



U N I V E R S I T Y O F  
**SOUTH CAROLINA**

**ADDENDUM NO. 1**

**TO: ALL VENDORS**

**FROM: Reed Bickers**

**SUBJECT: Sealed Bid # USC-IFB-1569-RB  
OPENING DATE AND TIME: REMAIN UNCHANGED**

**DATE: October 6, 2009**

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This Addendum No. 1 modifies the Bid invitation only in the manner and to the extent as stated herein.

**Questions submitted by vendors received by the deadline of 5:00 P.M. October 05, 2009 are addressed as follows:**

**#1** What type of material are you molding? **Answer:** Mostly bulk molding compounds made from thermoset resins and fillers.

**#2** Can you supply a typical sequence of operation? **Answer:** Load material, close clamp, keep clamp closed while material cures, open clamp, remove molded part.

**Scope of work**

**#3** N. What parameters are expected to be stored in recipes? **Answer:** Closing speed, clamp pressure, platen temperatures, time the clamp stays closed.

**#4** O. What level of troubleshooting is expected? Voltage detection? I/O status? **Answer:** Indicators that would warn the operator when the main parts are not working, such as when the pump is off, the linear transducer is not working, the clamp is open or closed, the emergency stop is engaged or not.

**#5** P. (A) What is the expected accuracy of cylinder positioning? **Answer:** The cylinder position will be measured with the linear transducer, but we not expect to be able to control where the cylinder stops. The cylinder will stop when the mold closes or when the press is unable to squeeze the compounds any more.

**#6** P.(B) Is bi-directional positioning expected? **Answer:** This question is not clear. What is meant by bi-directional positioning? What is being positioned?

**#7** P.(C) We have re-phrased the question, hope that helps. What is the expected positional

accuracy (i.e. 5.752" +/- .002") of the press travel? **Answer:** In a typical experiment a sample will be squeezed between two disks with constant applied force. The sample will fill the gap between the disks, and as the disks move closer to each other excess sample will exit the gap between the disks. We need to measure accurately the gap between the disks, and that is the purpose of the linear variable displacement transducer (LVDT) on the clamp cylinder. We would rather have a transducer with a small total displacement (2.54 mm = 0.1 inches in the specifications) that can measure the gap with high precision (approximately 0.001 mm) , than a transducer with large total displacement (say 1 inch) that can measure the gap with lower precision. We do not need to measure large distances (such as the whole movement of the clamp cylinder); we need to measure accurately the position of the moving cylinder (or the parts attached to it) near its closing position.

**#7 Q.** Are the two pressure transducers to be for display of cylinder pressure only? **Answer:** Yes, one would display the pressure on one side of the cylinder, and the other the pressure on the other side.

**#8 S.** What is the expected force and repeatability accuracy? **Answer:** Approximately 2% of full scale.

**#9 CC. (A)**-Two heat plug receptacles are required? **Answer:** The number of heat receptacles is not specified, but we must be able to set each platen at a different temperature.

**#10 (B)** 2KW capacity? **Answer:** 2 kW per platen or higher.

**#11 (C)** Heat control for each heat plug required? **Answer:** We must be able to control the temperature for each platen, but not necessarily for each heat plug in each platen.

**#12 LL.** Maximum distance required between press and power unit? **Answer:** No maximum distance specified.

**#13 A.** It is usually the customer's responsibility to rig the equipment into place and connect the utilities to the machine at the specified and tagged locations. We then normally send a factory technician to verify that the equipment was installed properly, start-up the equipment and give on-site operational instructions/training. Is this acceptable? If not acceptable, please explain our specific responsibilities. **Answer:** That is acceptable. We expect the instrument delivered to our loading dock. We will be responsible for unpacking it, moving it to the location where it will be operated, and connecting the utilities. The manufacturer will then send a technician to check it, start it up, and instruct our personnel on how to use it.

**#14 I.** Please state acceptable deflection on the 20" left to right platen dimension. Deflection is usually stated as +/- .001"/per foot or +/- .002" per foot, etc. **Answer:** Acceptable deflection should be approximately +/- 0.0015" per foot of the platen left to right dimension.

**#15 U.** Please describe the desired mechanical ejector. If you cannot give a detailed description of what is required, we have 2 options – we can include the less expensive option and quote the more expensive ejector system as an option. **Answer:** Mechanical ejection by ejector rods would be enough.

**#16 V.** The tie rod spacing, left to right is stated as 15", but the platen is stated as 20" left to

right in point Y. Usually, the platen fits between the tie rods left to right. Please clarify.

**Answer:** The tie rods would go through the platens to guide them; therefore, the spacing between tie rods should be less than the platen width.

**#17 BB.** Please specify size and number of holes per platen. **Answer:** No holes specified. Your standard tap holes would be acceptable.

**#18 CC.** Please state the heated platen size (20" left-right x 12" front-back?) and number of heat zones per heated platen. Also state the number of heat receptacles needed. Are the mold heat zones also 2kW each also? If not, please specify kW of each mold heat zone.

The two heated platens should be as large as would reasonably fit between the tie rods left to right and almost as long as the platens front to back. The heated platens would thus be approximately 14 inches left to right, 11 inches front to back. **Answer:** The number of heat receptacles or heating zones per platen is not specified, but we must be able to set each platen at a different temperature. Heating power must be 2 kW per platen (not per heating zone) or higher. We must be able to control the temperature for each platen, but not necessarily for each heating zone in each platen.

**#19 II.** Is pressing speed to be manually adjustable (valve on the hydraulic unit) or electronically adjustable? If possible, please detail typical pressing cycle. What materials will be molded? **Answer:** Pressing speed should be adjustable either manually (through a valve) or electronically.

Typical pressing cycle: load material, close clamp, keep clamp closed while material cures, open clamp, remove molded part. Materials to be molded: mostly bulk molding compounds made from thermoset resins and fillers.

**#20 LL.** What is the maximum possible distance between the press and the hydraulic unit?

**Answer:** No maximum distance specified.

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**BIDDER SHALL ACKNOWLEDGE RECEIPT OF ADDENDUM NO. 1 IN THE SPACE PROVIDED BELOW**

**AND RETURN IT WITH THEIR SEALED BID RESPONSE. FAILURE TO DO SO MAY SUBJECT BID TO REJECTION.**

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Authorized Signature

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Firm

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Date