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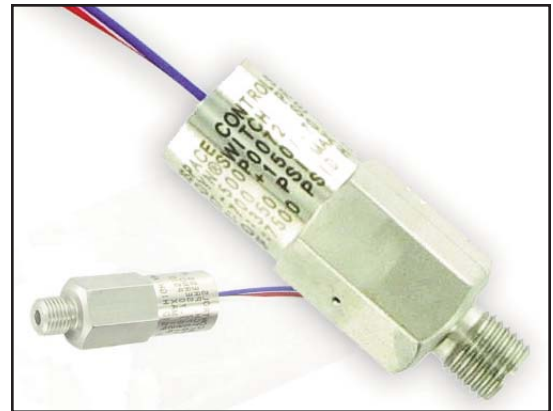
Neo-Dyn®

500P Subsea Switch

An ITT Neo-Dyn Differential Pressure Switch Application story

More than 30 years ago, the very first subsea production system was installed in the Gulf of Mexico. Shallow and simple by today's standards, it nonetheless marked the beginning of a new era in subsea oil and gas production. Today all the knowledge and experience gained in production control technology is available throughout the world and ITT Neo-Dyn is doing their part in helping to pioneer this ever changing market.

The new trend in this industry over the past few years is modularity. Modularity allows the control system to be lighter and smaller, yet incorporate more functionality than other previous production systems. The heart of the control system is the Subsea Control Module or SCM. This is the component which houses the ITT Neo-Dyn series 500P differential pressure switch.



Approximately the size of a 55 gallon drum, the SCM is a pressure compensated chamber filled with a petroleum based synthetic mineral oil and is rated for water depths up to 10,000 feet and working supply pressures to 5000 psi. The SMC controls a wide variety of up to 32 field functions such as X-mas tree valve control, manifold valve control, choke adjustment, header pressure monitoring and many others including shutdown and alarm functions. Even corrosion monitoring is within the standard SMC capabilities. The shutdown and alarm functions are part of ITT Neo-Dyn's 500P series role. As we have discussed in previous application stories, pressure switches are primarily used to indicate an abnormality and its role in this application is no different. Specifically, the Neo-Dyn switch is used in conjunction with an actuator on a hydraulic X-mas tree valve. If the differential pressure is equal to or greater than the 1000 psi increasing set point for open vs. closed, the topside operator is signaled that a valve is not completely closed as should be. Normally the Neo-Dyn switch acts as a verification that the valve closes on shutdown and if not, emergency procedures must follow.

Can you imagine how good a pressure switch must be to operate in this environment. Yes, the Neo-Dyn pressure and temperature switches are known for their superiority in enduring high cycle rates, over pressure conditions and vibration resistant. But to be chosen as the switch of choice in this application goes beyond most all applications. There are no instrument techs on the sea floor and if they could get there they would be of little use.

* The ITT Neo-Dyn 500P differential pressure switch is a custom designed switch that is not in the catalog and is manufactured to the OEM's specifications. It closely resembles our 106P switches and variations are available upon request.

Engineered for life

For more information, please visit www.neodyn.com