

**Industrial Tribology, Machine Dynamics and
Maintenance Engineering Centre (ITMMEC)
IIT Delhi, New Delhi 110016, India**

16/12/2014

NIQ no: IITD/ITMMEC/17657

**Sub: Notice inviting quotations (NIQ) for fabrication of a customised “Table Top
Pneumatic Conveying Pipe Line Setup with Swirling Device for Erosion
Studies in Pipe Bends”**

Sealed quotations (Technical and Financial in separate sealed envelopes) are invited for fabrication of a customised “**Table Top Pneumatic Conveying Pipeline System with Swirling Device for Erosion Studies in Pipe Bends**”.

1. Function of setup: To simulate experimentally the pneumatic conveying of powders/granules/sands through the pipeline test loop having some of bends for study of erosion in pipe bends at various operating parameters. The material will be fed by the rotary valve into the pipeline. Air will be supplied from the Roots blower and the mixture of air and particles will be conveyed through the pipeline. The material will be discharged from the pipeline into the storage hopper and the clean air will be discharged into the atmosphere through the bag filter.

Note: The Roots Blower is available with the purchaser and shall not be a part of supply under this offer. The bidder shall supply necessary piping, valves and other such material required for tapping the air from the blower to the proposed test set up.

2. Schematic diagram of setup:

Figure 1 provides the schematic diagram of the table top setup with names of various components.

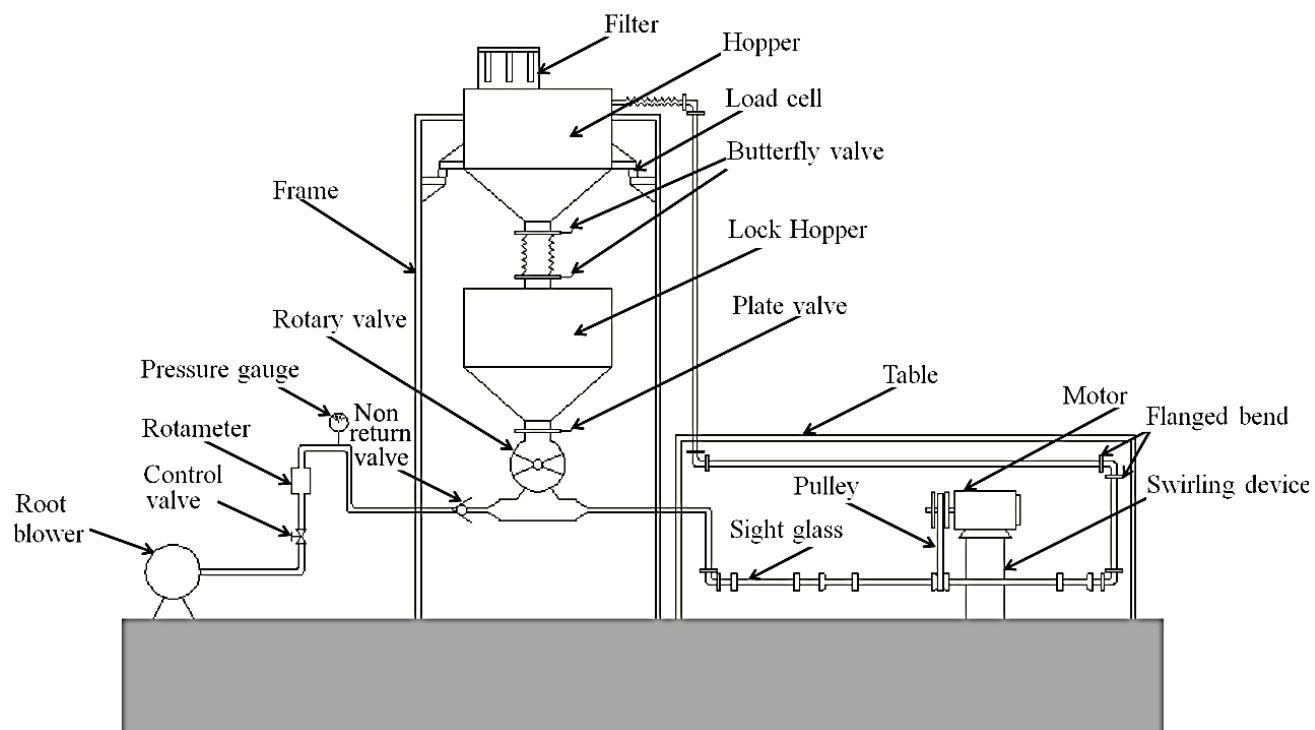


Fig.1 Schematic diagram of setup

3. Specifications of components of setup:

Table 1 provides the major specification of the components of setup.

Table -1 Specification

S. No.	Component	Specifications	
1	Table	Size: 2.5 x 2.5 m, Material: Mild Steel	
2	Pipe line	Total pipe length: 25-30 m (approx.) having 3-4 turns; Pipe diameter: 1.25 inch Material: Mild Steel Bends: To be fitted with flanged/half union coupling	
3	Hopper & Lock Hopper	Each should have: Volume: 0.15 m ³ , Capacity: 50 kg	
4	Swirling device	Length: 30-50 cm	
5	Rotary valve	Size: 6"; Capacity: 0.3 ft ³ / rev	
6	Load cell	Type: Strain Gauge; Nos.: Three (3); Capacity: 100 kg each	
7	Pressure gauge	Digital (3 Nos.) for recording of pressure up to 1 bar	
8	Filter	Type: Reverse Air /Pulse Jet	
9	Rota meter	Complying with roots blower discharge	
10	Control valve	Complying with the system	
11	Non return valve	Complying with the system	
12	Plate valve	Complying with the system	
13	Butterfly valve	Complying with the system	
14	Frame	Complying with the system	
15	Sight glass	Complying with the system	
16	Pulley	Complying with the system	For swirling device
17	Motor	Complying with the system	
18	Control Panel	For all the buttons and displays of readings etc.	

4. Terms and conditions

1. The quote should reach in **ITMMEC office** on or before **4 pm** of **7th January 2015** in favor of:

Dr. V. K. Agarwal
Professor
Industrial Tribology, Machine Dynamics and
Maintenance Engineering Centre (ITMMEC)
IIT Delhi, Hauz-Khas
New Delhi-110016, India
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2. Delivery of setup should be done at IIT Delhi, New Delhi-110016, India.
3. Quote should be in Indian Rupees and it should be valid for three months.
4. Specify all terms and conditions clearly in quotes.
5. Delivery of setup within 60 days after receiving the fabrication/supply order.
6. Technical and financial quotations should be submitted in separate sealed envelopes. Moreover, for tuning of technical specification of setup, a clarification meeting shall be held.
7. Past experience of similar type of fabrication work is essential. Please submit supporting documents with technical bid.
8. Payment (100%) will be made on delivery, installation and successful operational demonstration of setup at IIT Delhi.
9. Roots blower will be provided for interfacing with setup.



(Prof. V. K. Agarwal)
Buyer