

# **Workstrings Engineering Services**

Workstrings International<sup>®</sup> has a staff of Engineers to support domestic and international projects by providing the following services to our customers:

#### String Design Modeling

Collaborative string design using industry standard torque and drag modeling software that considers trajectory, rig equipment, hydraulics, slip-crushing limitations, drilling parameters, and any other identified parameters or constraints to optimize a design to work for each particular section and project.

#### **Tubular Performance Analysis**

An in-house developed calculator as per API 5C3 utilized to evaluate tension, torsion, burst, and collapse of tubulars and accessories, with or without biaxial loading.

### **Historical Modeling Calibration**

Review of actual drilling data to validate and calibrate future design modeling.

## **Connection Analysis**

Evaluation of the mechanical properties of API and proprietary connections.

### **Specialty Tool Design**

Solutions and specialty work string tools and accessory designs, including custom crossovers, lift subs, side-entry pump-in subs, and many others to meet unique well, rig, and operational challenges.

#### **Failure Analysis**

Assist Operations and QAQC teams with failure and root cause analysis.

### Slip-Crushing

Calculations that consider actual slip design, length of die contact with the pipe, pipe dimensions, and yield strength that are backed by physical load testing.



# **Engineering Support**

- · Optimized Tubular Project Design
- Torque and Drag Modeling
- Hydraulics Modeling
- · Landing String Design

- Reduced Collapse Calculations
- Tubular Connection Analysis
- · Finite Element Analysis
- · Project Management



# Deep Inventory. Even Deeper Expertise.







Scan Code for all of our current specification sheets

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