

# SHRINK-FIT™ TAPER-JOINT



## FEATURES

- High Pressure to 10,000 psi
- No welding
- Reduced forging
- High strength steel
- Low SCF
- Metal sealing
- Bolted connection

## TECHNICAL ADVANTAGES

- Eliminates the need for welding and associated qualification
- Improved fatigue performance
- Reduced riser weight
- Improved riser performance
- Efficient make-up
- High load capacity

## COMMERCIAL ADVANTAGES

- Lower joint capital cost
- Reduced inspection risk
- Pipe grade flexibility
- Shorter fabrication/ assembly schedule
- No weld qualification delays
- Reduced materials risk

SRP routinely supplies integrally forged and fabricated taper joints for critical riser applications. SRP can now also offer taper joint solutions using the latest SHRINK-FIT™ construction method. This approach applies proprietary SRP technology to facilitate solutions that previously have been impractical and offer projects the benefit of simpler manufacturing, shorter schedules, lower costs and improved technical specification.

The process allows high-strength thick-wall pipe to be machined in a tapered profile before applying the end flanges or couplings. The process results in a weld-less, structurally efficient design with a fatigue performance equivalent to an integrally forged joint. In fact material properties are generally improved in the Shrink-fit solution by virtue of thinner ruling sections.

Benefits are realized from smaller starting ingots, access to multiple pipe manufacturing processes, reduced forging complexity, higher strength steel and parallel machining of pipe and couplings. The net result is a combination of technical and commercial benefits. For example, pipe yield strengths in the region of 80-110ksi are possible allowing higher riser loading to be accommodated or shorter taper joint lengths. Multiple material supply routes and parallel machining allow schedules to be optimized and project risks reduced.

SRP have a strong hardware pedigree and work closely with various international forge masters and machinists to optimize the process and be able to deliver product to meet specific project demands. The ability to specify and procure such fatigue critical products is a key capability developed over many years of supplying such components. Also critical to the process of delivering fit for purpose taper joints is the depth of understanding of riser structural response and fatigue drivers. This is gained through use of personnel with over 20 years in the deepwater riser business.

