

OMIC R&D TECHNOLOGY BOARD

Titanium Cryogenic Machining with 5ME Technology

Request for Proposals

1.0 Project Information

- **Project Title:** Titanium Cryogenic Machining with 5ME Technology
- **Project Type: Joint General Project**
- **Project Description:** Utilizing a CNC Mill either horizontal or vertical incorporate and test machinability characteristics of titanium and other specialty alloys with the 5ME (<http://5me.com/the-5ms-of-efficiency/explore-the-5ms/>) cryogenic technology compared to water soluble coolant technology.
- **Project Outcomes:** The team expects increased tool life while speeding up material removal rates by 2x-5x faster than similar subtractive manufacturing milling processes in water soluble coolant environments on the same machine tool. Less environmental waste as well as energy consumption. Improved finished part quality results.
- **Project Duration:** The team expects that this project would require on the order of 6 months.

2.0 General Information for All Proposals

- **Eligibility:** All faculty at OMIC R&D Research institutions and OMIC R&D technical staff.
- **Performance Period:** The Performance Period of the proposed work must be appropriate for the content given above in the Project Information sections. Requests for excessive or unjustified performance periods can be reason for proposal rejection by the OMIC Technology Board.
- **Award Amounts:** The funding requested must be appropriate for the content given above in the Project Information sections and consistent with any limitations given there. In all cases requested funds must be fully justified. Requests for excessive or unjustified funding can be reason for proposal rejection by the OMIC Technology Board.
- **Proposal Format, Content and Details:** All proposals must strictly follow the template given below and include all required sections
- **Submission Deadlines: Monday June 3, 2019**
- **How to Submit:** Send proposals by email to the OMIC R&D Project Manager, Ally Imbody <alicia.imbody@oit.edu>
- **Proposal Review Process:** Proposals will be reviewed and award decisions made by the OMIC Technical Advisory Board. The Board encourages collaboration between OMIC's university research partners in response to this RFP when collaboration will provide the best value for achieving the desired Project Outcomes. Evaluations will be based on the following criteria:
 - Soundness of the proposed methodology
 - Demonstrated subject-matter expertise of proposed staff
 - Cost/reasonableness of proposed budget

- Timeline/adherence to proposed schedule
- Past performance (if applicable)

Technology Board members will evaluate each eligible proposal submitted using a five-point scale where: 1- poor, 2-deficient, 3-acceptable, 4-superior, 5-outstanding.

Evaluators will assign a default score of 3 for Past Performance if no information is available. All scores will be averaged by the Tech Board chair and a decision made based on the highest overall score.

- **Informational Contact:** Questions are to be directed to the OMIC Project Manager, Ally Imbody <alicia.imbody@oit.edu> by **Monday, April 29, 2019**. Consolidated questions will be sent to the Technology Board Chair and responses will be provided to all research partners by **Monday, May 6, 2019**.
- **Performance Requirements:** The PI and institution awarded the project will be expected to progress the work expeditiously to meet all of the progress milestones shown in their proposed schedule (see section two below).
- **Project Termination:** The Tech Board reserves the right to cancel the project at any time.

3.0 Specific Information for this RFP

Depending on the amount of material required by a proposal, ATI may provide titanium alloy workpieces as an in-kind contribution.