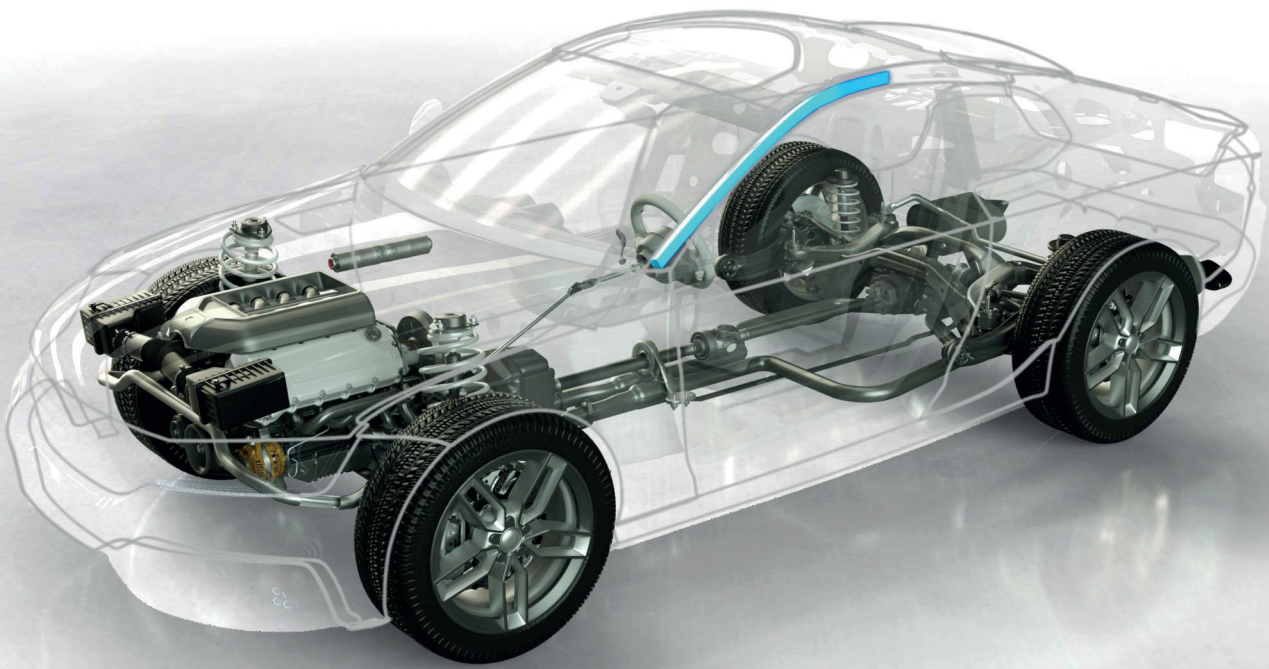


# Reinforcement tube

## Mubea

PRECISION STEEL TUBES



### Product information | Technical data sheet

Mubea Precision Steel Tubes produce welded precision steel tubes and profiles used as structural reinforcements in the automotive industry.

High-tensile materials are used for the structural reinforcement tubes. Applications within this automotive industry segment are very sensitive to quality and component failure in the event of an undesired deformation of the component may have serious consequences. The tight production tolerances gua-

rantee efficient and thus cost-effective tube processing during component production. The use of new modern air-hardening materials allows a significant reduction of the work involved by eliminating the tempering process, and thus a significant reduction in costs.



## Tube requirements

- Excellent formability
- High levels of fatigue strength
- High levels of strength and hardness according to Q+T
- excellent surface conditions

## Material properties

- High levels of fatigue strength
- Excellent reforming properties
- Excellent hardening properties
- Homogeneous strength properties and ductility

## Structure

- Homogeneous, fine-grain structure in weld seam and basic material
- Minimised surface decarburisation of inner and outer surfaces (< 50 µm)
- Very good weld seam quality
- Very good reforming properties

## Geometry

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

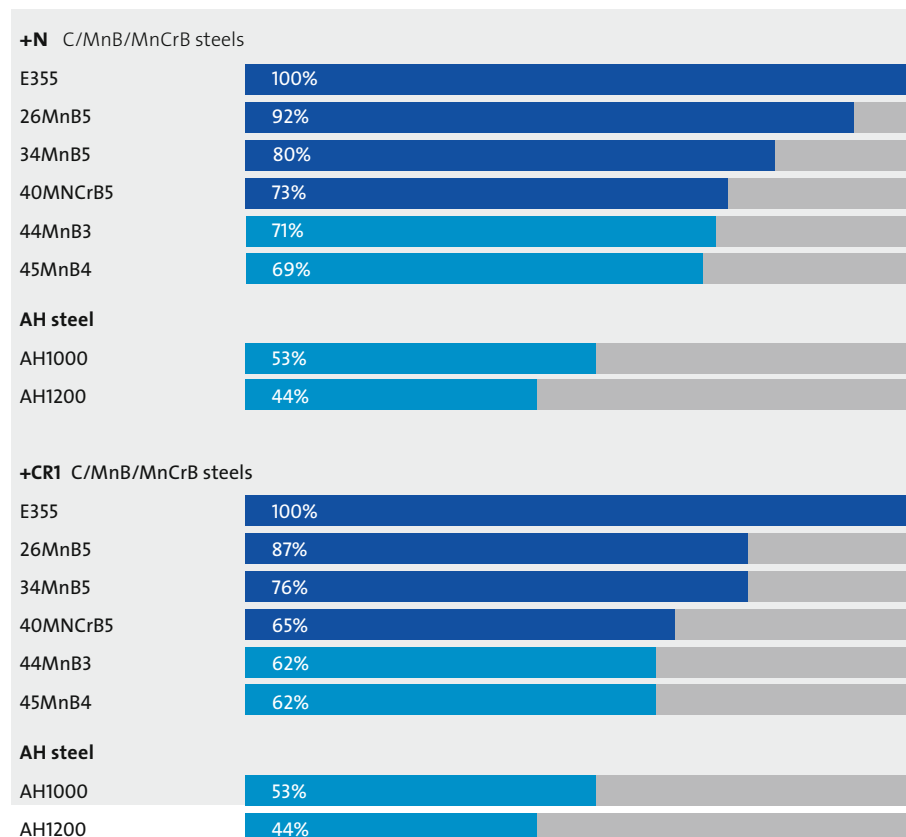
## Surface

- 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	
Reinforcement tube	✓ EN 10305-2 ✓ EN 10305-3	✓ E355	✓ +N ✓ +CR1	✓ AD 35 - 80 ✓ WD 2 - 6.5	
		✓ 26MnB5			
	✓ 34MnB5	* 44MnB3 * 45MnB4			
	✓ 40MnCrB5				
	* 5700	* AH1000 * AH1200 * OP1000 * CP800			
	* AH1000				
	* AH1200				
	* OP1000				
			* CP800		

## Extract from achievable weight-savings



✓ Series production  
\* in validation

AH: air hardening      OD: ø outside diameter  
TDT: Tailor Drawn Tube      WT: wall thickness