

API Specification

8C

4th Edition, February 2003
Drilling and Production Hoisting Equipment
(PSL1 and PSL2)

Annex A (Normative)

Supplementary Requirements

A1

General

If specified in the purchase order, one or more of the following supplementary requirements shall apply.

A2

SR1 – Proof Load Test

The equipment shall be given a proof load test and subsequently examined in accordance with 8.6.2.

The equipment shall be marked “SR1” using low-stress, hard die-stamps near the load rating identification.

A3

SR2 – Low Temperature Test

The maximum impact test temperature for materials used in primary-load-carrying components with a required minimum operating temperature below -20°C (-4°F) shall be specified by the purchaser.

Impact testing shall be performed in accordance with 6.3 and ASTM A 370. The minimum average Charpy impact energy of three full-size test pieces, tested at the specified (or lower) temperature, shall be 20 ft-lb. (27 J) with no individual value less than 15 ft-lb. (20 J).

Each primary-load-carrying component shall be marked “SR2” to indicate that low temperature testing has been performed. Each primary-load-carrying component shall also be marked to show the the actual design and test temperature in degrees Celsius.

A4

SR3 – Data Book

If specified by the purchaser, records shall be prepared, gathered and properly collated by the manufacturer into a data book. The data book for each unit shall include at least the following:

- Statement of compliance
- Equipment designation/serial number⁶
- Wear limits and nominal capacities and ratings⁶
- List of components
- Traceability codes and systems (marking on parts/records on file)
- Steel grades
- Heat treatment records⁶
- Material test reports⁶

⁶ Equipment as listed in clause 1 with exception of r.

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- NDE records
- Performance test records including functional hydrostatic and load testing certificates (when applicable)
- Supplementary requirements certificates as required
- Welding procedure specifications and qualification records

A5

SR4 – Additional Volumetric Examination of Castings

The requirements for SR4 shall be identical to the requirements of 8.4.8, except that all critical areas of each primary-load-carrying casting shall be examined.

A6

SR5 – Volumetric Examination of Wrought Material

The entire volume of primary-load-carrying wrought components shall be examined by the ultrasonic method. If examination of the entire volume is impossible due to geometric factors, such as radii at section changes, the maximum practical volume shall suffice.

Ultrasonic examination shall be in accordance with ASTM A 388 (the immersion method may be used) and ASTM E 428. Straight-beam calibration shall be performed using a distance-amplitude curve based on a flat-bottomed hole with a diameter of 3.2 mm ($\frac{1}{8}$ in.) or smaller.

Wrought components examined by the ultrasonic method shall meet the following acceptance criteria:

- For both straight and angle beam examination, any discontinuity resulting in an indication which exceeds the calibration reference line is not allowed. Any indication interpreted as a crack or thermal rupture is also not allowed;
- Multiple indications (i.e., two or more indications), each exceeding 50% of the reference distance amplitude curve and located within 13 mm ($\frac{1}{2}$ in.) of one another, are not allowed.

A7

SR6 – Boreback Stress-Relief Feature

When requested by the purchaser, the boreback box stress-relief feature shall be a supplementary requirement for paragraph 9.9.5 – Rotary Swivel Subconnection, 9.10 – Power Swivel Subconnection, and 9.11.3 – Power-Sub Connections. The connection shall conform to the applicable requirements as specified in API Spec 7 for the drill collar boreback box stress-relief feature.