

# TECHNICAL UPDATE # 009

## Cost effective maintenance strategy for rotating machinery

In a recent post we illustrated the potential energy savings that can be made over alternative types of motor shaft couplings using the Thompson TCAE-R coupling.

As a former maintenance engineer for a large manufacturing group the continual cost pressures to perform under budget and maintain the highest plant runtime was always in the forefront of one's daily duty. To develop the latest maintenance system using such terms as Preventative Maintenance, Predictive Maintenance, and Proactive Maintenance for our rotating machinery (pumps, rolling lines, gear trains, presses etc.) demanded a good understanding of the components reliability and the associated test and measure tools.

As many engineer has already said the reliability of a good pump or roller drive is only as good as the shaft coupling that drives it. Unless specified directly at the outset many OEM machines are often purchased unfortunately with the cheapest motor shaft coupling that have untimely let the system down due to failure or else burdened with lengthy maintenance schedules to keep the alignment in its critical state. Not only the expense but the time required to perform accurate laser alignment on such rotating machines costs the plant enormously in lost production that is extended to the many, many instances of like machines across most large plants.

The effective management of such as simple thing as a shaft coupling can be achieved with self-aligning couplings such as the TCAE-R by Thompson Couplings Ltd.

Compared to other types the TCAE-R coupling offers a fully sealed alignment eliminator device that can be removed from the high intense PM schedule of a plant. The TCAE-R coupling is akin to a "set and forget" device that remains fully sealed with no alignment requirements to be regularly checked. Not be misled the TCAE-R coupling will require a quick visual and audible observation as part of a much longer schedule to check for such events as damage from extraneous sources for example

Furthermore it's "out of sight – out of mind" abilities lend themselves to applications that are often in remote and/or inaccessible places. Such examples include remote water feed pumps in minesites or pumps situated in hazardous areas that may require difficult and elaborate entry permits to access that would ordinarily require routine coupling alignment activities to be performed. In these instances the "set and forget" nature of the TCAE-R frees up the resources of the maintenance team for other more demanding duties.

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*(David Farrell is Chief Engineer for Thompson Couplings - designers and manufacturers of The Thompson Constant Velocity Joint. David has more than 30 years as a professional mechanical engineer involved in a wide range of mechanical engineering designs and maintenance projects. He was one of the key founders of Thompson Couplings Ltd since 2001 and continues to design the range of TC products as well as support the engineering community with specific applications for power transmission and shaft couplings.) [www.thompsoncouplings.com](http://www.thompsoncouplings.com)*