

Center for Rural Development & Technology
Indian Institute of Technology Delhi
Hauz-Khas, New Delhi 110016

Date: 10.09.12

Sub: Notice Inviting Quotations – for biogas enrichment and bottling unit in field

Quotations are invited for the purchase of following components of 'Automatic Biogas enrichment and bottling system based on IIT Delhi Improved Water Scrubbing Technology for the capacity 25 NM³/hr.

Item No 1. Raw Biogas Compressor :

Gas compressor with Capacity of 25 NM³/hr, up to 12 bar discharge pressure (Suction – ambient) compressor parts such as piston, cylinder lining, valves etc., should have corrosion free Material of Construction with biogas at working pressure and temperature. Compressor should be equipped with 'pressure switch' & 'safety valve' and flame proof motor.

Item No. 2. Purified Biogas Compressor:

Gas compressor with Capacity 10 NM³/hr, up to 215 bar discharge pressure (Suction – ambient) compressor parts such as piston, cylinder lining, valves etc., should have corrosion free Material of Construction with biogas at working pressure and temperature. Compressor should be equipped with 'pressure switch' & 'safety valve' and flame proof motor.

Item No 3. Water Pump:

'Helical Screw type Rotor Pump' with Capacity: 5 M³/hr - satisfying the requirement of high pressure and low flow rate with flame proof Motor.

Item No. 4 Biogas Purification Plant (components):

Packed tower: Packed tower (Capacity: 25 NM³/hr) should be made of either stainless steel or mild steel with necessary coating inside to prevent the corrosion. Sheet thickness of tower should be in correspondence with the working pressure and diameter of the tower. Test pressure of the tower should be at least 150% of the working pressure. Tower should be equipped with a safety valve having a maximum set value 20% greater than working pressure. Working pressure of the column should be around 10 bar.

Flash Tower: Flash tower (Capacity: Corresponding to Packed Tower) should be made of either stainless steel or mild steel with necessary coating inside to prevent the corrosion. Sheet thickness of tower should be in correspondence with the working pressure and diameter of the tower.

Gas Drying System: Gas drying system of either PSA or Refrigeration type (Capacity: 15 NM³/Hr) should have their parts (adsorption tower, cooling coils etc) MOC and sheet thickness in correspondence with working fluid characteristics and working pressure & temperature. Test pressure of the parts should be at least 150% of the working pressure. Parts should be equipped with a safety valve having a maximum set value 20% greater than working pressure.

Pressure Vessel: Pressure vessel (Capacity: 100 Liters) should be made of mild steel with necessary coating inside to prevent the corrosion. Sheet thickness of vessel should be in correspondence with the working pressure and diameter of the vessel. Test pressure of the vessel should be at least 150% of the working pressure. Vessel should be equipped with an 'Auto Drain Valve' and a 'Safety Valve' having a maximum set value 20% greater than working pressure.

Control Panel, Piping & Instrumentation: Control Panel for all plant components and necessary piping & instrumentation.

Gas Dispensing System: Purified gas dispensing system for filling the gas in cylinders (up to 225 bar) should have a gas dispensing gun along with a buffer of 120 Liters Water Volume with pressure gauge and required accessories. It should be able to fill CNG cylinders available in market.

Terms & Conditions:

- 1) Above items are to be purchased by Shree Vallabh Goshala, Junagarh (Gujarat) on the recommendation of technical specifications of IIT Delhi. Items are to be supplied at V&P- Shree Vallabh Goshala, Vadala, Junagarh.
- 2) All technical details of the items should be provided. Technical and financial bids should be sent in separate envelopes.
- 3) The quotations should have validity of two months

The quotes should reach the undersigned before 25.09.2012 by 5.00 pm.

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