

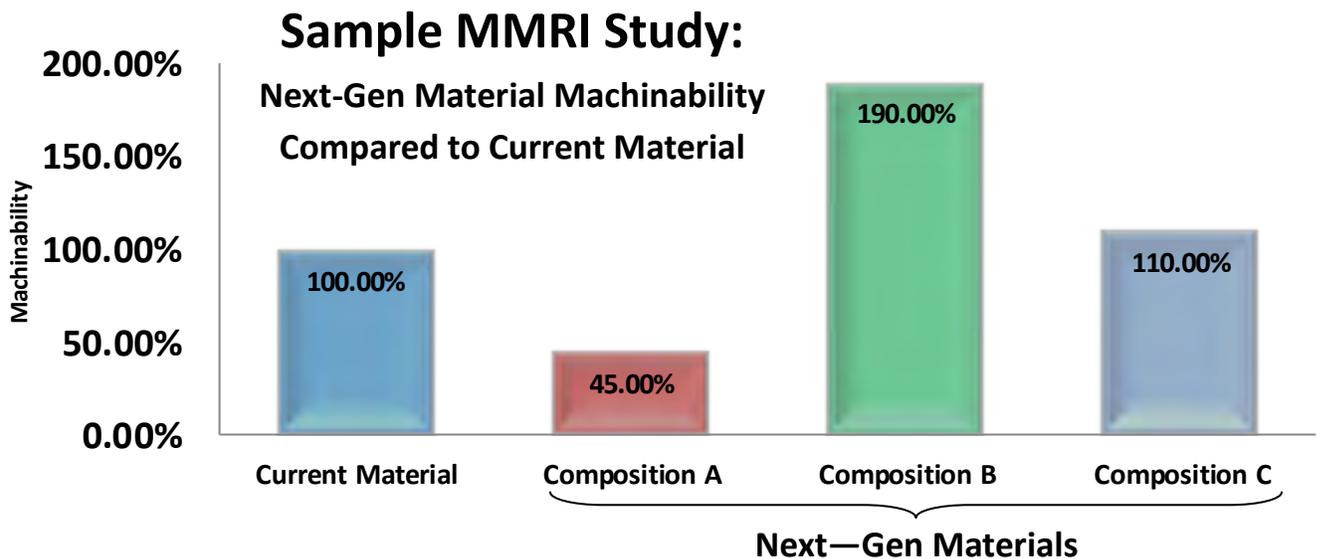


THE MMRI CONNECTION

Machinability of Next-Gen Materials

Are you developing a new process, anticipating new materials in next generation parts, or experiencing machinability issues in current production? Understanding the machinability of a material in the process planning stages can help accurately estimate process capacity requirements, eliminate unexpected bottlenecks, and prevent surprises in new processes.

The MMRI Can Help By Performing Machinability Studies to Estimate Cycle Time, Tool Life, Power Requirements, Cutting Forces, Vibration Issues, Swarf Management and Identify Other Machinability Issues Early in Process Planning



Engage CANMET-MTL to complete the new product cycle. Design and Prototype New Materials with CANMET-MTL and Test Machinability with the MMRI

Accelerate Process Development by Understanding Machinability During Planning Stages

The McMaster Manufacturing Research Institute (MMRI) opened for business in May 2001. The MMRI is one of the largest university based manufacturing research institutes in Canada, supporting a wide range of academic programs related to Manufacturing. Founded by Dr. Mo Elbestawi, now McMaster's vice-president of Research and International Affairs, and directed by Dr. Stephen Veldhuis, the 20,000-sq.-ft. of research space houses a wide range of lab scale research tools and industrial scale manufacturing equipment, designed to meet the sophisticated research and development needs of leading manufacturers in the polymer, automotive, power generation and aerospace, as well as the tooling and die/mold industries.

HOW TO WORK WITH THE MMRI

The MMRI supports research projects in the following categories:

I. Basic, Pre-Competitive Research

Long term, pre-competitive and fundamental research. The duration of these research projects will typically average three (3) years or longer. These projects generally benefit from the Federal Government's Natural Science and Engineering Research Council (NSERC) and Ontario Centres of Excellence (OCE) grants.

II. Applications Engineering

Research and development projects sponsored by industrial partner(s), with a typical duration of three (3) years or less. The research focus, milestones, and deliverables are all specified in close consultation with the industrial partner(s). Whenever appropriate, effort will be made to attract matching support from relevant programs at OCE and/or NSERC.

III. Industrial Process Development

Typically projects of this nature will have a timeline on the order of one year. Research initiatives will respond to industry needs for advanced manufacturing process development and/or current process enhancement. These efforts may be funded entirely by the participating industrial partner or in conjunction with funding available through federal and/or provincial organizations such as the National Research Council's Industrial Research Assistance Program (NRC-IRAP).

Funding Opportunities

For most projects, matching funding can be obtained through various Government sponsored programs, through Ontario Centres for Excellence (OCE), National Sciences and Engineering Research Council (NSERC), and other organizations. These programs offer cash incentives to offset the costs of collaborative projects.

For more information on these programs, contact the MMRI.



Centre for Advanced Polymer Processing & Design (CAPPA-D)



Machine Systems Laboratory (MSL)



Metal Forming Laboratory (MFL)



Robotics and Manufacturing Automation Laboratory (RMAL)



Thermal Processing Laboratory (TPL)



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