

Top Quality by Highest Purity

CS1 & TQ1

Hot-work Tool Steels for Die Casting

TQ 1 - Top Quality by Highest Purity

- Super clean hot-work tool steel
- High high-temperature strength in combination with outstanding toughness
- Very high heat-checking resistance
- High thermal conductivity

Advanced Casting Requirements

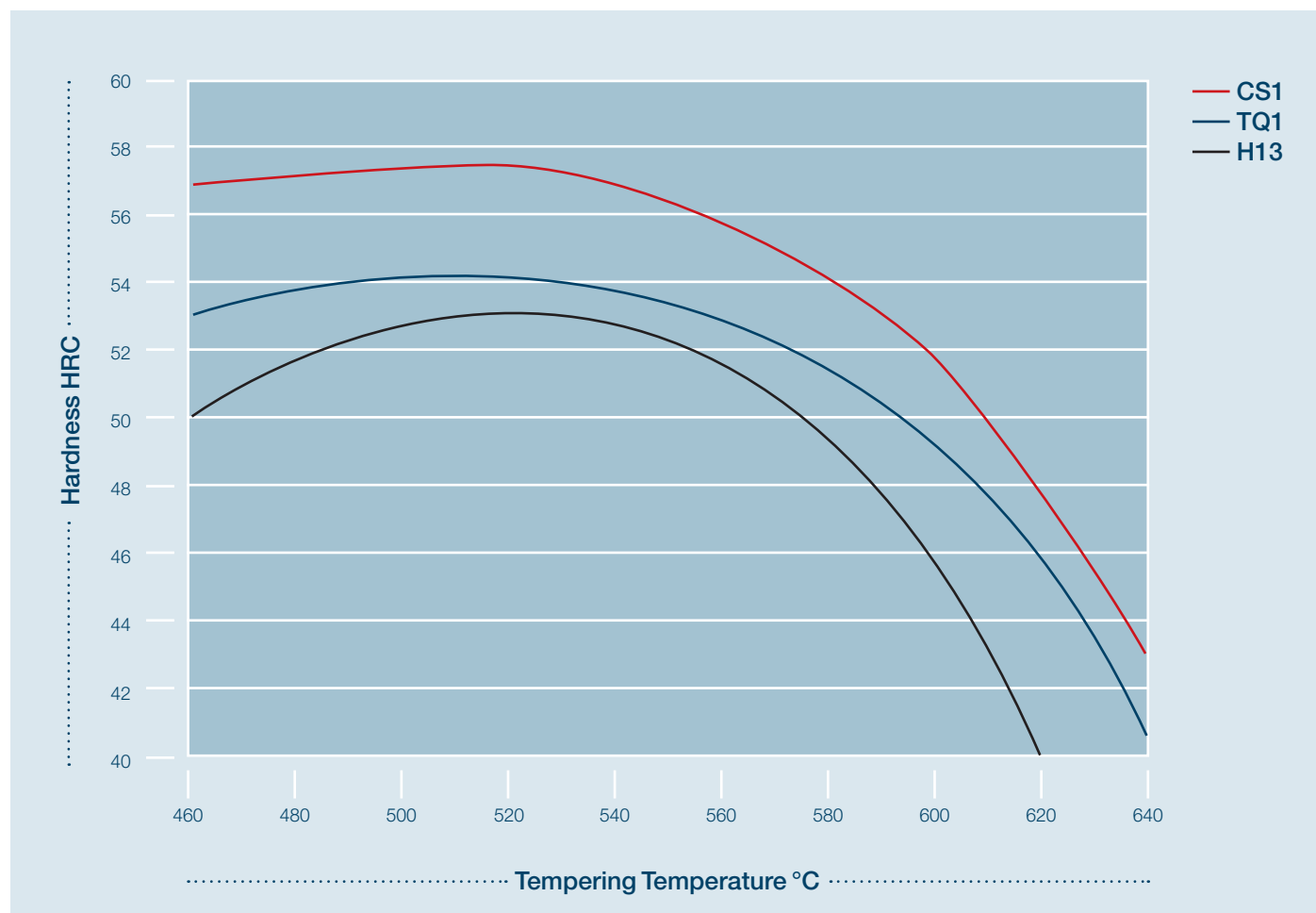
- Dies for large structural automotive components
- Dies for castings with pronounced cooling fins
- Complicated dies for automatic gear boxes
- Components for e-powered vehicles (battery cases)
- Dies for with short cycles times
- Dies for mass production

Advanced Heat Checking Resistance

- Castings with visible, esthetic surfaces
- Minimal spray cooling dies

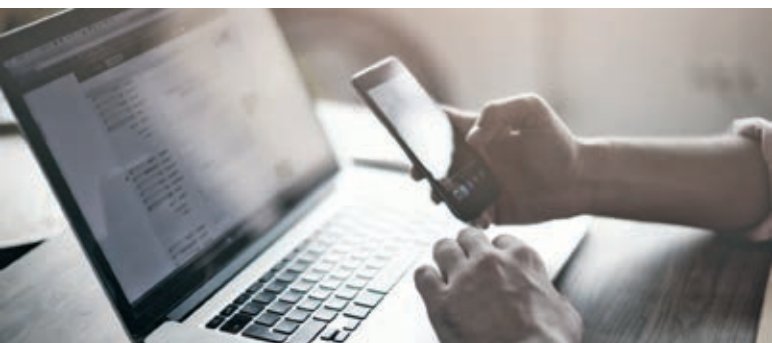


Tempering Resistance of Premium Hot-work Tool Steels CS1 and TQ1



CS 1 - Additional Markets and Potential in Premium Tool Steel for High-end Demands

- High - temperature strength exceeding all other tool steel brands
- Excellent toughness even at elevated working hardness
- Working hardness up to 54 HRC possible
- Outstanding heat checking resistance



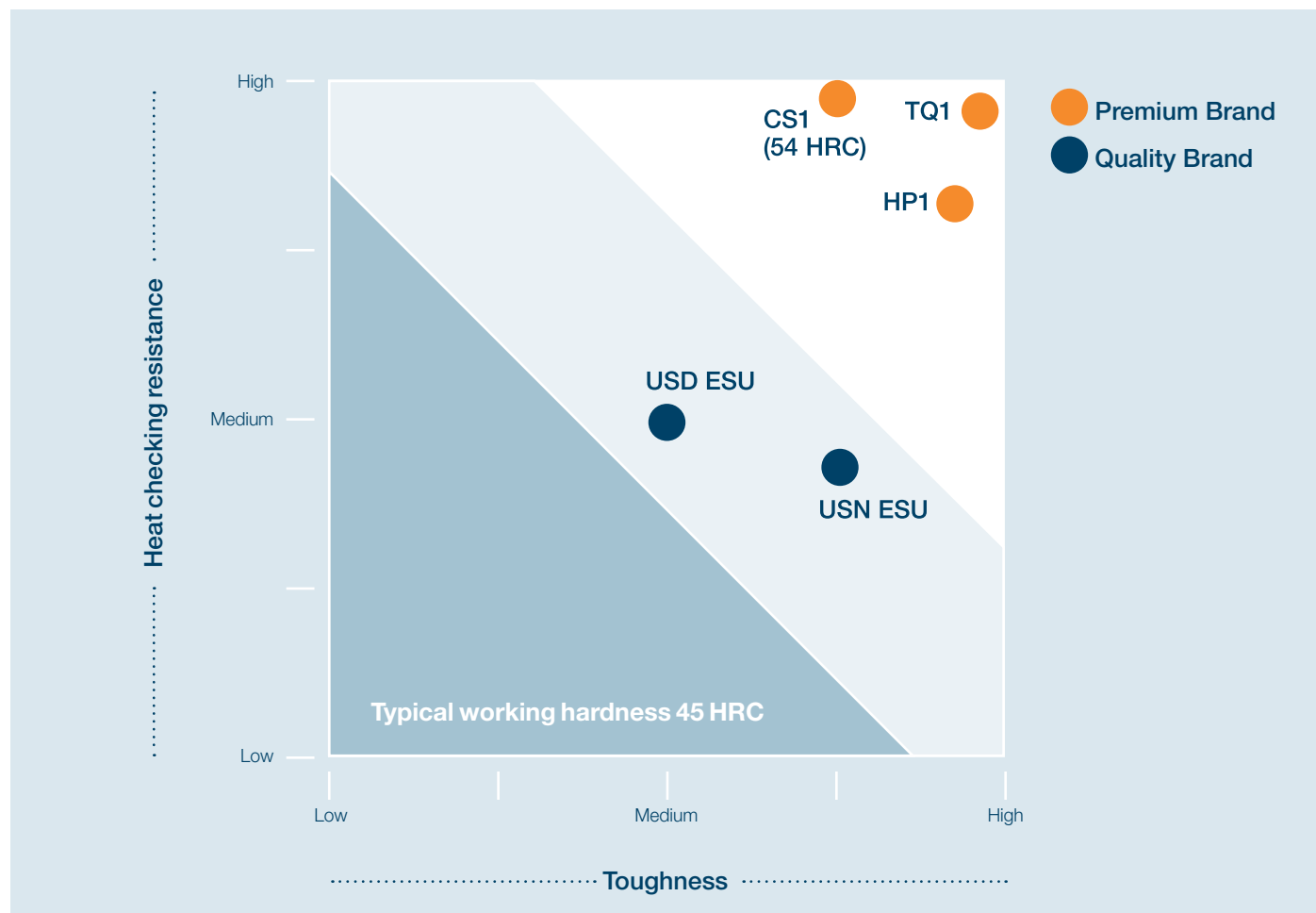
Advanced Demands to Surface Conditions

- Visible parts of motorbikes
- Automotive cylinder head covers
- Parts for laptops, mobile phones
- High end consumer products
- Housing of visible electro motors
- Electronic items
- Mechanical parts with tight tolerances in the joining area

Advanced Resistance to Hot Temperatures

- Gating areas in die casting dies
- Alloys requiring higher casting temperatures

High Performance Tool Steels for Die Casting



Production processes

Melting

Forging

Heat treatment

Mechanical processing

Vacuum hardening

Surface treatment

Products

Hot-work tool steels

Cold-work tool steels

Die forging steels

Plastic mould steels

Industries

Die casting

Extrusion

Die forging

Pipe technology

Plastics technology

Hot-stamping

Special applications

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