Casing Connections and Tubing Connections

Connections are critical because they decide whether the casing or tubing string can be made up correctly, run smoothly, seal under pressure and carry axial / torsional load at site. Even if the pipe body grade, size and wall thickness are correct, the wrong connection type can still cause thread mismatch, coupling rejection, leakage risk, failed make-up torque or rig-side delay.

For casing, the connection must match the well depth, cementing load, axial tension, pressure rating and running condition. For tubing, the connection must also consider drift clearance, packer compatibility, sealing performance, workover load and internal flow restriction. Premium connections may be required when standard API connections cannot meet gas sealing, high torque, HPHT, CO2 injection or critical completion requirements.

Connection Type	Product	Main Feature	Typical Use
STC	Casing	Short round thread connection	Shallow or moderate casing strings
LTC	Casing	Longer thread engagement than STC	General casing service with better engagement
BTC	Casing	Buttress thread for higher axial load	Deeper wells and heavier casing strings
NU	Tubing	Non-upset tubing with slimmer outside profile	Tight-clearance completions
EUE	Tubing	External upset end with stronger joint capacity	Common production tubing service
Premium Connection	Casing / Tubing	Enhanced sealing, torque shoulder or metal-to-metal seal	Gas wells, HPHT, deep wells, CO2 injection and critical completions

Tubing order checkpoint	Confirm drift requirement together with the connection type. OD can be correct, but poor internal clearance may block packers, safety valves, downhole tools or logging tools and cause inspection failure or running restrictions.
Casing release checkpoint	Check thread protectors, coupling make-up, thread inspection records and connection compatibility before shipment release. This avoids coupling rejection, field make-up delay and pressure-sealing disputes.