

## Used Sucker Rods

### Equipment Required:

1. Standard personal protective equipment
2. Wire brush capable of cleaning external and internal threads
3. Full body thread gauge for pin and box and profile thread gauges. New rods may be checked by API P8 Go gauge. Used rods may be checked with the same gauge or a API P6 Not Go gauge. Vendors may also have acceptable gauges.
4. A feeler gauge with 0.05mm (0.002") accuracy
5. Micrometers if inside and outside box diameter is to be checked.
6. Measuring tape or strap longer than longest rod length.
7. Permanent marking pen or paint device.
8. Forms for recording data on the rods.

### Checks:

1. Record metallurgy if available.
2. Reject rods that are bent, have damage from impacts, or are worn more than 5% of body or coupling thickness.
3. Clean pin connection surfaces of debris.
  - a. Reject the rod if there is corrosion or pitting in the threads.
  - b. Minor mechanical damage may be repaired by chasing the threads with a properly sized thread die.
  - c. Insert an external thread gauge onto the pin end until the shoulder is engaged or the gauge is hand tight. Check for tightness of fit (can it be shaken or moved side-to-side or back and forth?). Downgrade the rod or reject if excessive looseness is found in the connection.
  - d. Use a feeler gauge to measure standoff from the connection shoulder to the face of the thread gauge. Any clearance of 0.05 mm or more is cause for rejection if the joint will not be repaired.
4. Clean box connection
  - a. Reject the rod if there is corrosion or pitting in the threads.
  - b. Repeat procedure in #3 with a internal gauge.
5. Examine connection and at least the first 50 cm of rod body from the wrench flats. Reject rod if the following defects are found: body cracks or splits; severe wrench, tong or slip marks more than 2 mm deep; corrosion pitting more than 1 mm deep;
- 6.

### For Corrosion: **MR0176-2000 Metallic Materials for Sucker-Rod Pumps for Corrosive Oilfield Environments**

Again, for pipe, we have certainly 'logged' used pipe in the past (i.e. put through ultrasonic inspection for wall thickness, defects/cracking, etc.) and I am sure something could be generated. However, again I am not aware of any written procedures that are available.

Tubing - API 5C1  
New Rods - API 11B  
Used Rods - API 11BR

0% - 15% Wall Loss - Yellow Band (Used for downhole operations and some line pipe applications)

16% - 30% Wall Loss - Blue Band (Shallow downhole operations and line pipe applications)

31% - 45% Wall Loss - Green Band (Low pressure line pipe applications)

We only inspect to #1 grade of rod inspection which is less than .020" body defect.

Of course with the above inspections, there are special end area and coupling inspections.

If you would like anything more detailed on tubular/rod inspection, please let me know.  
The above data is general information concerning our inspection.