

Quenched tubes

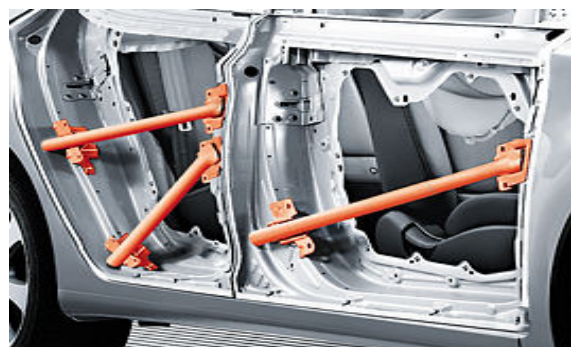
Induction quenching is based on the material heating while passing through a high strength variable magnetic field. Heating penetration depends on working frequency. An accurate control on it ensures a perfect quenching homo-

geneity in the entire section. The use of Mn-B alloy steel grades, guarantees a high level of impact energy absorption, essential value property in some pieces like side impact beams.

Product Range				
Range	Ø (OD)	wall thickness	length	Tolerance
	18 - 40 mm	1,40 - 3,50 mm	250 - 1.250 mm Tolerances: ±1 mm (standard) (±0,50 mm narrow) (±0,30 mm precision)	1 According to standard required (EN 10305-3, NES M2022) or customer specification. 2 For raw material apply EN 10083-3, PSA B533830, Renault RNT 11-04-822, Nissan M2201

Straightness	Maximum bending of 1,50 mm/m.
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Mechanical Properties on tube. Tensile test acc. ISO 6892-1					
Standard	Grade	Rp(0,2) MPa	Rm MPa	A(5)%	min. HRC(*)
EN 10305-3	Tube 22MnB5	≥ 1100	≥ 1450	≥ 5	46
NES M2022	STAM 1470	≥ 1080	≥ 1470	≥ 5	46
RNT 11-04-822	22MnB5F-RNT	1000-1250	1300-1650	≥ 4,5	43
PSA B533830	22MnB5-PSA	≥ 950	≥ 1300	≥ 6	43
EN 10305-3	Tube 26MnB5	≥ 1200	≥ 1550	≥ 4	47
EN 10305-3	Tube 30MnB5	≥ 1300	≥ 1650	≥ 4	48



*Based on EN 10083-3. Typical values from steel mill.

Surface condition	The surface free from marks and scratches. Slightly oiled.
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Testing methods	Before quenching process: Eddy current ISO 10893-2 (NDT) only for weld seam Flattening test acc. ISO 8492 Drift-expanding test acc. ISO 8493	After quenching process: Hardness test (HRC)
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Remarks:	Further requirements to the above detailed, should be approved with a feasibility study.
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