

Special Threaded Drill Pipe Connection Inspection Checklist

A procurement and pre-shipment reference for special thread, tool joint, gauge and document acceptance.

Use this checklist when a drill pipe order includes NC / FH / IF / REG, high-torque, double-shoulder or drawing-based special connections. The focus is rig-side acceptance: correct connection, protected threads, matched inspection records and traceable shipment documents.

1. Order Data to Confirm Before Production

Data Field	What to Confirm	Why It Matters
Pipe body	OD, wall thickness, grade, upset type, length range, PSL when specified.	Prevents mismatch between pipe body capacity, rig requirement and receiving inspection.
Connection	Thread family and size: NC, FH, IF, REG, high-torque, double-shoulder or drawing-based special thread.	Similar connection names may not be fully interchangeable on the rig.
Tool joint	Tool joint OD, ID, pin/box length, tong space, bevel and shoulder design.	Controls make-up clearance, strength, handling and connection compatibility.
Torque basis	Make-up torque should follow approved drawing, connection data or project specification.	Avoids using a generic torque value for a special connection.
Options	Hardbanding, internal coating, special marking, thread compound and thread protectors.	Options affect acceptance, wear control and shipment protection.
Inspection scope	Thread gauging, visual thread check, dimensions, MPI/PT where required, TPI if specified.	Sets acceptance evidence before manufacturing and shipment.

2. Connection Inspection Checklist

Inspection Item	Control Focus	Acceptance Evidence
Connection identification	Confirm thread name, size, pin/box end, tool joint OD/ID and drawing revision.	Connection marking or inspection record matches PO, drawing and packing list.
Thread gauging	Check standoff, taper, lead, pitch diameter and gauge result per API 7-2, drawing or special connection requirement.	Thread gauge record or inspection sheet, with pin/box results clearly identified.
Shoulder face	Shoulder should be clean, flat and free from dents, galling, corrosion pits or mechanical damage.	Visual inspection result; photos for critical shipments when required.
Visual thread condition	No torn threads, handling damage, burrs, corrosion, contamination or thread protector damage before loading.	Final visual inspection record and end-protection check.

Inspection Item	Control Focus	Acceptance Evidence
Tool joint dimensions	OD, ID, length, tong space, bevel and shoulder geometry match order or drawing.	Dimensional inspection report tied to lot / pipe marking.
Hardbanding	Type, position, surface condition and coverage checked when hardbanding is specified.	Hardbanding report or visual/dimensional record as required by project.
Internal coating	Coating type, bore coverage and visible defects checked when internal coating is ordered.	Coating inspection record or supplier certificate when required.
Pipe body and upset	OD, wall thickness, straightness, length, upset condition and body marking.	MTC, dimensional record and traceability to heat number.
MPI/PT / NDT	Applied to tool joint, weld area or threads when specified by order / ITP.	NDT report with acceptance scope and results.
Thread protection	Pin and box ends fitted with suitable protectors; protectors tight, clean and undamaged.	Packing photos, protector check and loading record.
Document match	MTC, thread inspection record, packing list, marking photos and TPI records match delivered joints.	Document package supports receiving and rig-side acceptance.

3. Pre-Shipment Release Checklist

Release Check	Recommended Verification Before Loading
Connection review	Connection type and drawing revision have been checked against purchase order or approved technical data.
Gauge result	Pin and box gauge results are recorded and traceable to the inspected pipe joints or batch.
Shoulder / thread condition	No visible damage, galling, corrosion or contamination on shoulder face and thread surfaces.
Protector condition	All pin and box ends are fitted with correct thread protectors before movement to packing area.
Bundle and marking	Pipe marking, heat number, connection, grade and quantity match packing list.
Inspection package	MTC, thread inspection report, dimensional report, NDT / TPI when required, packing list and photos are complete.
Shipment handover	Loading photos and package identity are saved for export tracking and receiving review.

Important note: For special thread orders, the connection name alone is not enough. Confirm the thread drawing, tool joint dimensions, gauge requirement and make-up torque basis before production. Different versions inside the same connection family may not make up correctly with an existing drill string.

4. Document Package for Buyers

Document	Purpose
Material Test Certificate (MTC)	Confirms pipe body / tool joint material, heat number, grade and mechanical properties.
Thread inspection record	Shows thread identification, gauging result and visual thread acceptance.
Dimensional inspection report	Records OD, wall thickness, length, tool joint OD/ID, tong space and other key dimensions.

Document	Purpose
NDT / MPI / PT report	Provides evidence for tool joint, weld area or connection surface inspection when specified.
Hardbanding / internal coating record	Confirms optional wear or coating requirements when ordered.
Packing list and marking photos	Links delivered pipe joints to purchase order, bundle identity and shipment documents.
Third-party inspection record	Supports project witness points and independent release when required.

Reference basis: API 5DP / ISO 11961 for steel drill pipe body and welded tool joint delivery conditions; API 7-2 for rotary shouldered connection threading and gauging; API RP 7G / project design basis for drill stem selection and operating considerations.

