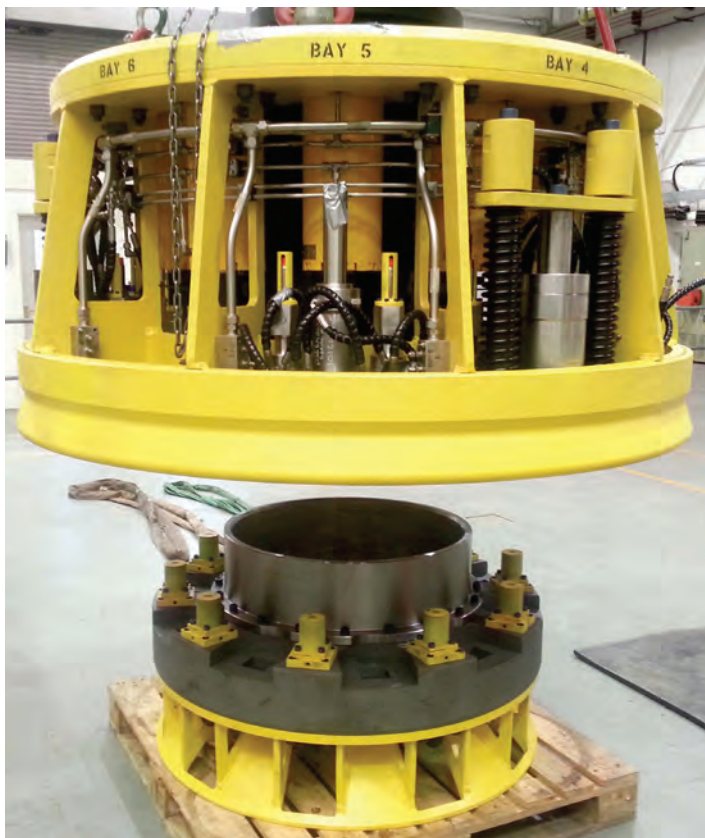


## ACE Industrial Shock Absorbers Protect Oil Rig Pipelines

The ductile connection between oil rigs and their pipelines are the achilles heel of an offshore rig system. These connections are susceptible to shock and vibration damage. Using the right kind of shock absorber is one way to protect this connection and keep oil rigs running safely.

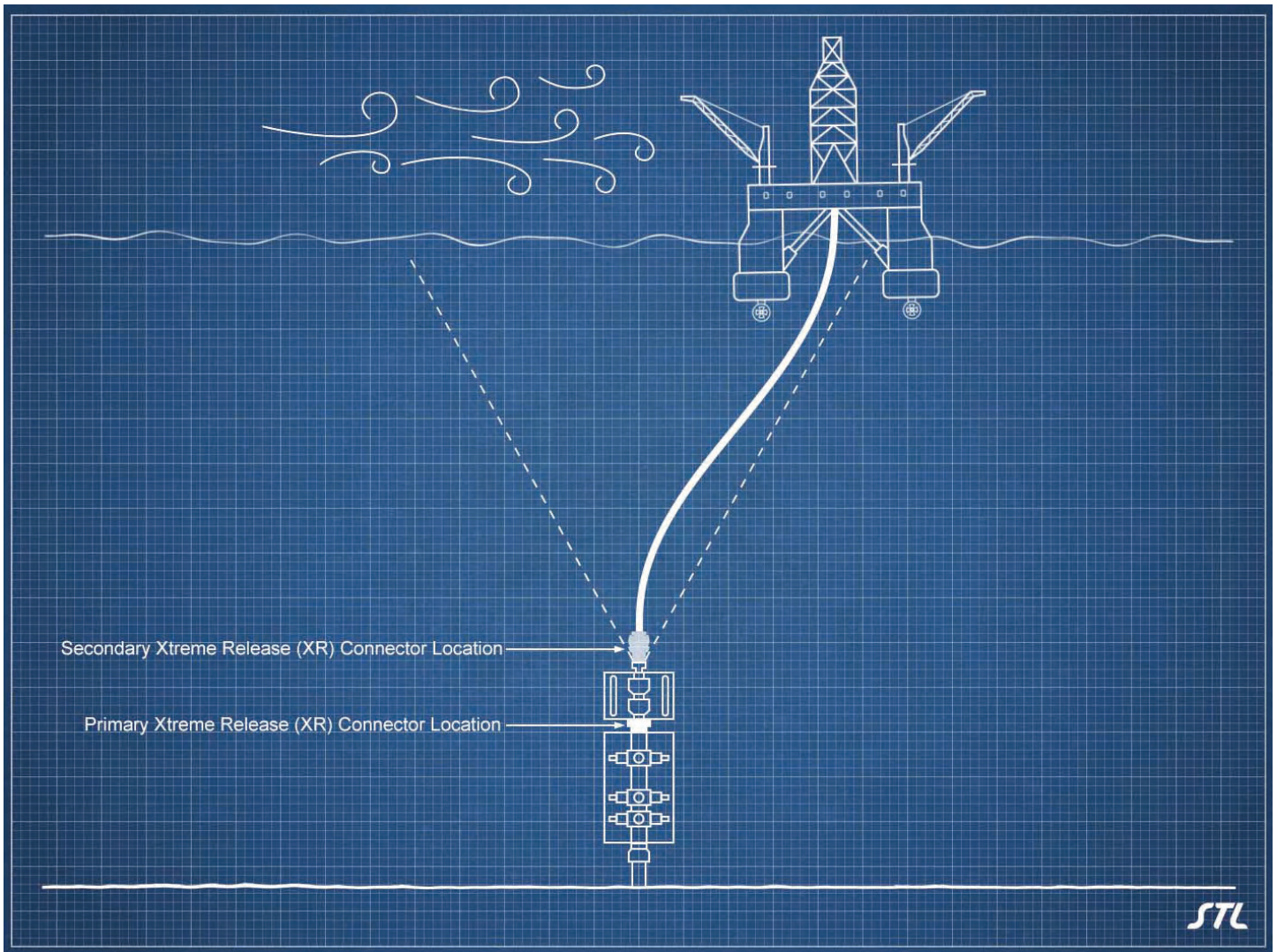
For a recent undersea pipeline application, one offshore engineering company created a new connector system using face-seal technology for improving the safety on oil



rigs. This new design allows crews to safely disconnect in dangerous conditions. The system is based around 10 MAGNUM self-adjusting shock absorbers from ACE Controls.

**Safety first.** If the drilling riser extension at the oil well's opening can't be quickly removed during an emergency, ensuing damage can put rig teams in harm's way. Any damage to the riser, well opening or pipeline can cause uncontrolled oil to escape into the environment.

Traditional connector designs use a male-female plug to connect the borehole and pipeline. But these connectors come with some safety limitations such as low slot angles and less time for safe separation. In the new face-seal system, crew members have more time for safe separation since no limits are set on the maximum slot angle when the oil pipe is uncoupled.



Another integral part of the connector's face-seal technology are clamping dogs, which sometimes are exposed to significant mechanical forces during a controlled or emergency release. MAGNUM dampers safely absorb the kinetic energy, protecting the dogs and other equipment from possible damage during release.

**About the shock absorbers.** Made from rustproof stainless steel and weighing 2.9 kg a piece, MAGNUM shock absorbers come with a tough body, an innovative sealing technology and strengthened guide bearings for long service life under extreme conditions. They're good for underwater deployment applications, even with stormy conditions on or above the water's surface.

With an effective mass up to 21,200 kg, these shock absorbers are ideal for performing heavy work. They also have a quick response time of just 0.12 seconds, a stroke of just 50 mm and withstand up to 1,700 N per stroke.

#### **Advanced models for more extreme conditions.**

In standard units, MAGNUM shock absorbers withstand temperatures between -12 and 70°C and operate with speeds from 0.15 to 5 m/s. In some cases though, you need wider ranges. ACE makes customized industrial shock absorbers for applications requiring wider temperature ranges, as well as absorbing up to 40% more energy than standard versions.

**To learn more, please visit: [www.acecontrols.com](http://www.acecontrols.com)**