

Propeller shaft

Product information | Technical data sheet

Jansen Steel Tubes and Mubea Precision Steel Tubes produce welded-drawn precision steel tubes for propeller shafts.

During processing, tubes for the propeller shafts are partly drawn in at the ends, leading to high demands on the formability and the quality of the weld seam. Stringent tolerances in terms of concentricity, straightness and wall thickness are

necessary to prevent NVH (Noise, Vibration, and Harshness) issues. This guarantees smooth propeller shaft operation within the vehicle. The use of modern air hardening steel materials creates new opportunities to reduce weight.



Tube requirements

Excellent formability (drawing in, hammering)
High torsional strength and durability
Very good welding properties
High geometrical accuracy (eccentricity, roundness)
Excellent surface condition

Material properties

High torsional strength and fatigue strength
Excellent reforming properties
Homogeneous strength properties and ductility
Excellently suitable for welding

Structure

Homogeneous, fine-grain structure in weld seam and basic material
Minimised surface decarburisation of inner and outer surfaces (< 100 µm)
Very good weld seam quality
Very good reforming properties

Geometry

Minimised fluctuations in wall thickness and inner/outer diameter
Minimised deviations in straightness
Minimised deviations in concentricity and axial run-out
Minimised eccentricity
Specific tube end processing: sawn/brushed; chamfered

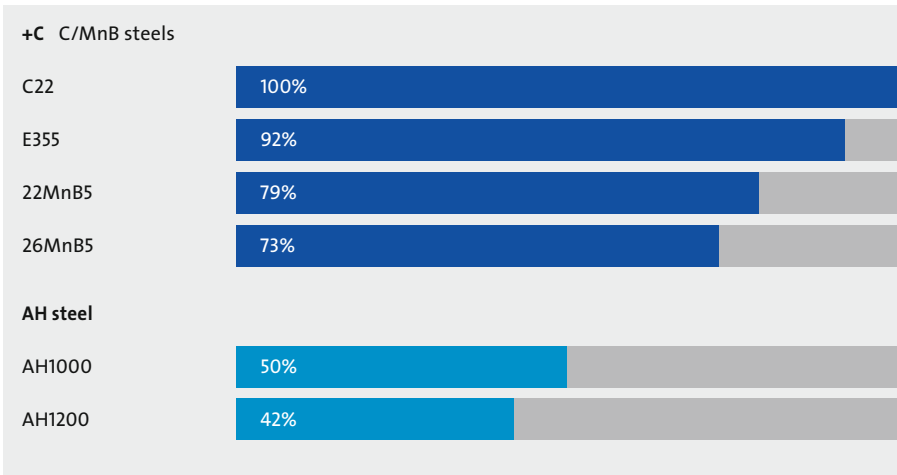
Surface

Excellent surface condition
Minimised surface flaws (adhesions, scratches, dents, etc.)
Minimised corrosion protection, optionally specific corrosion protection

Materials & dimensions

Application	Tube standard	Steel grades	Delivery condition	Dimensions range mm
Propeller shaft (Car)	✓ EN 10305-2	✓ C22 ✓ E355 ✓ 22MnB5 ✓ 26MnB5 * AH1000 * AH1200	✓ +C	✓ OD 50 - 90 ✓ WT 1.5 - 3
Propeller shaft (HGV)	✓ EN 10305-2	✓ C22 ✓ E355 ✓ 22MnB5 ✓ 26MnB5 * AH1000 * AH1200	✓ +C	✓ OD 60 - 120 ✓ WT 2 - 5

Extract from achievable weight-savings



✓ Series production
* In validation

AH: air hardening

OD: outside diameter
WT: wall thickness