

Central Glass & Ceramic Research Institute KOLKATA (WEST BENGAL) INDIA

CORRIGENDUM

CONSEQUENT TO THE PRE-BID MEETING HELD ON 27/08/2009, THE REVISED SPECIFICATION OF THE COLD ISOSTATIC PRESS ARE GIVEN BELOW:

AS ALREADY NOTIFIED, THE REVISED DEADLINE FOR SUBMISSION OF BIDS AND DATE OF OPENING OF BIDS ARE AS FOLLOWS:

Last Date of Submission of Bids	10/09/2009 by 1:30 p.m.	Opening of Bids	10/09/2009 by 3:30 p.m.
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TECHNICAL SPECIFICATION

REQUIREMENTS FOR COLD ISOSTATIC PRESS

- i) The equipment should be capable for pressing ceramic powder isostatically at room temperature.
- ii) The equipment will be operated in wet bag tooling mode
- iii) Maximum operating pressure : 400 MPa (60,000 psi)
- iv) Chamber size : 250 mm (10 inches) inside dia x 600 mm (24 inches) inside height
- v) The high pressure vessel should be manufactured following standard international directives. Name of the manufacturer and certifying authority of the pressure vessel should be clearly mentioned in the bid document. Inspection and acceptance certificates from the internationally recognized organizations, like TUV, ASME, ASTM, BVQI, etc. or equivalent should be provided at the time of supply. The specification of the material of construction of the high pressure vessel and the design of the vessel should be clearly mentioned.
- vi) The details of the closure assemblies (locking and unlocking systems) should be provided in the bid document.
- vii) Pressurization fluid should be a mixture of water and soluble oil.
- viii) Pressurization will be accomplished through electro-hydraulic systems. Specifications and manufacturers of the system should be provided in the bid documents.
- ix) The control of the pressure should be programmable through a controller of reputed make (like Siemens, Eurotherm etc.) – the equipment should also have a provision of manual operation in case of PLC failure.
- x) The provision for lifting arrangement of the chamber top of the pressure vessel should be made. Option should also be given for the lifting arrangement of the job/ sample cages separately.

- xi) The machine should be provided with sufficient safety devices and could be operated safely in case of any emergency like, electrical power failure. Details of the safety specifications should be clearly stated in the bid documents.

2) Utility requirements :

- i) The space required to install the machine should be clearly specified with detailed drawings of placement of the components. The height requirement and the load bearing requirements (max. load per unit area) on the floor should also be specified. Civil construction details for the installation of the machine should be mentioned.
- ii) Electric power : The machine should be operated with a supply of $385 \pm 10\% V$ AC, 3 -phase, 50 Hz. Power requirement of the individual components may be stated.
- iii) Provision for UPS connection to the PLC controller and any other emergency unit to be operated electrically should be made.

3) Safety :

- i) Standard specifications number for the design of the pressure equipment and the provision should be furnished in the bid document.
- ii) Details of the protection systems against over-pressurization should be clearly stated.
- iii) Emergency manual decompression must be provided
- iv) Manual overwrite over the PLC control console is needed

4) General :

- i) Utility requirements at the user's site should be clearly stated.
- ii) The components and the machine as a whole should preferably have a warranty of minimum two years from the date of installation at the user's site. The AMC terms and amount after the end of the warranty period may clearly be mentioned.
- iii) Control systems, high pressure tubing, water flow and control, electric power control and cables, safety devices and guard, other necessary items for operation of the machine not included above should be supplied by the supplier of the machine
- iv) The manufacturer should have an experience of installing minimum 5 units of the specified equipment. The users' list along with the model number must be furnished with the technical bid documents
- iii) The operation and maintenance guidance, including details of electrical layout and circuits, of each component of the machine should be provided by the supplier in 2 sets each
- iv) Space, electric power (upto the electrical mains), Compressed air connection and water supply will be provided at the installation site by CGCRI.
- v) Performance certificate of the machine will be issued after complete installation and commissioning of the machine at the user's site and only after the satisfactory operation in presence of the supplier's personnel.

Satisfactory operation means compaction of user's powder at the desired pressures.

vi) Technical Compliance:

Technical bid and application notes should clearly explain the provision of the features which are desired. If there are major deviations and/or non-availability of any feature or if the explanations are not available, then the quotation will be liable to be rejected. However, the manufacturer may also bring out the existence of any additional features which would otherwise make the operation of the equipment easier and better controlled.

vii) Training and Inspection:

Conditions for the inspection of the equipment and training of buyer's personnel at manufacturer's premises before the shipment should be provided in the bid documents. Local hospitality for one person should be provided by the manufacturer for 7 days.

viii) The installation and commissioning charge of the supplier at the user's site, if any, should be mentioned clearly.

ix) The delivery time of the machine should not exceed six months after placement of the firm purchase order to the supplier on the basis of bank guarantee. Late delivery than the schedule will incur penalty by the supplied as per CSIR rules.

Spares :

The manufacturer should also recommend the spares to be needed after the expiry of the warranty period in the technical bid document. The price of the spares should be stated separately in the price bid document.
