

INTEGRA Services Technologies, Inc is a Controlled Bolting Service company that specializes in Leak Free Start Ups. INTEGRA has trained and experienced Technicians, specialized equipment and engineering support available to evaluate, develop and implement bolting programs for all types of flanged connections. INTEGRA has a range of Hydraulic Bolting products available for Sales, Rental and Service.

Since the early 1980's INTEGRA Technologies has been the leading provider of subsea tensioning equipment in the Gulf of Mexico. Their SEASTallion range of Hydraulic Equipment was designed specially for the offshore subsea environment which demands tools that will be reliable, safe and easy to operate. The SEASTallion range includes Hydraulic Bolt Tensioners, Nut Splitters, Flange Spreaders and Flange Pullers.

The SEASTallion subsea tensioning tools have been developed for use on subsea bolted joints where speed, reliability and simple operation are essential. They are hydraulically operated tools being connected to a hydraulic pump unit via hydraulic hoses.

The Tensioning tool comprises of only two parts a hydraulic load cell and a split reaction nut. The tool is placed onto the bolt and the split reaction nut screws onto the portion of the bolt that is protruding above the hydraulic load cell. The split nut assembly can be opened and closed by pressing a release button. Tensioning tools are used in multiples; this provides uniform tightening of the joint. The tools are connected in series to a pump unit via a single down line hose. As the hydraulic load cells become pressurized the piston extends and reacts against the reaction nut inducing a load in the bolt. The load applied to the bolt results in bolt extension and joint compression. When the required pressure is reached the nut on the joint face is turned securely down using a tommy bar.

The SEASTallion range is used on many different applications subsea, such as Marine Construction, Subsea Tiebacks, Flow lines and Risers. Each product has its own area of expertise. Tensioners are used to tighten bolts on the flanges, Nut Splitters for removing corroded or seized nuts, Flange Spreaders for spreading flanges and Flange Pullers for pulling and aligning flanges.

Caldive recently took advantage of the full utilization of the SEASTallion range of products when they rented the Tensioners, Nut Splitters, Flange Spreaders and Flange Pullers together with one of our specialized Technicians for work on SHELL's Glider Project and SHELL's Princess Project.

Glider Project

INTEGRA rented their full range of SEASTallion products, subsea tensioners, Flange Spreaders, Flange Pullers, Nut Splitters and a specialized technician to CalDive for work on the Shell Glider Project, a subsea tieback to their Shell Brutus platform. The equipment was used for connecting the pipelines back to the TLP, there were a total of 6 to 8 spool pieces the SEASTallion Subsea Tensioners were used when tightening the 6" 10,000 ft lb. flanges on the spool pieces.

Princess Project

The full range of SEASTallion products and the specialized technician were also used by CalDive on the Shell Princess project which is a subsea tieback to the Shell Ursa.

For more information on INTEGRA Services Technologies, their products and services please contact:

Debbie Jackson, Marketing

INTEGRA Services Technologies, 3238 E Pasadena Frwy, Pasadena, TX 77503

Tel: (800) 779-2658, 713-920-2400, Fax: (713) 920-2313,

Email: info@integratechnologies.com

Web Site: www.integratechnologies.com