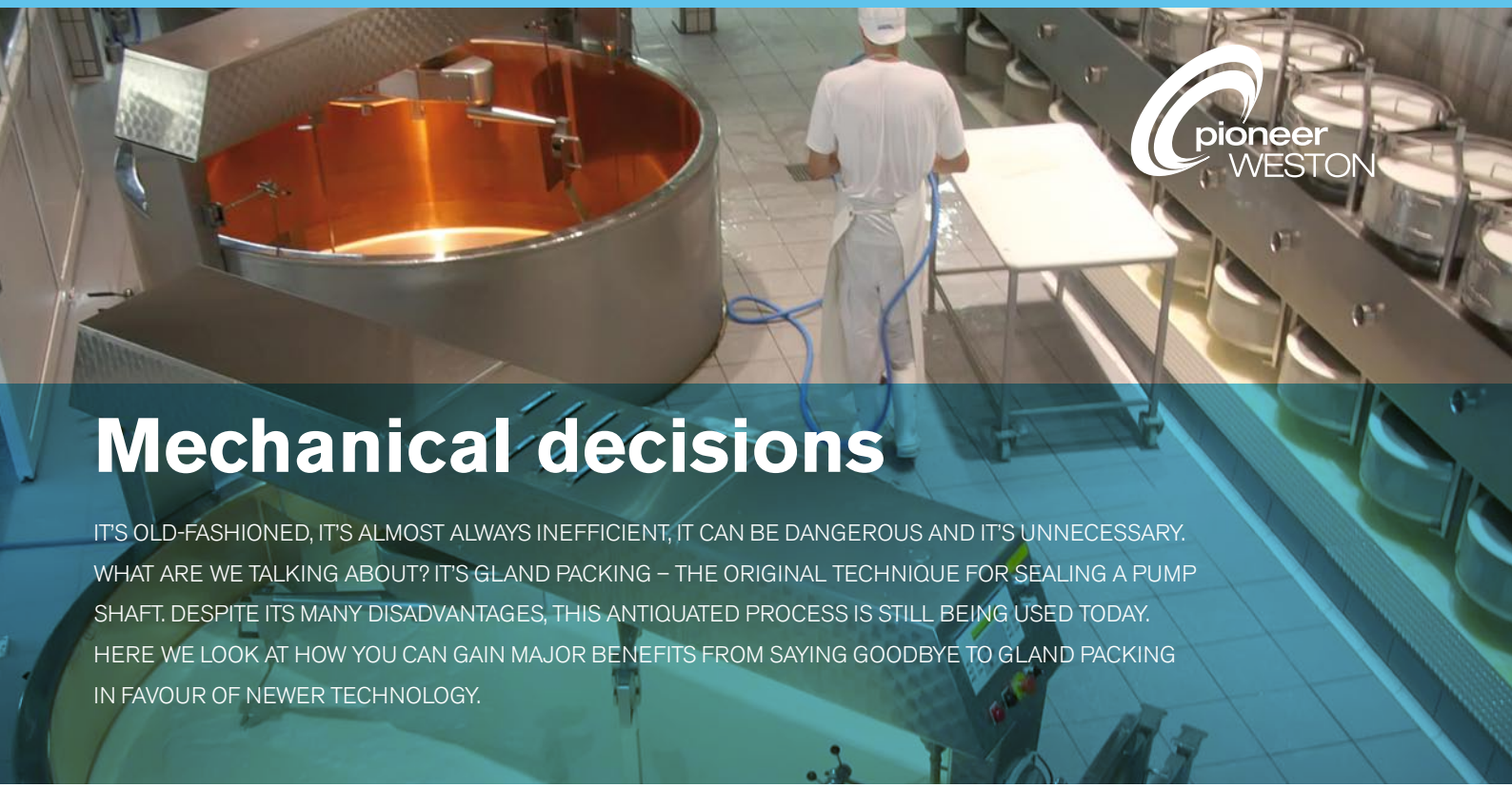


Mechanical decisions

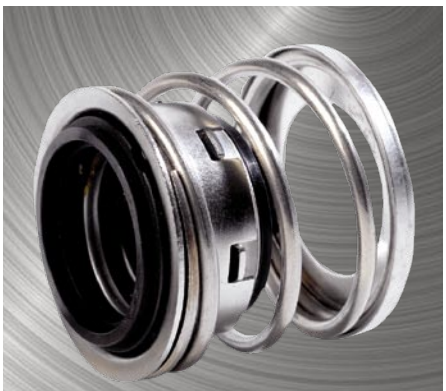
IT'S OLD-FASHIONED, IT'S ALMOST ALWAYS INEFFICIENT, IT CAN BE DANGEROUS AND IT'S UNNECESSARY. WHAT ARE WE TALKING ABOUT? IT'S GLAND PACKING – THE ORIGINAL TECHNIQUE FOR SEALING A PUMP SHAFT. DESPITE ITS MANY DISADVANTAGES, THIS ANTIQUATED PROCESS IS STILL BEING USED TODAY. HERE WE LOOK AT HOW YOU CAN GAIN MAJOR BENEFITS FROM SAYING GOODBYE TO GLAND PACKING IN FAVOUR OF NEWER TECHNOLOGY.

Gland packing may be dated, but it remains very common – a very large number of pumps across all sectors of industry still use the technique. Yet the argument for using it is weak, at best. Today, mechanical seals offer a better solution in almost every respect and can be easily fitted, or retro-fitted, to almost every product, whether new or old. And the advantages of doing so are enormous. So, what are these advantages and if you're using gland packing, why should you consider switching to mechanical seals?

Possibly the first and foremost reason for replacing packing with mechanical seals is because gland packing needs a small amount of leakage for cooling purposes. This has several problems associated with it, not least the fact that unless the fluid is controlled properly it can damage bearings or the pump housing. This leak requirement causes a number of problems, not least the fact that it's inherently very messy. It can also be a significant issue in hygienic environments, as lubrication could taint the product under manufacture. Obviously, pumps that contain hazardous liquids should not use the technique at all.

Maintenance is an issue, too. This is because the pump gland nuts need to be tightened regularly and because the packing gland rubs against the shaft, it will tend to wear the shaft. Although this is usually addressed through the use of a shaft sleeve, it may need replacing from time to time.

Yet another problem with gland packing is the material it uses. Today, these materials include a wide range of substances, including rubberised aluminium mesh, copper mesh and graphite fibre, but some packing products may include materials such as asbestos. This is rare, but it can happen – and it's not always obvious when it does. The risks can be eliminated by avoiding gland packing altogether.



While gland packing is low-cost in terms of capital expenditure, it compares very badly with mechanical seals in terms of lifetime costs.

Contrast these downsides with mechanical seals. Available for every pump purchased new, they're also extremely easy and inexpensive to retro-fit to almost every product currently in use – they simply fit straight into the same space previously used by gland packing. What's more, their advantages over gland packing are considerable. They are, for example, a zero-maintenance component, requiring no lubrication. Compare this with gland packing, which typically requires weekly or monthly attention. Lifetime too is a major plus, as mechanical seals will typically give a much longer – and hassle-free – life than a gland packing solution. In other words, while gland packing is low-cost in terms of capital expenditure, it compares very badly with mechanical seals in terms of lifetime costs. Mechanical seals are also clean and safe – an important consideration for many sectors.

There are other benefits to mechanical seals, too. If you'd like to know more about them, or how you can benefit, there's no-one better to discuss your application with than ERIKS, a world-leader in mechanical seal technology through Pioneer Weston, with over 50 years of experience in design and development. A massive range of standard product is available, all of market-leading quality, and full custom solutions can be designed and manufactured. And remember, ERIKS also offers a full pump refurbishment service – and we can also change your existing mechanical seals, too!