Mississippi State University
Notice of Proposed Sole Source Purchase

Mississippi State University anticipates purchasing the item(s) listed below as a sole source purchase. Anyone objecting to this purchase shall follow the procedures outlined below.

1. Commodity or commodities to be purchased (make, model, description):

ABB Robotic Weld cell (IRB 2600 IRBP A-250 Cell with Welding Equipment) with accessories and software for wire-arc additive manufacturing capabilities. The system includes two welding process capabilities-cold metal transfer and plasma arc welding with a feature to transition between welding methods.

1. Explanation of the need to be fulfilled by this item(s), how is it unique from all other options, and why it is the only one that can meet the specific needs of the department:

CAVS currently has a funded project to investigate a novel additive manufacturing process (wire-arc additive manufacturing) and develop process parameters and monitoring methods for specific materials for the sponsor. The sponsor would then take the developed parameters and use them on the network of existing equipment the sponsor has access to. In order to develop parameters and in-situ process monitoring techniques for the sponsor, we will need to purchase a system that has the same hardware and software to ensure that our developments can be transferred to the sponsor with full fidelity. If a different system was selected from another manufacturer, the parameters and monitoring techniques would be inherently different since manufacturers typically use proprietary control systems and techniques to retain competitive edge. We would like to purchase a system that is a similar as possible to the sponsor so that we may provide the most applicable parameters and monitoring for the sponsor.

1. Name of company/individual selling the item and why that source is the only possible source that can provide the required item(s):

ABB is the only known source that has previously developed a robotic weld system specifically for wire-arc additive manufacturing. We have discussed the type of system that we need with other companies, but they have not had experience with wire-arc additive processes and do not offer the same software integration capabilities that ABB has on offer. ABB has provided all of the other wire-arc additive manufacturing systems for the sponsor and its other contractors. Because of this, there is an existing network of identical machines that the sponsor would like to make use of. Our work would not be as valuable to the sponsor if we are not working on a system that is as similar to theirs as possible.

1. Estimated cost of item(s) and an explanation why the amount to be expended is considered reasonable:

The estimated cost is $247,806 which includes the robotic cell, the welding heads, software for the control system, a tool change system, setup and cleaning tools, laser position sensors, and a positioning system for the workpiece. Compared to other additive manufacturing systems, this is nearly half the price of commercially available additive systems. We have quoted other AM systems that range in price from $400,000 to over $1M.

1. Explanation of the efforts taken by the department to determine this is the only source and the efforts used to obtain the best possible price:

Because this is a custom system, ABB has developed their cost based on their costs not on list price. As such, they are not able to provide typical discounting, and we do not qualify for academic discounts since the system is not primarily used for educational classes. Based on information from other system manufacturers, the price is a competitive price for the hardware. The software integration is not available from other suppliers so a cost comparison is not available.

Any person or entity that objects and proposes that the commodity listed is not sole source and can be provided by another person or entity shall submit a written notice to:

Don Buffum, CPPO
Director of Procurement & Contracts
dbuffum@procurement.msstate.edu
**Subject Line must read “Sole Source Objection”**

The notice shall contain a detailed explanation of why the commodity is not a sole source procurement. Appropriate documentation shall also be submitted if applicable.

If after a review of the submitted notice and documents, MSU determines that the commodity in the proposed sole source request can be provided by another person or entity, then MSU will withdraw the sole source request publication from the procurement portal website and submit the procurement of the commodity to an advertised competitive bid or selection process.

If MSU determines after review that there is only one (1) source for the required commodity, then MSU will appeal to the Public Procurement Review Board. MSU will have the burden of proving that the commodity is only provided by one (1) source.

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