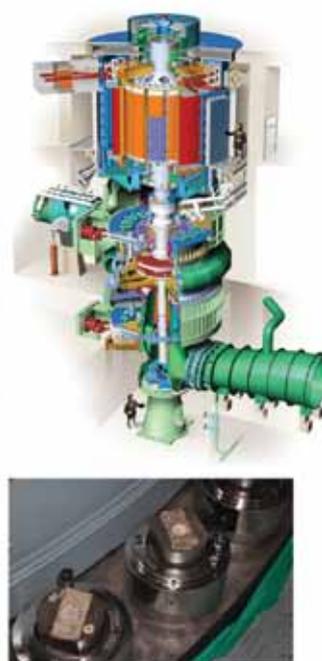


HYDRAULIC BOLT TENSIONING



Technofast specialises in the use of hydraulic power to simplify bolting and lifting operations in a wide spectrum of applications not only in Australian industry, but internationally. The company has a long association with developing and providing innovative products to the international Power Generation Industry, and has previously signed development and sales agreements with industry leaders, including Westinghouse Electric and Siemens Energy. The resulting technology has won wide industry recognition, including prestigious industry accolades such as the Platt's Global Award, and widespread uptake of product. Technofast designed fasteners are extensively used in Commercial Nuclear Power generation worldwide.

Technofast excels in providing solutions which demonstrate efficiency and mechanical efficacy with economy and safety. The company's staff take pride in designing and manufacturing equipment which is not only practical, but built to last.

SEEKS TO BECOME MORE COMPETITIVE

As industry seeks to become more competitive internationally, engineers are pressured to streamline maintenance and breakdown repair procedures to maximise returns from capital invested in machinery and plant. Any analysis of such procedures illustrates the amount of time necessarily dedicated to removing and retensioning fasteners. Technofast responds to these needs by designing bolt tensioning equipment and fasteners which can get major plant items operating and producing income quickly.



Technofast Wind Turbine Tensioners; Standard and Custom Designs

On-going experience with age old problems always suggests new products. For example, Combustion Turbine manufacturers now specify Hydraulic Bolt Tensioning as the preferred method of case closure for large power generation turbines, and fit longer bolts to accommodate the method. However, with older models, modernising to this system would require an entire replacement of fasteners and a machining of each spotface to permit location of the hydraulic tensioning tool. Technofast's CamNut avoids the need for such costly outlays by providing a replacement nut which suits existing hardware and can be operated quickly and precisely to achieve ideal outcomes of mechanical integrity and reduced machine downtime.

The CamNut system is also ideal for closure of steam turbine casings, where instead of using time consuming bolt heating and shrinkage methods, bolts are hydraulically tensioned in multiples. Clearly, the use of multiple tensioners drastically shortens assembly time, so for example, with an alternate bolt (50%) system, a large HP/IP casing can be closed in a matter of minutes, rather than days. An added bonus is that any release and retensioning of fasteners can be carried out quickly and easily. In case of breakdown, fastener removal can be effected even before the turbine is fully cooled from operating temperature.

Continued over ▶

Continued from page 31

HIGH TEMPERATURE HYDRAULIC NUTS

Technofast also pioneered the use of High Temperature Hydraulic Nuts for Power Generation applications. These incorporated a serviceable all-metal seal, allowing their installation at service temperatures in excess of 600°C. Since their introduction over a decade ago for Gas Turbine closure, many thousands have been used in other fossil and nuclear fuelled power generation applications such as Reactor Coolant Pumps, valves, steam generators, turbines and pressurisers. Technofast formed a partnership with Westinghouse Electric LLC (USA) to specify and introduce these products for Reactor Vessel closure. Use of High Temperature Hydraulic Nuts in all situations has demonstrated the speed and efficiency of joint closure which is achievable. Personal safety for workers is also enhanced, as hydraulic bolt tensioning is essentially a "hands off" operation. Exposure to radiation for nuclear workers is dramatically reduced from the drop in fitting times.

The company's designers have built upon this experience to now offer a radically new metal seal which has far greater durability. The EziTite Hydraulic Nut can be fitted with a unique release mechanism to allow removal

without hydraulic pressurisation. These improvements address any concerns relating to emergency removal of hydraulic nut fasteners in case of seal failure. In the unlikely event of such a problem, the EziTite fastener can be removed with ease, refurbished, and returned to service.

DRIVE COUPLING BOLTS

In response to industry enquiry, Technofast have developed a range of Drive Coupling Bolts suited to Power Generation, Marine Propulsion and other critical applications. These products demonstrate superior mechanical function, simpler fitting procedures and lower installed cost than other competitive offerings. Although 'radial fit' coupling bolts have been available since the mid-1970s, the relatively high cost of purchase and installation has stymied their more general application. The new Technofast products are designed and priced to overcome such constraints and allow more widespread usage of such technology.

Technofast excels in providing solutions which demonstrate efficiency and mechanical efficacy with economy and safety. The company's staff take pride in designing and manufacturing equipment which is not only practical, but built to last. 



www.technofast.com
sales@technofast.com
Tel: + 61 7 3375 1431