Thermomechanically treated seamless steel tubes produced in one production step with RAPID COOLING TECHNOLOGY offer a wide range of opportunities.
The following high strength seamless steel tube requirements can be achieved with ToughTubes:

- improved weldability (low CEQ)
- high strength (yield strength, tensile strength, hardness)
- in combination with excellent toughness (high impact energy absorption)
- good cold forming properties
- improved surface quality
- extremely fine grain size

The diagram demonstrates how material properties can be influenced by the production process. Thermomechanical treatment in combination with rapid cooling technology offers a wide range of opportunities at lower CEQ and therefore improved weldability.

Responding to customer's material property requirements voest alpine Tubulars can produce seamless steel tubes by one of the following three production methods.

ToughTubes is the right choice when improved weldability, high strength in combination with excellent toughness, good cold forming properties and improved surface quality are required.

ToughTubes can be used as:

- High strength Line Pipe
- Mechanical Tubes
- Automotive products

ToughTubes' product properties offer a wide range of applications.

Why ToughTubes?

How material properties are influenced by the rolling process

Comparison of the results applying different processes

Fields of application

ToughTubes' unique characteristics and advantages:
- High strength, excellent toughness, improved weldability.
- These are only a few desirable properties which can be achieved with thermomechanical treatment.
- Through accurate control of temperature and forming parameters, material characteristics can be generated, which are not achievable with conventional production technologies, e.g. the optimal combination of high strength and excellent toughness.

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