

Creative sourcing keeps rail projects on track

One of the main difficulties in the rail industry is that component procurement typically centres on upgrades to existing systems, rather than new projects. The reason for this is simple: although the rail industry is keen to use the latest electronics to enhance passenger safety, comfort and convenience, it also has rolling stock with extremely long operational lifetimes. This longevity, combined with the heavy penalties imposed on rail operators for train breakdowns, places upgrades and refurbishments at the centre of the industry's procurement initiatives.

Ingenious solutions

The replacement of obsolete components with modern alternatives often demands an element of creativity within the procurement process. For example, one buyer first approached Charcroft when he was unable to find a drop-in replacement for some legacy circuit breakers that had non-standard fixings. The only option appeared to be significant and costly alterations to the metalwork of the distribution panels to accommodate the fixings of the replacement breakers.

Close liaison between Charcroft's franchised circuit-breaker manufacturer, Sensata, and a third-party fixings company, enabled Jeff to source adaptor plates for the new breakers. This allowed the new breaker to be fitted directly into the existing footprint of the legacy component and eliminated the need to re-configure the metalwork of the panel.

Customisation is key

Flexible thinking was also the answer when refurbishing a heating, ventilation and air conditioning system on a legacy carriage. The customer's buyer had spent considerable time searching for spares inventory, only to find that the manufacturer had withdrawn the thermostats some years earlier. Working with the buyer, Jeff engineered a Klaxon thermostat to provide the same electrical, mechanical and thermal parameters as the legacy unit and ensure that it would be available on a short lead-time.

Getting tough

The demanding operating environment is another challenge faced daily by buyers in the rail industry.

One of Chris's customers, for example, had an issue with an open-frame DC/DC converter that was failing in service.

Chris suggested a more rugged supply from MTM Power, with vacuum encapsulation for protection against the extreme environment.

Customisation was used to add fixings which ensured that the standard 30W supply was a drop-in replacement for the legacy unit. These modifications also meant that the unit could quickly be swapped-out during the trains' regular service windows, without the need to pull vehicles from service. The fact that the converter was supplied with a low minimum order quantity also eased another common issue for rail-industry buyers.

Working on these, and many other rail-based projects, has shown that customisation, low minimum order quantities and ensuring that components are rugged enough to provide a long operational life, are keys to success in rail procurement.

Long operational lifetimes and extreme environments mean procurement in the rail industry can be tricky. Charcroft's Jeff Gurr and Chris Leek highlight some of the intriguing challenges they have faced



E-mech specialist, Charcroft, Jeff Gurr



Power specialist, Charcroft, Chris Leek

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