

MONTANA MACHINING COMPANY PRIORITIZES TRAINING TO ENHANCE QUALITY

ABOUT MANUFACTURING & REFACE TECHNOLOGY. Manufacturing & Reface Technology (MRT) is a remarkable example of how a very small company can establish a strong presence in the oil and gas industry. Since 2012, the MRT team of 11 employees in Laurel, Montana, has provided cutting-edge machining and design services, allowing them to produce highly precise working parts. Additionally, MRT is home to innovative developers who created a patented Mobile Lathe Refacing Technology, used to maintain drill pipe sealing surfaces in the field, helping with repairs and lowering downtime for many customers. In less than 15 years, MRT has built a global client base that goes beyond the oil and gas sector to include mining, agriculture, and construction.

THE CHALLENGE. MRT is committed to fulfilling its clients' needs with quality products and excellent customer service. Company leadership regularly conducts initiatives to enhance their ability to produce precisely crafted tools efficiently. MRT identified two opportunities to improve in-house capabilities and quality through staff training: reverse engineering and continuous improvement.

MEP CENTER'S ROLE. MRT partnered with the Montana Manufacturing Extension Center (MMEC) to develop and implement training plans. In the first phase, MMEC Business Advisor Lane Gobbs helped the company identify and document reverse engineering gaps in MRT's systems and processes. He then delivered 40 hours of onsite training to staff to improve their understanding of key topics needed to address the gaps, including industry standards, geometric tolerancing, material selection, secondary processing standards, and quality standards.

In a later phase, MMEC involved employees across the company in continuous improvement through a mix of Lean manufacturing and leadership training. The comprehensive approach included introductory training on Lean principles, advanced training on Lean implementation, Smart Talent implementation training to improve performance management, and supervisor leadership training to help key team members lead and maintain the improvements.

The reverse engineering training has improved the quality assurance decision-making process, especially when determining part acceptability. Generally, this decreases the number of interactions between production and design teams, saving time and resources. Over the long term, this is expected to improve quality, lower the cost of goods sold (COGS), and minimize waste related to manufacturing print errors.

The continuous improvement training strengthened internal understanding of Lean manufacturing principles across the company, enabling production workers to contribute their expertise to suggested process enhancements. By deploying supervisory training alongside a Smart Talent system, MRT has established a framework for ongoing knowledge and skill development that will support and maintain improvements.

RESULTS



\$957,000 increased/retained sales



11 increased/retained jobs



\$585,000 in new investment



\$260,887 in cost savings

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"[MMEC Business Advisor] Lane Gobbs is a fantastic benefit to our organization and has helped us to grow in many areas of expertise, from reverse engineering to facility throughput and organizational flow. We have invested in new equipment this year, and we are adding one position with engineering capabilities to allow us to grow product line offerings within the oil and gas sector. I am looking forward to utilizing future engineering services as we move towards new innovative products."

-Richard Oldson, CEO, Manufacturing & Reface Technology