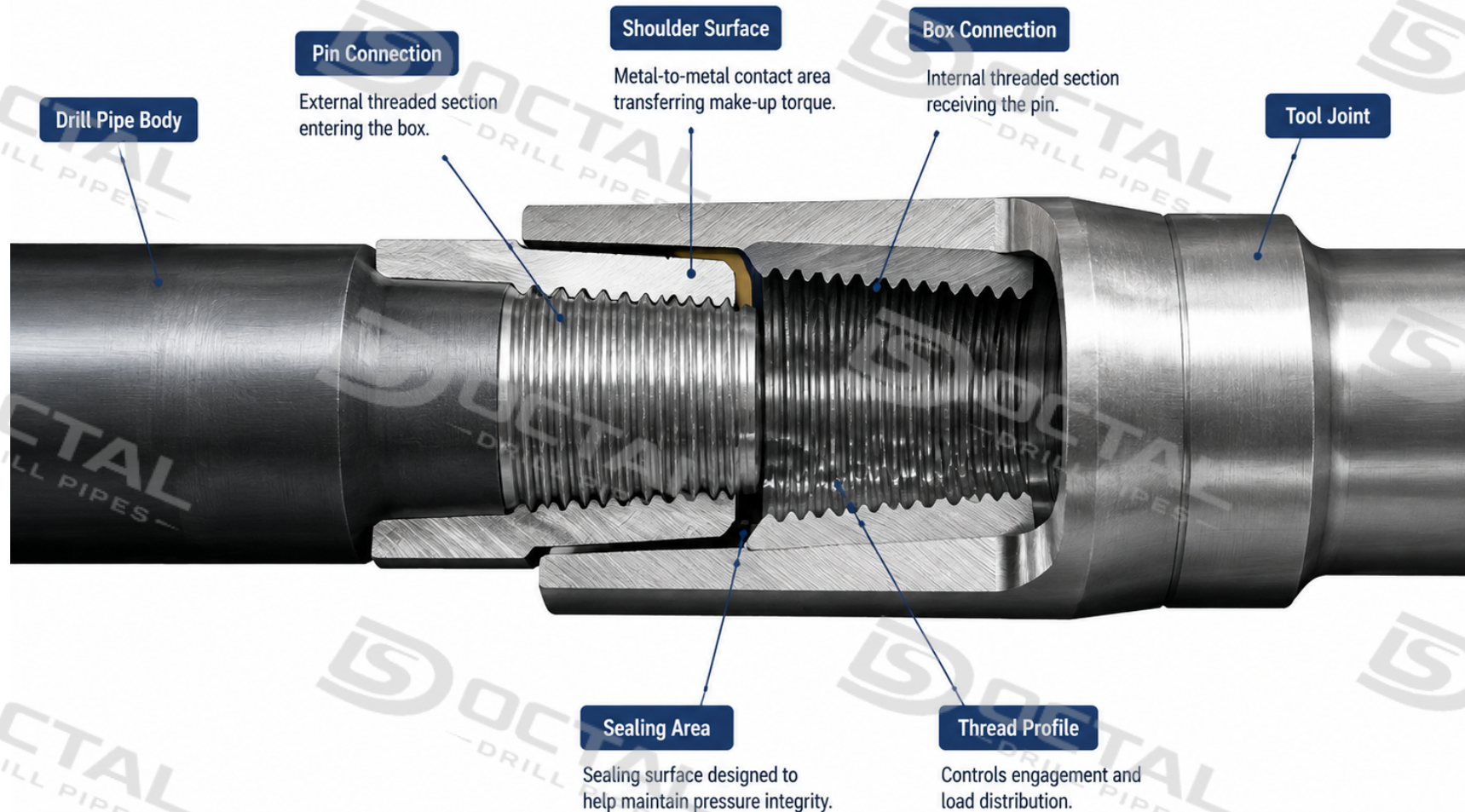
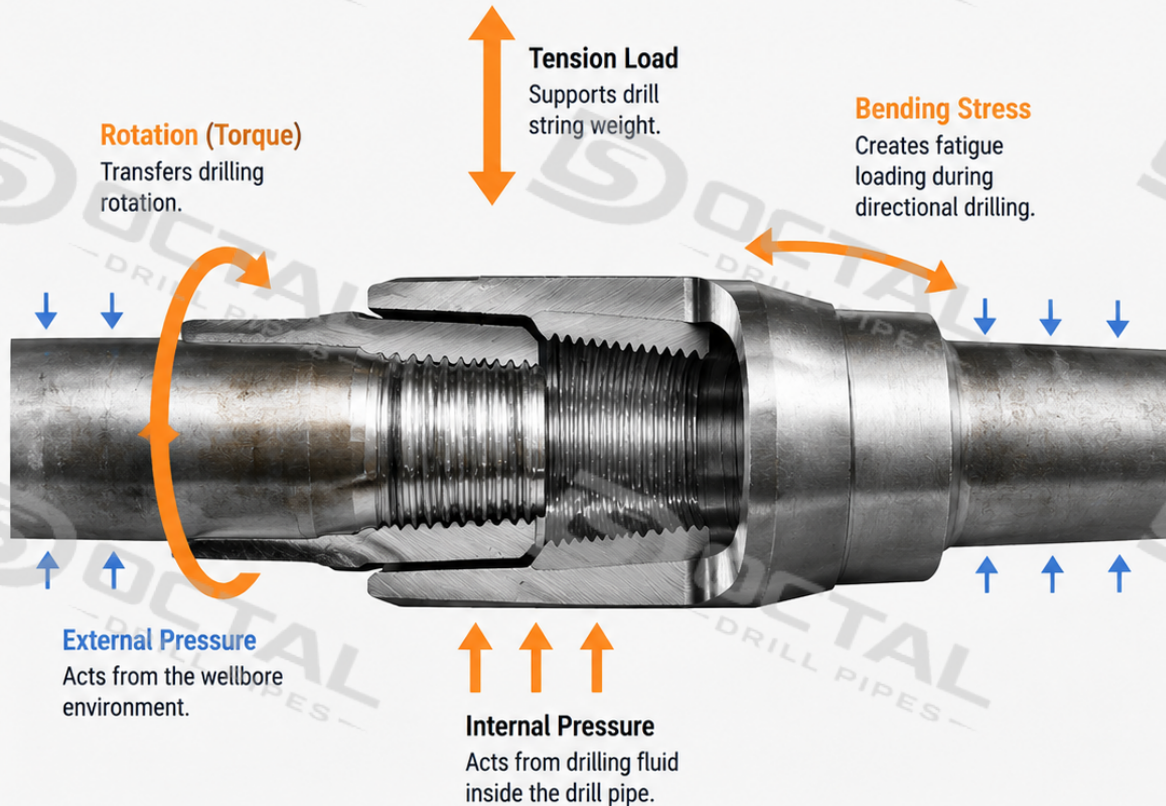


Drill Pipe Rotary Shouldered Connection Structure



How Drill Pipe Connections Transfer Loads During Drilling



Torque
Transfers drilling rotation.



Tension
Supports drill string weight.



Bending
Creates fatigue loading during directional drilling.

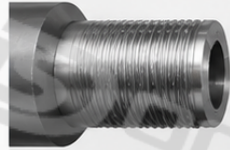


Pressure
Requires reliable sealing performance.

Connection Components and Engineering Functions

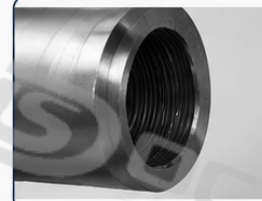
1 PIN

Function:
Mechanical
engagement



2 BOX

Function:
Receives threaded
connection



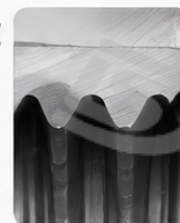
3 SHOULDER

Function:
Torque transfer
surface



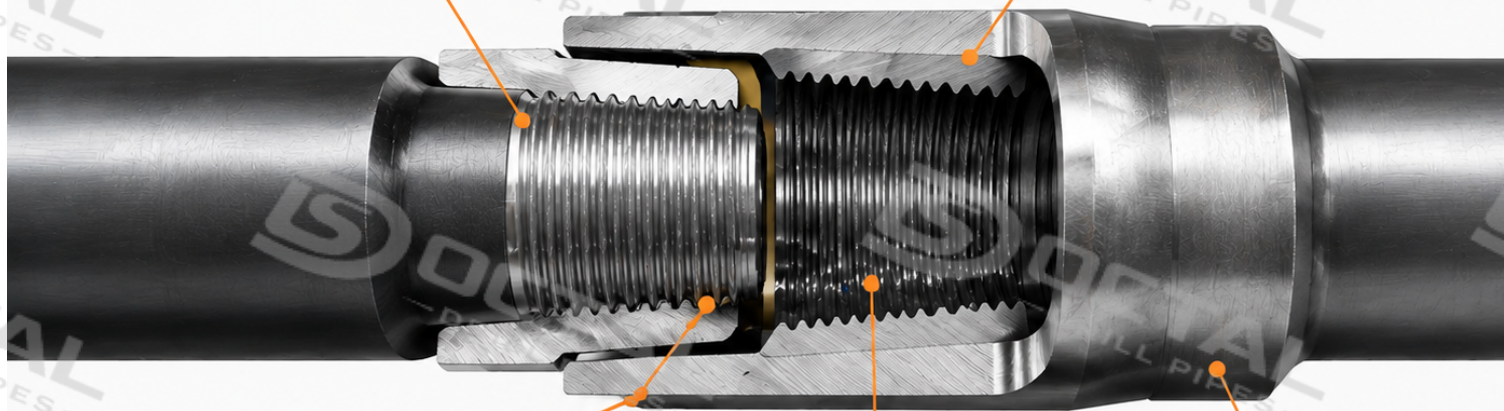
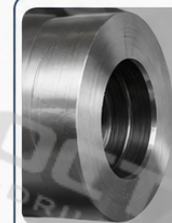
4 THREAD PROFILE

Function:
Load distribution and
connection strength



5 CONNECTION GEOMETRY

Function:
Compatibility and
inspection control



Connection Performance Control Factors



Requirements depend on applicable API specification / project requirements.