



A leading American oil field services company

Reduced manufacturing cost by  
**30%**

ITC Infotech is a leading global technology services and solutions provider, led by Business and Technology Consulting. ITC Infotech provides business-friendly solutions to help clients succeed and be future-ready, by seamlessly bringing together digital expertise, strong industry specific alliances and deep domain expertise. The company provides technology solutions and services to enterprises across industries through a combination of traditional and newer business models, as a long-term sustainable partner.



[www.itcinfotech.com](http://www.itcinfotech.com)

# Design of test fixture to perform bending capacity testing for surface products like connectors under customized tension and compression loads



## BUSINESS CHALLENGE

Need to design & develop a test rig to perform combination loading (tension, compression and/or bending test) on subsea products like high pressure/high temperature housing, connectors etc.

## SOLUTION

- Multiple concepts for test fixture were created with initial specifications along with BOM of material, hardness tests, coating information, etc.
- Design verifications were done using Mathcad calculations and FEA, to validate the concepts before prototype creation
- Test procedure documents were created for test fixture design, post design freeze
- Conducted experiments and generated charts for the data generated and compared with defined specifications

## RESULTS

- Reduced complexity of the system with fabrication
- Reduced manufacturing cost by 30%
- Achieved capacity for over 95% of all possible combination load tests