



KMT SmartLine jigs support Hitachi Rail in renewing UK rail network

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One of the challenges for OEMs of rolling stock is sourcing the highly specialised equipment needed to set up production lines. For something as complex as a modern train, custom machinery is needed at nearly every stage of the process to maximise production efficiency. KMT, a manufacturer of bespoke machinery, has supported the production of high-speed trains at Hitachi Rail's Newton Aycliffe assembly plant by providing custom-built SmartLine jigs.

Hitachi Rail's Newton Aycliffe assembly plant manufactures modern trains designed to help renew the UK rail network. The site has already delivered 122 pioneering trains for the Department for Transport's InterCity Express Programme (IEP) for the East Coast and Great Western Main Line as well as 70 all electric commuter trains for ScotRail. Furthermore, it is also actively supporting the UK Government's 'Levelling Up' strategy.

As Hitachi Rail was setting up production for new West Coast Mainline trains at Newton Aycliffe, it approached Staffordshire-based KMT to provide a large quantity of custom jigs to support the fabrication, welding, finishing and inspection of rolling stock. Hitachi Rail selected KMT due to the quality of its work and proven track record of delivering machines to leading UK rail, industrial and automotive OEMs.



"We're a provider of bespoke engineering services, with a specialism in custom production machinery," explains Adrian Degg, Group Engineering Director at KMT. "Working closely with leading rail OEMs is a cornerstone of our business. Our ability to provide a turnkey service from design to installation means that we can deliver machinery to almost any specification. A large in-house capacity ensures we can produce the quantities of equipment needed to build large, modern production lines. We always aim to provide solutions that maximise manufacturing efficiency."

KMT offers a complete engineering service that encompasses each stage of a project, managing the design, fabrication, prototyping, testing, production and instrumentation processes in-house. On-site, the business provides dedicated installation, technical and maintenance support. KMT also offers a standalone fabrication service, underpinned by an ongoing programme of investment in new equipment such as state-of-the-art fibre laser cutting machines and press brakes. In fact, each service is modular, allowing customers to pick and choose based on requirement. In this case, Hitachi Rail engineers provided detailed specifications for the jigs, relying on KMT's engineering expertise to carry out the project from start to finish.

The SmartLine jigs produced by KMT for this project are entirely bespoke, designed to accommodate specific train models manufactured by Hitachi Rail. Highly automated and operated via custom hydraulics, the jigs allow fabrication, welding, finishing and inspection processes to be condensed within one area of the production line. The jigs hold key subassemblies, such as the floor, sides and roof, in position for this work. Consequently, efficiency is improved and available space on the line maximised, helping to boost productivity.

"We delivered the SmartLine Jigs to the facility ready to support production operations," says Adrian. "Furthermore, we provide on-site technical and



maintenance support to Hitachi Rail around-the-clock, ensuring that the equipment is always running at optimum efficiency and maximising productivity."

Mark Snowdon, Quality Engineer at Hitachi Rail, added: "KM Tools has been absolutely fantastic from the beginning. The company has been completely professional all the way through, and its engineering capabilities are second to none. We look forward to working with KM Tools again and are already planning future ventures with them."



Image captions:



Image 1: KMT SmartLine jigs support Hitachi Rail in renewing UK rail network



Image 2: The SmartLine jigs produced by KMT for this project are entirely bespoke, designed to accommodate specific train models manufactured by Hitachi Rail.



Image 3: KMT provides dedicated installation, technical and maintenance support.



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About KM Tools Ltd

KM Tools Ltd (KMT) specialises in manufacturing, maintaining and renewing specialised machines used for the manufacture of automotive components, with a specialist focus on emission control (Exhaust, CAT & DPF) product manufacture. It also specialises in providing precision assembly-line jigs and machines for the rail industry.

Its machines are used by leading brand manufacturers building parts for the OE market and the automotive aftermarket across the globe. Our manufacturing and service centre is based in a purpose built facility the Midlands from which it manufactures, services and rebuilds and supports hundreds of individual machines.

KMT can service, support and re-manufacture most machines from any original manufacturer, including one-off custom designs. It also develops tooling and workholding solutions such as bespoke automated, or semi-automated mandrels, jig and fixturing systems.

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