Drill Stem Performance Properties

API RECOMMENDED PRACTICE 7G-1
FIRST EDITION, APRIL 2023

ERRATA 1, FEBRUARY 2024
ERRATA 2, SEPTEMBER 2024



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Drill Stem Performance Properties

1 Scope

This standard includes the performance properties for certain drill stem elements and gives general cautions regarding the use of the performance properties. The properties of drill pipe and tool joints, drill collars, heavy weight drill pipe, kellys, rock bits, and lift subs are given. Also provided are the properties of rotary shoulder connections and associated special processes, and break-in steps.

2 Normative References

This standard contains no normative references. For a list of associated documents, see the Bibliography.

3 Terms, Definitions, and Acronyms

3.1 Terms and Definitions

For the purposes of this document, the following definitions apply.

3.1.1
bending strength ratio
BSR
The ratio of the section modulus of a rotary shouldered box at the point in the box where the pin ends when made up divided by the section modulus of the rotary shouldered pin at the last engaged thread.

3.1.2
bevel diameter
The outer diameter of the contact face of the rotary shouldered connection.

3.1.3
bit sub
A sub, usually with 2 box connections, that is used to connect the bit to the drill string.

3.1.4
box connection
A threaded connection on oil country tubular goods (OCTG) that has internal threads.

3.1.5
calibration system
A documented system of gauge calibration and control.

3.1.6
Class 2
An API service classification for used drill pipe and tubing work strings.

3.1.7
cold working
Plastic deformation of metal at a temperature low enough to ensure or cause permanent strain.

3.1.8
corrosion
The alteration and degradation of material by its environment.