

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

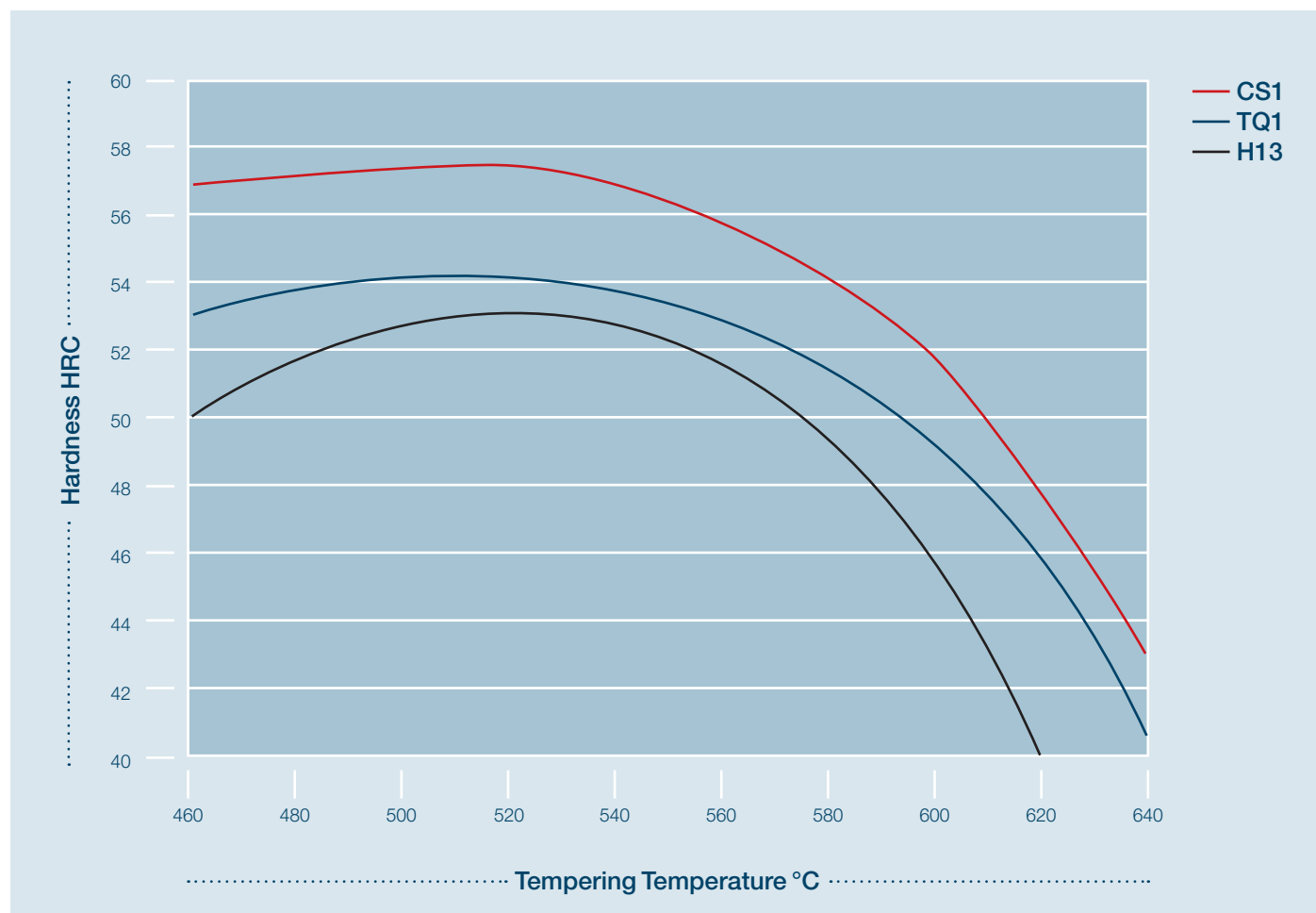
- Dies for large structural automotive components
- Dies for castings with pronounced cooling fins
- Complicated dies for automatic gear boxes
- Components for e-powered vehicles (battery cases)
- Dies for with short cycles times
- Dies for mass production

Advanced Heat Checking Resistance

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



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



CS 1 - Additional Markets and Potential in Special 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



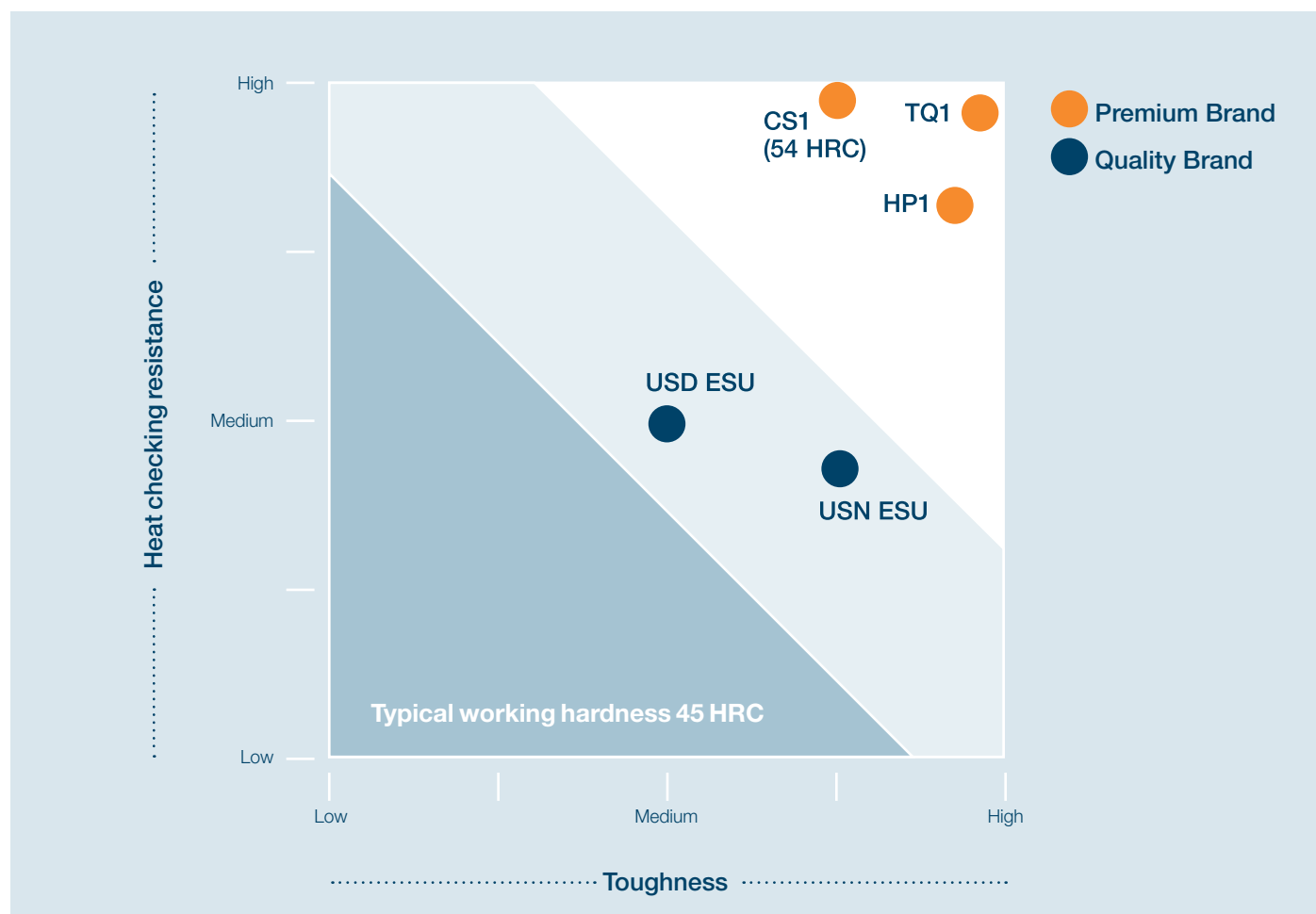
Advanced Demands to Surface Conditions

- 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



More ESR, more power, even more quality

Electroslag remelting is used to meet special quality requirements in terms of purity, toughness, and polishability, all in a reproducible manner.

Open Die Forging

An optimum of forging ratio for more value

The first forming operation for the manufacturing of hot-work tool steels with outstanding toughness and high temperature resistance properties is an important step in the process chain of producing high premium toolings.



Service

Tool Steels
Melting
Forging
Heat Treatment
Machining
Surface Treatment

Products

Hot Work Tool Steels
Cold Work Tool Steels
Die Forging Steel
Steel for Plastic Moulds

Industries

Punching
Cutting
Extrusion
Forming
Bending
Rolling
Tube Manufacturing
Plastics Technology

Heat treatment

The way to the desired useful properties Reliability and profitability are the essential criteria which make the difference of the quality of a tooling. Beside the steel grade special refining procedures will optimize the wear resistance of your superior toolings ending up in a longer lifetime.



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