

DRILL PIPE SPECIFICATION OVERVIEW



SPECIFICATION COMPONENTS



OUTER DIAMETER

Defines the outside diameter of the drill pipe for size compatibility with hole and tools.



WALL THICKNESS

Determines pressure resistance and affects burst strength and collapse resistance.



NOMINAL WEIGHT

Weight per foot of drill pipe used for drill string design and load calculations.



STEEL GRADE

Defines the material strength level and mechanical properties of the drill pipe.



CONNECTION TYPE

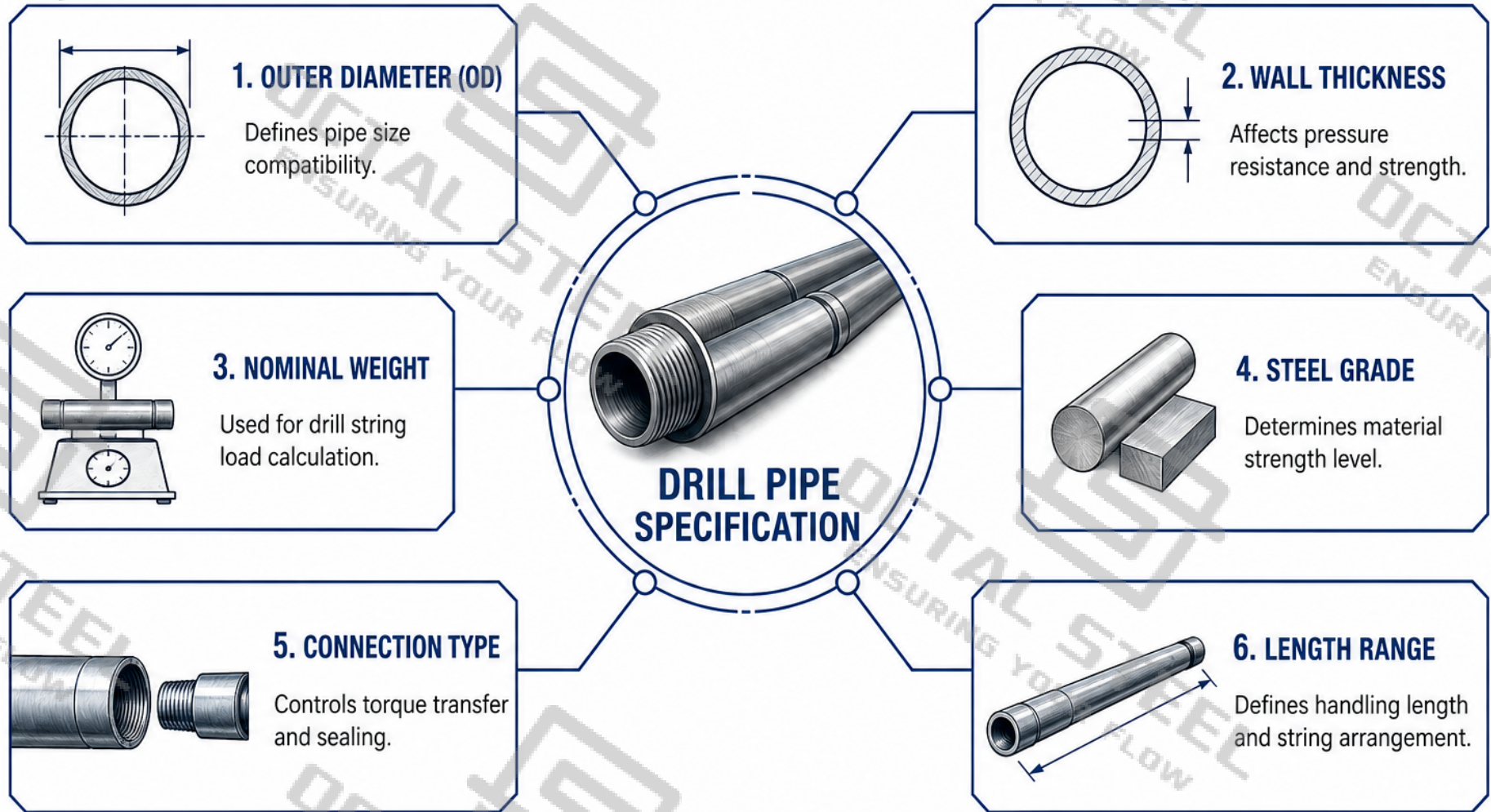
Determines the thread form and connection performance for torque transmission and sealing.



LENGTH RANGE

Defines the available length range for drill pipe in the drill string arrangement.

Main Specification Components of Drill Pipe



EXAMPLE OF COMPLETE DRILL PIPE SPECIFICATION

5"

1

×

19.50 lb/ft

2

×

S135

3

×

R2

4

×

IEU

5

×

NC50

6

1

5 INCH

PIPE OD

Indicates the outside diameter of the drill pipe. Determines hole clearance compatibility.

2

19.50 LB/FT

NOMINAL WEIGHT

Weight per foot of drill pipe. Used for drill string load calculation and selection.

3

S135

STEEL GRADE

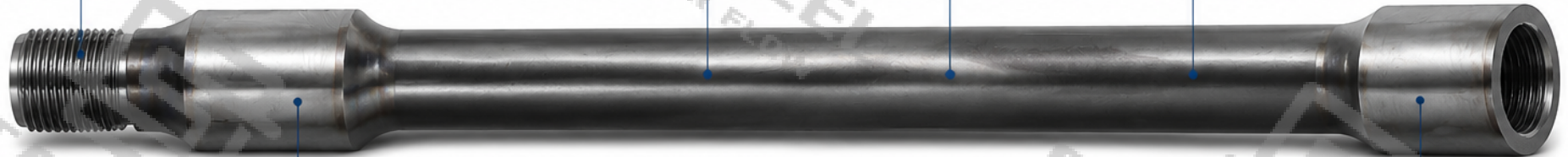
Represents the steel grade of the drill pipe body. Affects strength and mechanical performance.

4

R2

LENGTH RANGE

Defines the range of available lengths for the drill pipe.



5

IEU

UPSET TYPE

Internal and External Upset. Provides reinforcement at both internal and external ends of the tooljoint.

6

NC50

CONNECTION TYPE

NC50 box / pin connection. Determines thread form, connection strength and torque capacity.



SPECIFICATION PARAMETERS AND DRILL PIPE PERFORMANCE

DRILL PIPE SPECIFICATION (INPUT PARAMETERS)



OUTER DIAMETER (OD)

Defines size compatibility and flow area.



WALL THICKNESS

Affects pressure resistance and mechanical strength.



NOMINAL WEIGHT

Used for drill string load calculation.



STEEL GRADE

Determines yield strength and tensile capability.



CONNECTION TYPE

Controls torque transmission and sealing performance.



LENGTH RANGE

Affects handling, logistics and drill string arrangement.

DRILL PIPE SPECIFICATION (Combined Effect of All Parameters)



MECHANICAL STRENGTH

Ability to withstand axial load, internal pressure and external stress.



TORQUE CAPACITY

Ability to transmit rotational torque through the drill string.



HYDRAULIC PERFORMANCE

Efficiency of fluid circulation for hole cleaning and cooling.



FATIGUE RESISTANCE

Ability to resist cyclic loading and extend service life.

PERFORMANCE IMPACT (DRILLING APPLICATION)



- Safe operation under high load
- Prevents collapse and burst



- Smooth torque transmission
- Reduces risk of thread damage



- Efficient cuttings transport
- Better hole cleaning and cooling



- Resists cyclic stress in drilling operations
- Extends drill pipe service life

The performance of drill pipe in drilling operations is the result of the combined effect of all specification parameters. Proper specification selection ensures safe, efficient and economical drilling.