**JOINT STRENGTH SYSTEM** **JSS** **Rotary Shouldered Connections**
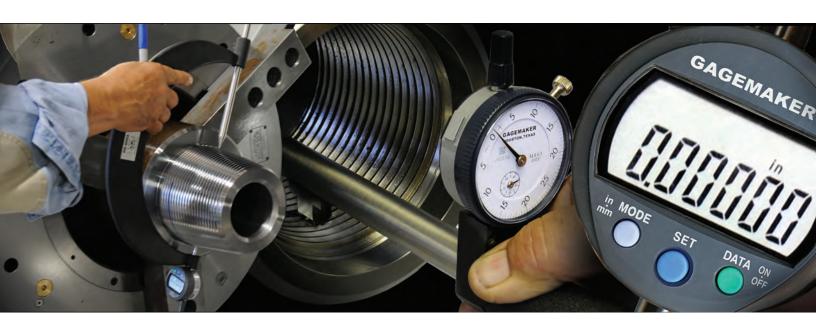
# RSC Thread Inspection System



Prevent Drill String Failures…

Reduce Costly Rework Charges….

Ensure Stronger Joint Connections…

Demand More Than What's Now Offered for Used Pipe…
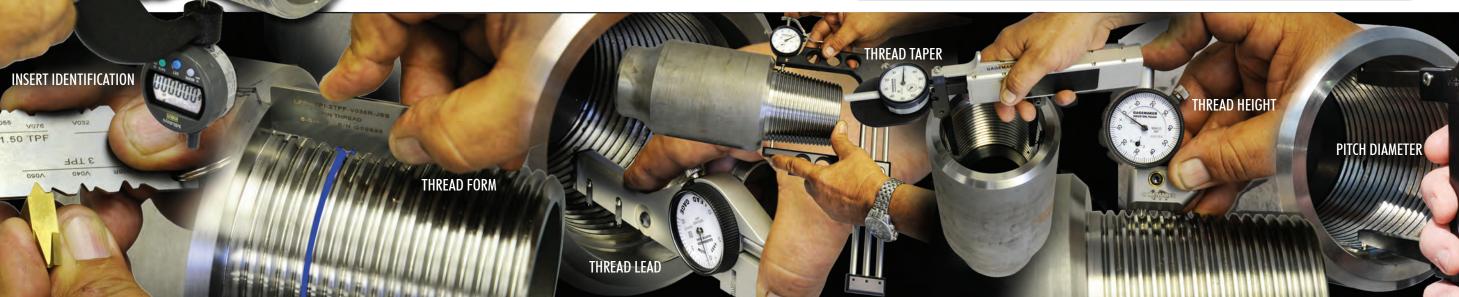
**GAGEMAKER**

# Gagemaker's Joint  Strength System

Gagemaker's Joint Strength System™ (JSS) is the only system available that measures and qualifies both new and used pipe. It's now possible to avoid broken connections by identifying thread damage before it's visually apparent and unfortunately too late. From inspecting just a few key points, you will save hours of down time and thousands of dollars in rework charges.

## *Inspect with the Revolutionary Joint Strength System and Make An Immediate Impact on Your Bottom Line*

- Extend Drill String Longevity
- Optimize Connection Performance
- Avoid Fishing for Broken Parts
- Eliminate Standoff, Lead, and Taper Errors
- Prevent Stress Cracking and Galling from Improper Make-Up and Excessive Torque
- Reduce Non-Producing Rig Time Due to String Failure
- Ensure Exact Thread Cone Interference When Torque Shoulders Make-Up
- Detect Pitch Diameter Errors that Cause Oversized Boxes and Undersized Pins

INSERT IDENTIFICATION

THREAD TAPER

THREAD HEIGHT

PITCH DIAMETER

THREAD FORM

THREAD LEAD

# JSS Six Step Inspection Process

## STEP 1
### Insert Identification
The first step in the quality process is to ensure the tooling being used is correct for the job.  Use the JSS Thread Insert Identifier Templates to quickly verify that the correct threading insert has been selected.  A quick mating of the insert to the template ensures the insert is correct for the job.  JSS insert identifiers have multiple notches on each template and are available for all API thread forms.

## STEP 2
### Thread Form
Thread form accuracy is important if two connectors are to make-up properly. Using a JSS Thread Profile Gage and a JSS Thread Addendum Gage provide a quick check of the thread to ensure that the form is correct. Thread form verification ensures form accuracy.

## STEP 3
### Thread Lead
Verifying thread lead is within tolerance is a required inspection according to API specification.  Application of the JSS Lead Gage to a setting standard and then to the product confirms that the lathe is cutting properly.  Lead variation has a direct effect on pitch diameter and how two connectors go together when made up.

## STEP 4
### Thread Taper
Thread taper is another inspection required by API Spec 7.  For accurate taper inspections, use the JSS Taper Gages to verify that the pin and box connectors will have matching tapers.  As connectors are made up, taper errors induce high stresses that eventually can lead to connection failure.

## STEP 5
### Thread Height
Proper thread height maximizes the performance of the connection. Thread height is also an API requirement. The JSS Thread Height Gages provide immediate feedback on how the thread height compares to the specification requirements.  A shallow thread height may allow the connection to pull apart under critical loads.
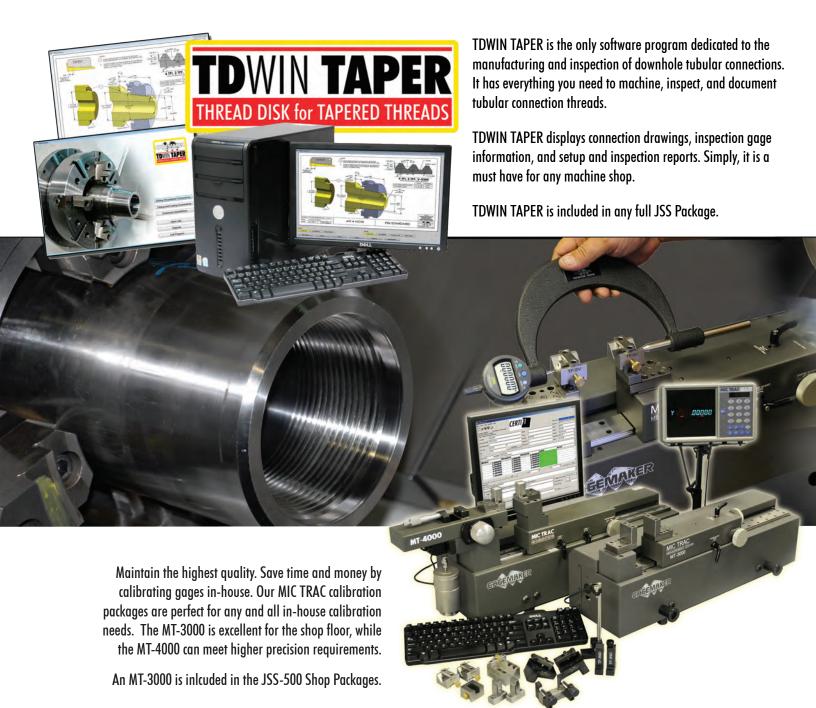
## STEP 6
### Pitch Diameter
Pitch diameter is the most critical measurement in machining threads.  The JSS Pitch Diameter Locating Templates and JSS Pitch Diameter Gages give you control over your threading quality. When pitch diameters don't meet specification it allows the connection to flex while drilling, ultimately causing galling and connection failure.

# System Essentials

**TDWIN TAPER**
**THREAD DISK for TAPERED THREADS**

TDWIN TAPER is the only software program dedicated to the manufacturing and inspection of downhole tubular connections. It has everything you need to machine, inspect, and document tubular connection threads.

TDWIN TAPER displays connection drawings, inspection gage information, and setup and inspection reports. Simply, it is a must have for any machine shop.

TDWIN TAPER is included in any full JSS Package.

Maintain the highest quality. Save time and money by calibrating gages in-house. Our MIC TRAC calibration packages are perfect for any and all in-house calibration needs.  The MT-3000 is excellent for the shop floor, while the MT-4000 can meet higher precision requirements.

An MT-3000 is inlcuded in the JSS-500 Shop Packages.

## GAGEMAKER

Gagemaker LP, • P.O. Box 87709, Houston, Texas 77287-7709
712 East Southmore Ave., Pasadena, Texas 77502
Phone: 713-472-7360 • Fax: 713-472-7241
Email: gagemaker@gagemaker.com