



Media Release – Technofast

New generation fastening technology radically cuts slew bearing bolting time

New generation hydraulic bolt fastening technology deployed at an Australian iron ore port has enabled operators of a 5000tph (tonnes per hour) ship loader to tension bolts during slew bearing replacement more than five times faster than by using conventional torqueing or hazardous manual methods.

A total of 72 specially designed Technofast EziTite® Hydraulic Nuts were used at the Karara Geraldton Port to tension grade 12.9 studs that secure the slew bearing of the loader, which is a vital materials handling installation with long travel, luffing and slewing capabilities.

The EziTite® Hydraulic Nuts – simultaneously tightened in groups of four to further enhance precision, speed and safety and cut load scatter - are part of a globally proven range of EziTite® Hydraulic Nuts used in mission-critical applications where speed, precision and avoidance of downtime are paramount.

EziTite® Hydraulic Nuts are rapidly applied by being placed onto bolt studs and hydraulically actuated to stretch the bolt to the precise tension required then locking it in place mechanically with a lockring. The reverse procedure permits equally rapid disassembly when it is eventually required.

Applications range from nuclear and conventional generators through to rotating, vibrating, turbine, heat exchanger and mineral processing equipment including stamping, crushing, dragline boom supports, high pressure grind rollers, hoists and conveyor drives, motors and shells.

“EziTite® Hydraulic Nuts such as those deployed at Karara are ideal for tensioning all of the studs on a flange, joint or cover simultaneously, loading entire groups of fasteners at once. This simultaneous tensioning gives an extremely accurate and even load onto the flange/joint, enhancing its long-term security, safety and reliability,” said Technofast CEO Mr John Bucknell.

At Karara, the EziTite® nuts were simply placed in position by hand then groups of four were linked together and pressurized simultaneously, reducing bolt load scatter and offering dramatic time savings.

“Using torque wrenches, for example, it would have taken about 30 minutes to tension four bolts, whereas the EziTite® fasteners completed the task in less than five minutes,” said Mr Bucknell.



“Also, there are no pinch points associated with Technofast tooling and it does not need to be handled whilst being pressurised, eliminating inherent health and safety hazards.”

The EziTite® Hydraulic Nuts also overcame bolt load scatter problems commonly encountered with standard slew bearing replacement procedures using torque wrenches. Bolt load scatter, due to a single bolt being fastened at a time, could have caused undue wear on the slew bearing, leading potentially to downtime on this particular application and on scores of others where slew bearings are mission-critical.

“Mining and materials handling operations just cannot afford downtime, production losses and safety risks at a time when they are stepping up output to compensate for current prices.

“The mining and materials handling industries are highly focused on eliminating bottlenecks in their output systems, especially those created by unnecessary time losses and ongoing maintenance arising from joint security may be less than ideal,” Mr Bucknell said.

Benefits of the EziTite® Hydraulic Nut

- Reduce maintenance down time.
- Improve safety on the job.
- Give reliable and precise tensioning.
- User-friendly.
- Fast to fit and remove.
- Requires little physical effort.
- Is ideal for difficult or confined spaces

The EziTite® Hydraulic Nut is ideal where:

- Accurate and reliable loading is required on bolting.
- Vibrational or torsional stresses are a problem.
- Regular maintenance requires repeated adjustment or removal of nuts.
- There are confined or difficult nut locations.

Technofast customers globally include Bechtel, BHP Billiton, BMA, Monadelphous, OneSteel and Rio Tinto.

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