

Holland

Welding the Future: How Holland's Intelliweld® System is Redefining Rail Efficiency and Quality



Holland mobile flash-butt welder and puller working in the Pilbara

Efficiency, quality and sustainability are key drivers for today's railways, from heavy haul to high-speed rail.

As both an original equipment manufacturer and service provider, Holland engineers and manufactures flash-butt welding equipment and control systems that serve railways in nearly 40 countries. Operating a fleet of nearly 200 MobileWelders in North America helps fuel the cycle of improvement that allows the organisation to provide an unmatched degree of accuracy and > 99.99% weld quality conformance.

Intelliweld® Control System & Weld Data Management

Intelliweld, Holland's proprietary weld control and data management system, is the result of that improvement cycle. *"Holland has used at least five different welding control systems on our mobile welding equipment over the years, with varying degrees of success,"* noted Shane Mayhill, Holland's General Manager of Welding Technology.

"Around 2014, we were using a third-party control

system. Some areas lacked the data input and output we wanted to improve our weld quality and production. When the supplier discontinued the system and tried to move us into using a new one with some of those same weaknesses, Holland decided it was time to take the welding control 100 percent in-house."

Thus began the development of what is now known as Holland's industry-leading Intelliweld control system. The team took the knowledge gained over 40 years of rail welding and brought that into a specifically designed control system for flash-butt welding rail.

In building the Intelliweld system, Holland took into account all of the pluses and minuses of previously used control systems as well as those things believed to improve the quality and efficiency of its welding fleet. *"The times our operators were in the field and thought, 'If only we had this or could do that,' were built into the system," Mayhill said.*

After almost a year of development and testing, Holland began installing the Intelliweld system on new mobile welding units being built. By the end of 2017, Holland had updated its entire North American fleet to a single, proprietary control system. Having a single control system in a fleet of more than 200 units improved efficiencies in training, unit repair times and access to needed spare parts.

Released to the global market this year, Holland's Intelliweld control system provides real-time weld monitoring and adjustments, automated data collection and low-consumption weld capability. Additionally, Intelliweld offers the ability for customers to receive real-time diagnostic support via remote system access that allows Holland welding experts to work through issues directly with the operator from anywhere in the world.

Managing Neutral Rail Temperature

Because Holland's Intelliweld® operating system ensures minimal rail consumption, the length of 'free' (unanchored) rail required is significantly reduced compared with alternative methods of closure joint elimination. Simple programme adjustments allow us to tailor rail consumption to your requirements for localised track structures and target rail neutral temperature. Lower rail consumption reduces the



Operators in training during a new flash-butt welder commissioning in India

amount of de-clipping and clipping required, improving productivity and reducing labour costs.

To maximise the closure process, Holland developed the Puller Lite. The Puller Lite was designed to be carried on the welder itself, eliminating separate carts and power packs. Its high capacity, extended working stroke, compact design and custom control features have allowed railroads to install rail welds in applications that were not possible before. The Puller Lite's four independently controlled hydraulic jacks are designed to allow easy, precise rail alignment. Designed for closure welding and rail destressing, the 38cm (15in) stroke length allows for the closure of large rail gaps.

Bringing New Life to Rail Switches and Crossing

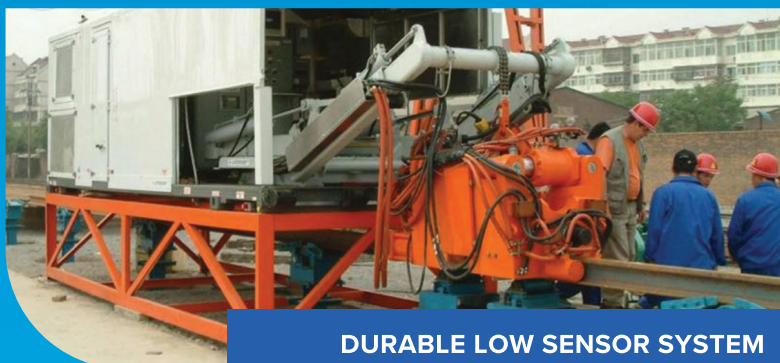
Building on the legacy of flash-butt welding equipment and services, Holland's Automated Manganese Repair (HAMR®) was developed to provide higher quality and longer-lasting repairs to frogs and diamond inserts. This process uses a robotically controlled welding procedure to build back damaged areas to give new life to rail frogs and crossing diamonds two to three times faster than the traditional manual repair process. HAMR helps increase efficiency and resiliency for partners by using renewed, existing components as an alternative for frequently hard-to-source special trackwork.

For more information visit our website www.hollandco.com or speak to one of the team sales@hollandco.com.





HEAVY HAUL TO HIGH SPEED RAIL



Holland's Intelliweldcontrol system provides unmatched weld quality through advanced weld data monitoring, reporting and remote diagnostics. Used on HSR projects in India and Japan and on Holland's contracting fleets in North America and Australia, Intelliweld Flash-Butt Welding systems have proven to be the most reliable and productive in the industry.

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