



# **CASE STUDY: MWI PUMPS**

Enhancing Operational Efficiency at MWI Pumps  
through Collaboration with Red-D-Arc and Airgas

# EXECUTIVE SUMMARY

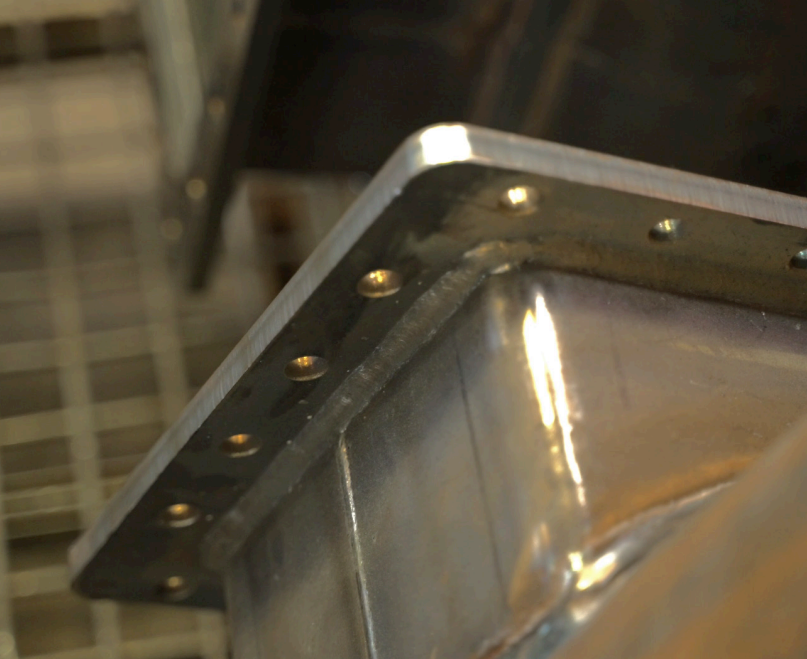
This case study covers the strategic relationship among **MWI Pumps**, **Red-D-Arc** and **Airgas**. MWI Pumps is a fourth-generation family business specializing in large-volume water and diesel pumps. Focused on overcoming challenges in welding processes and operational inefficiencies, MWI Pumps leveraged Red-D-Arc's innovative BotX™ cobot welding system in collaboration with a systematic program presented by Airgas to solve some key production challenges. This collaboration led to significant improvements in productivity, process efficiency, and cost savings.



# INTRODUCTION

**MWI Pumps**, with its rich history and dedication to flood control and water transfer solutions, faced challenges common to the metal fabrication industry—inefficiencies in welding processes and the need to minimize operational costs. The involvement of Red-D-Arc and Airgas introduced critical automation solutions, setting the stage for transformative changes in MWI Pumps' operations and productivity.





## THE CHALLENGE

Prior to the collaboration, **MWI encountered issues with its welding and fabrication processes, including leaks, that led to time-consuming rework of its gas and diesel tanks.** The need for a more efficient welding solution was evident, alongside the desire to uncover and address hidden costs within their manufacturing operations.



# THE SOLUTION (PART 1)

## Introduction of the BotX™ Cobot Welding System

The decision to integrate the BotX cobot welding system from Red-D-Arc came as a strategic response to the welding challenges faced by MWI Pumps. The BotX system was implemented with minimal downtime. It took just one morning—or about four hours—to install the system and train the MWI team.



*Before we tried out the BotX, we tried a more traditional robot [...] which required a lot more training and fixturing.”*

**- Darren Eller**

Vice President, MWI Pumps



# THE SOLUTION (PART 2)

## Synergy through Collaboration with Airgas

Andy Afflick, Director of Advanced Manufacturing for the South Region of Airgas, conducted a comprehensive evaluation of MWI Pumps' welding processes. This assessment was part of the **Unlocking the Hidden Cost of Welding™** program created by Airgas, which aims to identify inefficiencies and recommend optimizations. Afflick's visit led to actionable insights into voltage and amp setting adjustments, and recommendations on gas and wire usage that could lead to substantial savings.



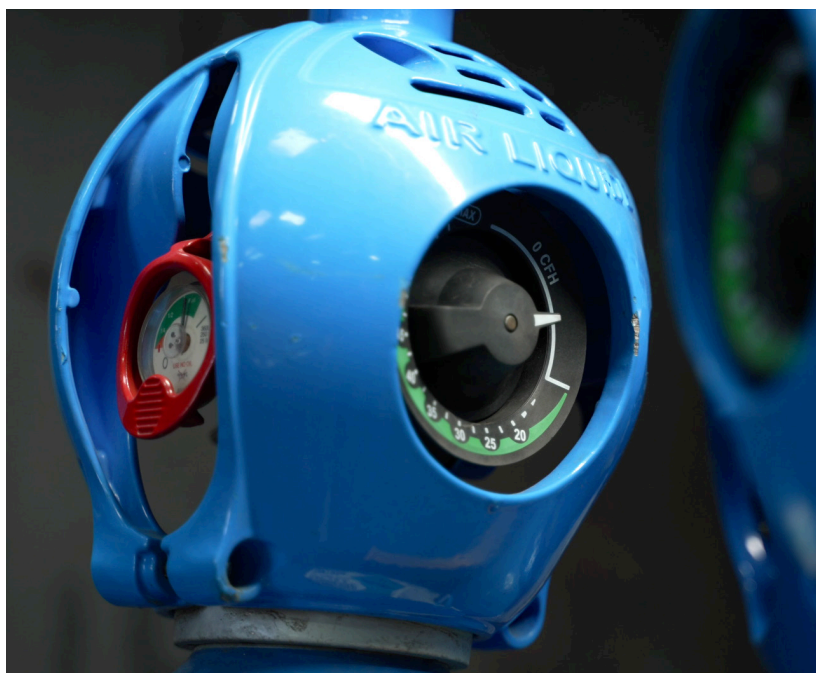
**Airgas**<sup>®</sup>  
an Air Liquide company



## IMPLEMENTATION

The BotX™ cobot welding system was swiftly incorporated into MWI Pumps' workflow, significantly reducing the learning curve associated with traditional robotic welding. Simultaneously, the recommendations provided by Airgas were adopted, leading to immediate improvements in welding quality and efficiency.

**“That training was very important,”** noted Roberto Carreras, Welding/Fabricating Supervisor for MWI Pumps, highlighting the impact of the expertise shared by Airgas.



**An additional aspect that significantly contributed to this transformation was the integration of ARCAL™ gases with EXELTOP™ into their welding processes.** Recognizing the need for high-quality welding gas solutions, MWI Pumps incorporated ARCAL premium gases, known for their consistency and optimal performance in welding applications. The choice of ARCAL gases was driven by their promise of delivering superior quality welds, enhancing safety, and optimizing gas usage.



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*The ARCAL™ cylinders use the gas [all the way] from the bottom of the cylinder, so you're using all of the gas in the cylinder. And also the quality of the gas, in my opinion, is very good. I haven't had any issues with welding defects from the gas itself.”*

**- Kris Rahall**

Application Engineer/Welding  
Supervisor, MWI Pumps



# THE RESULTS

The collaboration yielded impressive results:

- **33% increase in productivity**
- **3.5 hours saved per water tank produced**
- **Significantly less rework and repairs**
- **Increased safety and quality via ARCAL™ with EXELTOP™**

These improvements underscored the effectiveness of the BotX™ cobot and the implementation of techniques that the MWI team learned as a result of working with Airgas through the **Unlocking the Hidden Cost of Welding™** program.

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*We're not having as many repairs as far as leaks are concerned, and we're not having to rework any welding because the welds are a lot better.”*

**- Kris Rahall**





## CONCLUSION

The journey of MWI Pumps with Red-D-Arc and Airgas underscores the importance of trust and collaboration between manufacturers and their suppliers. Daren Eller's reflection on the relationship built with Red-D-Arc and Airgas emphasizes the value of expert support and knowledge in overcoming operational challenges. ***"The support I've received from Red-D-Arc and Airgas, they're here whenever we need them to be,"*** Daren notes, reinforcing the notion that embracing new technologies and expertise is essential for progress. ***"Once you realize their expertise and the knowledge that they have, and they're there to help, there shouldn't be any hesitation at all. It's really a no-brainer."*** Through collaborative efforts, technological innovation, and a commitment to excellence, manufacturers can achieve significant operational improvements and cost savings.



**BotX™** addresses the skilled labor shortage by enabling companies to acquire easy-to-use automated welding through short or long-term rental, lease or purchase programs. The innovative on-demand model allows customers to quickly scale up - or down - their production capacity to align with current business needs, with no capital investment.



- ✓ **Zero up-front investment**
- ✓ **Flexible commercial options (rent, lease or purchase )**
- ✓ **On site set-up and training**
- ✓ **No long-term commitment required**
- ✓ **Online and offline system options**
- ✓ **Full implementation support**
- ✓ **24/7, personalized virtual support via app**



**BOTX**  
**PRODUCT PAGE**

BotXWelder.com



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