink and paste

The feature and specifications of the three roll mill is as follows:

1. The rolls should be fitted with shafts on both sides to be suspended on the bearing housing. The shaft should designed to withstand static & dynamic loads.
2. The roll & shaft assembly should be machined and ground to precise dimensions with proper tolerance values of international engineering standards.
3. Centrifugally cast chill carbon rolls of diameter 15cm and length 20cm with chill depth 10 to 15 mm and surface hardness 500 to 550 BHN at rotating speeds 585:185:60.
4. The rolls should be mounted on sealed bearing housings on both sides with proper lubrication provision,
5. TEFC motor for dispersion.
6. Safely enclosed drive train should also be included which consisting V Belt pulleys and helical gears.
7. Hydraulic cylinders for engaging roll together and apron tray with motorized hydraulic power pack.
8. Mechanical roll gap adjustment for each roll with 5 microns graduated precision. The micro-gap between the rolls can be adjusted with the help of four hand wheels on both the ends of mill. The gap can be adjusted in increment as fine as 5µm.
9. Individual electronically adjustable and controlled temperature control for each roll
10. Hydraulically synchronized Apron tray and Apron roll
11. Gunmetal hopper cheeks on both sides of feed roll
12. Variable speed control using VFD
13. SS304 drip tray & Splash tray
14. Sturdy plain carbon steel frame with powder coating. It should consists of milling bay, transmission bay and cooling bay. The milling bay houses the horizontal array of rolls and apron tray. Cooling bay contains the roll cooling components, coolant control valves, hydraulic power source, hydraulic control valves and hydraulic piping.
15. Control panel with VFD: Control panel should be provided with the following to power the mill and operation control. • Individual ON & OFF push buttons for mill and hydraulic power source.

- A Variable frequency drive for the harnessing the speed of the mill as per latest safety regulations.
 - Line choke for the safety of VFD.
 - Digital display of speed of Apron roll
 - Phase sequencing relay for the unidirectional rotation of rolls
 - Temperature controller and display for the each roll.
16. High operator safety as per latest safety regulations **that should includes:** Emergency stop button on four corners of the machine. Emergency pull cord with manual reset interlock at safe and operating distance of the feeding end. Protection bar to be employed during cleaning. The Rolls run at only 10% of the maximum speed when the supplied production bar is fitted for cleaning the mill.

Terms & Conditions:

1. Please do mention tender number clearly on envelop.
2. Supplier/Vendors should submit **technical and financial bid together in separately sealed envelopes.**
3. Evaluation will be done on the basis of technical specifications as per our tender notice
4. Financial bid will be open only for those, who meet tender technical specification.
5. Please send the name and contact details of the person to whom company had supplied a similar systems. Committee may ask for the feedback.
6. Quotation must indicate FCA/FOB or FOR IIT Kanpur prices.
7. Payment terms & condition is 70% against delivery, 20% after installation and 10% after successful running of equipment for 3 months & approval.
8. Warranty/Guarantee should be clearly mentioned. The Warranty must start from the date of installation at IITK.
9. Installation, demonstration, and training-sessions at IIT Kanpur will have to be provided by the manufacturer or the vendor for the quoted system.
10. Quotation should carry proper certifications like proprietary certificate, authorization certificate from manufacturer, etc.
11. Validity of quotation should be at least for 60 days.
12. Maximum educational discounts should be applied.
13. Institute is exempted for partial custom duty (CD applicable to IIT Kanpur is 5.15%).
14. Institute is exempted from payment of Excise Duty under notification No. 10/97.
15. The delivery period should be specifically stated. Earlier delivery may be preferred.
16. The indenter reserves the right to withhold placement of final order. The right to reject all or any of the quotations and to split up the requirements or relax any or all of the above conditions without assigning any reason is reserved.

Kindly send the quotation in sealed envelope latest **by 3:00 pm on dated 07/02/2017** to the following address:

To,
Dr. Ashish,
Room No.305,
National Centre for Flexible Electronics,
Samtel Centre for Display Technologies
Indian Institute of Technology Kanpur,
Kanpur – 208016, Uttar Pradesh,
India