

DURAWEAR

NEXT GENERATION OF THROUGH HARDENED SENDZIMIR ROLLS

DURAWEAR rolls are the next generation of high-alloy rolls for cold rolling. SIJ Ravne Systems provides all sizes of work rolls for cluster rolling mills. Brand name **DURAWEAR** is synonym for rolls made out of SIHARD S grade tool steel with 10% chromium content, distinguished by high titanium content for through hardened rolls.

DURAWEAR brand rolls have, comparable to 1.2379 (AISI D2) tool steel, a longer lifetime, very high abrasive wear resistance to damage, and therefore longer campaigns.

CHEMICAL COMPOSITION – DURAWEAR (TYPICAL ANALYSIS IN %)

| C | Si | Mn | Cr | Mo | V | Ti | H2 |
|------|------|------|-------|------|------|----|--------|
| 1,25 | 0,30 | 0,30 | 10,00 | 0,90 | 1,00 | + | < 2ppm |

Source: SIJ Metal Ravne d.o.o.

COMPARISON TO 1.2379 (AISI D2) TOOL STEEL

DURAWEAR rolls provide a very good combination of very high wear resistance, while achieving a comparable or higher degree of toughness than 1.2379 (AISI D2) tool steel. Due to additional titanium content, **DURAWEAR** rolls are having dual type of carbides – both chromium and titanium carbides. Titanium carbides increase wear resistance, and therefore positively effect also on TCO (total cost of ownership).

COMPARISON OF MICROSTRUCTURE

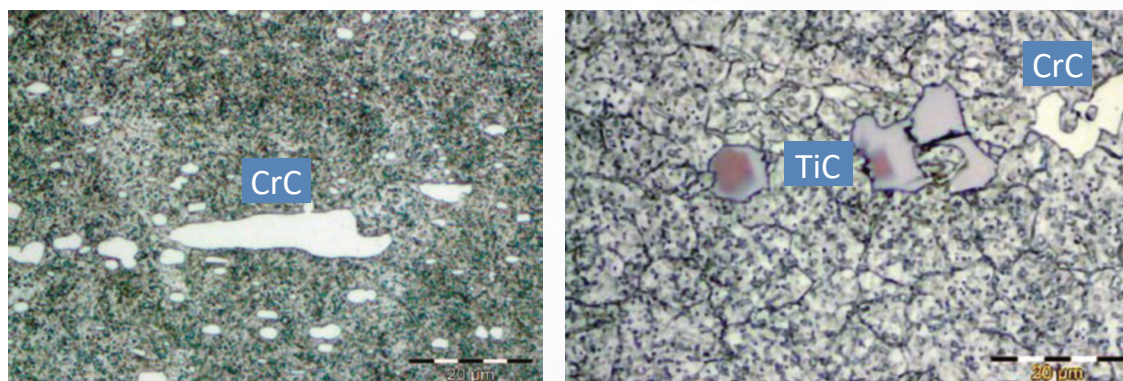


Fig. 1: Comparison of microstructure: Rolls made from 1.2379 (AISI D2) tool steel (left) and DURAWEAR rolls made from SIHARD S grade steel (right), showing the dual type of carbides in the new steel. Source: SIJ Metal Ravne d.o.o.

DURAWEAR

GOLDEN AWARD FOR INNOVATION RECEIVED FROM THE REGIONAL OFFICE OF THE GZS (THE SLOVENIAN CHAMBER OF COMMERCE AND INDUSTRY).



COMPARATIVE PROPERTIES

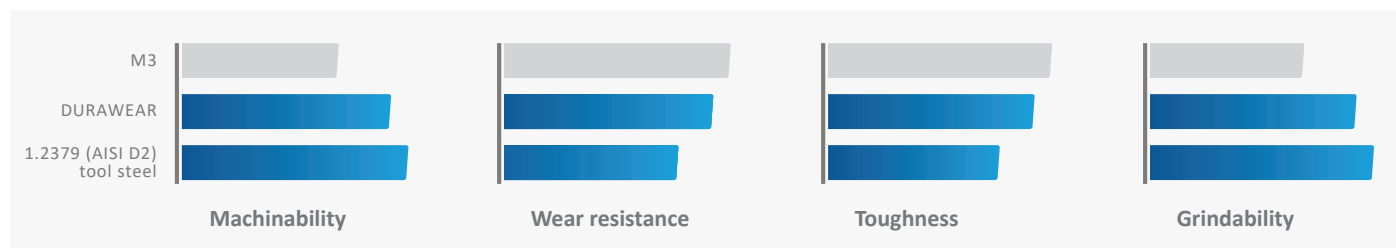


Fig. 2: Comparison of properties: 1.2379 (AISI D2) tool steel, DURAWEAR and M3, display of the machinability, wear resistance, toughness and grindability properties.

DURAWEAR ROLLS OFFER YOU THE FOLLOWING BENEFITS:

- Higher wear resistance, compared to D2
- Lower grind offs and extended campaign length
- Better tonnage in cycle, resulting in lower TCO
- Outstanding resistance to mill incidents
- Extended surface roughness retention.

BETTER SOLUTIONS WITH LONGER LIFE TIME!

Wide range of high-alloy rolls for cold rolling provides our customers with a definitive competitive advantage.

SIHARD S grades of steels are tailor-made steels designed and produced by SIJ Metal Ravne, part of SIJ Group. The SIJ – Slovenian Steel Group is the largest Slovenian steel producer and one of the largest producers of stainless and special steels in Europe.