

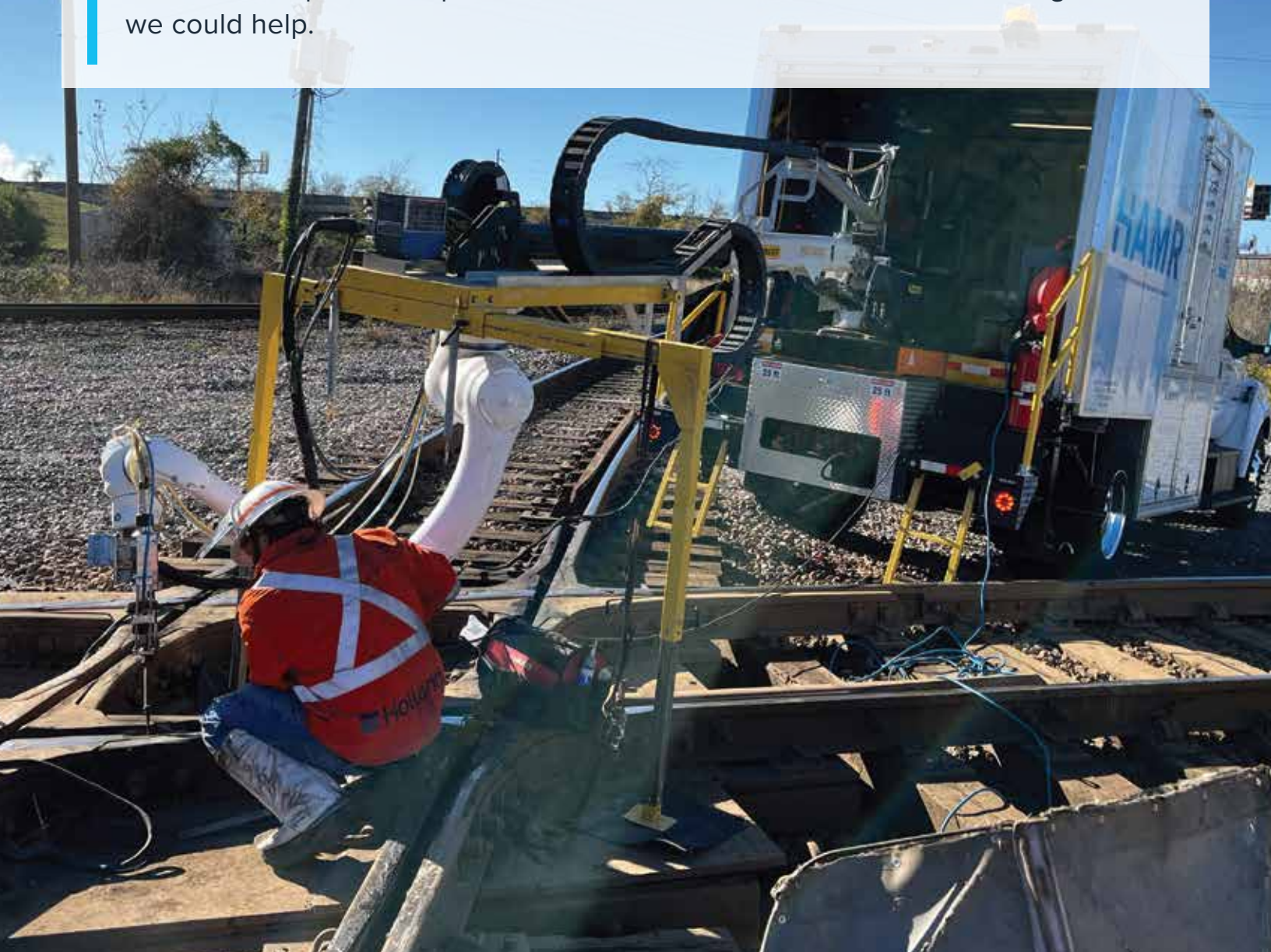
# HAMR™

*Holland Automated Manganese Repair*

## CROSSING DIAMOND CASE STUDY

### THE SITUATION

A Class 1 railroad had crossing diamonds with FRA violations. Limited available track time coupled with the severity of the damage made it infeasible to repair the diamonds in track with traditional manual welding procedures. Replacing the diamonds would also require extensive track time, planning, and work crews to result in an expensive repair. The customer contacted Holland to investigate how we could help.





# SOLUTION

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Holland's Automated Manganese Repair (HAMR™) service includes pre-weld material removal using plasma cutting and robotically controlled welding procedures to build back the damaged areas on specialty components such as rail frogs and diamonds. After damaged areas are built back up, our teams then finish grind components to bring them back to OEM specifications. Refurbishments can be completed on-track, off-track in a pond scenario, or sent into our fixed plant location in Crete, IL.

In this situation, Holland utilized its HAMR-4 mobile manganese repair truck to conduct in-track repairs for the customer. Holland's newly designed truck features a deployment method that allows us to begin welding in under 5 minutes. The speed of this new process makes it ideal for working either in-track or alongside track under Form B protection.

[sales@hollandco.com](mailto:sales@hollandco.com)  
**708.672.2300**  
[hollandco.com](http://hollandco.com)

Additionally, Holland's robotically controlled welding process deposits material 2-3x faster than manual welding. In addition, this process has been designed to limit the heat input to keep manganese components under 500 degrees. Utilizing this technology, Holland was able to repair all 4 diamond inserts for the customer, eliminating FRA violations faster and more cost-effectively than originally thought possible.

Holland's refurbishment process is higher quality, proven to last much longer than manual repairs, and can be capitalized. This helps reduce costs and track maintenance time by eliminating the need for repetitive repairs.

