Brief Synopsis of Inspections Relevant to Drilling and Workover Equipment. The following is confined to derrick/ mast and substructure mechanical and structural systems only. Electrical systems and mud systems are specifically not included.

API RP 4G:
- Covers masts, derricks and accessories
- Covers substructures and accessories
- Does NOT address much on carriers and ancillary devices for portable masts, i.e. carrier frame, tires, anchor points, work platform, guying
- Four inspection levels: **Cat I** is DAILY (no documentation required), **Cat II** is at rig- up (no documentation required), **Cat III** every 730 operating days (documentation required), **Cat IV** every 3650 operating days.
- Significant weakness in identifying capabilities of necessary qualifications of craftsmen (particularly welders) to perform repairs
- Good definition of required records
- Overlaps with RP 8B on crown blocks and sheaves and on dead line anchors. 8B has more rigid requirements and tighter frequencies
- Does not address drawworks or brakes, or rotary tables and components

API RP 7L:
- Covers a. rotary tables, b. rotary bushings, c. rotary slips, d. rotary hoses, e. slush pump components, f. drawworks components, g. spiders, h. manual tongs, i. safety clamps
- Four inspection levels: **Cat I** is “fix it if it breaks”, **Cat II** is “fix it if it’s bent or broken”, **Cat III** is “take it apart and look at it before it breaks”, **Cat IV** is “take it apart and conduct NDE on all load bearing parts before it breaks”
- Frequency is “Owner or user should develop his own frequency”.
- Owner or user develops own documentation procedure
- Validation of “qualified personnel” is approximately equal to that required for a fortune teller or palm reader
- Issued in 1995, has not been updated or revised

API RP 8B:
- Basically covers all drilling and production mechanical equipment hoisting equipment, including items also covered in API RP 4G.
- Does not address top drives or top drive tracks. Does not address mud system
- Does not address drawworks or brakes
- Four inspection levels: **Cat I** is basically watch it daily during operation, **Cat II** is up- close visual inspection, **Cat III** requires some disassembly and NDE of critical areas, **Cat IV** requires removal and disassembly in controlled environment as well as NDE.
- **Cat IV** included repair as per manufacturer’s recommendations.
• Frequency ranges from daily to every five years, and is defined in Table 1. Most equipment requires a Cat III every six months.
• Documentation required as desired, but should include records of repairs and of qualifications of personnel performing repairs

API RP 9B:
• Covers care and use of wire rope, including drill lines as well as raising lines, guy lines, etc.
• This is very technical document that is usually well-obeyed in terms of drill line. Compliance for other uses is spotty, and depends on how well informed and responsible the equipment operator is.
• Frequently ignored, particularly by smaller operators, with respect to guying and other ropes, and in attachment of clips.
• There is a significant weakness in designing and using sheaves for raising line systems, as the usage is completely off the chart. Sheaves big enough to accommodate the required lines in terms of strength will not fit the applications.
• Does not effectively address workover operations for ton/ miles

API RP 54: This document addresses API compliance to OSHA requirements as they pertain to the drilling industry. It includes fall protection, confined spaces, etc. each of which has its own particular requirements.

SUGGESTIONS:
• Create a matrix table (rough copy attached) listing components, standard under which each is addressed
• Issue and Publish a monthly list of companies that have gotten inspections current on all rigs in service
• Add (voluntary) verbiage to standard IACD Drilling contract re. listing of current inspections and status thereof. This calls it to the attention of the production company.
• Establish standards for testing of welders including certification procedure

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