

Contact

Our team of experts looks forward to hearing from you, discussing your goals, and planning the path to success together.

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About Us

Swiss Steel Group is a global leader in special steel long products with 69 locations in 26 countries. The company ensures reliable delivery of special steels and tailored solutions, combining production, sales and services seamlessly. As a pioneer in the circular economy, Swiss Steel Group exclusively uses steel scrap in electric arc furnaces and leads in sustainably produced Green Steel. Our strong global presence ensures customized solutions in engineering, stainless and tool steel, setting new standards in sustainable, innovative steel production.

ecovadis

Sustainability
rating
Gold



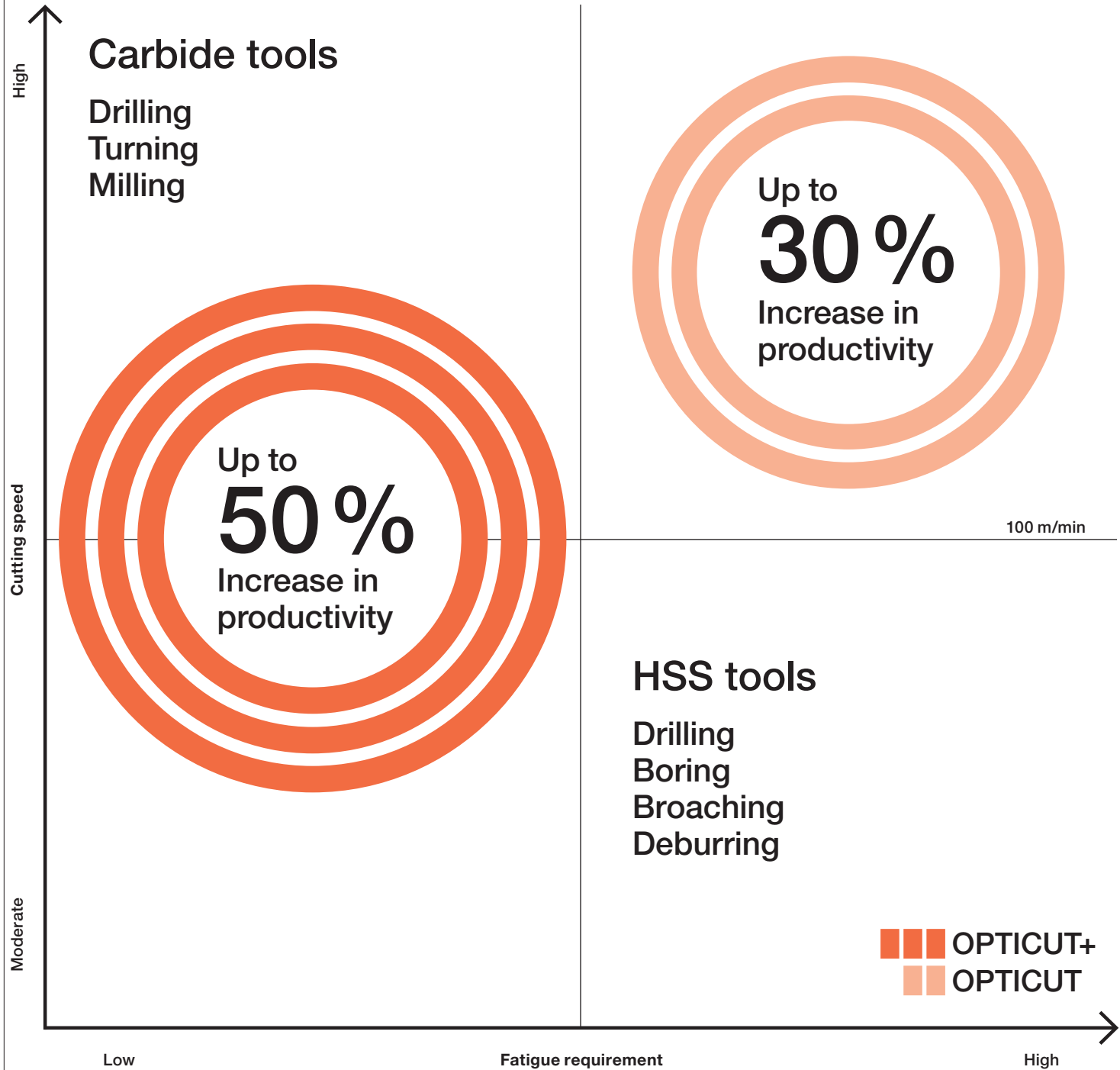
German
Sustainability
Award
Winner



Climate change
rating
A List

DNV
Group-wide
emissions
Assurance

Results



Grades

Every application has specific requirements – OPTICUT delivers the right solution. Our modular approach enables a precise selection of grades optimized for machining, produced at our production sites in Siegen and Witten.

Approved in various fields of the mechanical engineering and plant construction sector. OPTICUT and OPTICUT+ demonstrate their strengths wherever extensive machining is required.

- Ø Diameter: 21 – 270mm round
- Surface condition: Black or peeled
- 📍 Production sites: Siegen <80mm
Witten >80mm

Variant	Grades	Technical delivery conditions*
Opticut	S355J2	Untreated
Opticut	C45	Untreated
Opticut	16MnCrS5	Untreated
Opticut	42CrMoS4	quenched and tempered
Opticut+	S355J2	Untreated
Opticut+	C45	Untreated
Opticut+	16MnCrS5	Untreated
Opticut+	42CrMoS4	quenched and tempered

* Other delivery conditions possible on request

OPTICUT®

Engineered for greater efficiency in machining



Process

By OPTICUT and OPTICUT+, Swiss Steel Group expands its innovative portfolio and elevates established steel grades to a new level of performance. Due to specific calcium and sulfur treatments, approved materials are adapted for specific requirements resulting in significantly improved machinability.

Demands for machining are high as well as the variety of grades, formats and operations. What matters is an optimal performance in terms of consistently stable processes, reliable quality, and cost efficiency. This is exactly where OPTICUT shows its strength.

Due to a specific modification and control of inclusions, ideal conditions are created for an ideal chip fragmentation, improved surface quality and high process stability – especially for demanding cutting conditions.

Grades			
Variant	Treatment	Sulfur Content	Result
OPTICUT	Calcium treatment	0,02–0,04 %	Increase in productivity up to 30 %
OPTICUT+	Calcium + sulfur treatment	0,06–0,09 %	Increase in productivity up to 50 %

Benefits

With the OPTICUT and OPTICUT+ process, you receive steel grade variants that sustainably support your production – reliable, consistent, and efficient.

Increased tool life

Reduced costs for parts and tools

Reduction of tool wear

Inclusion modification reduces abrasive wear to a minimum

No Limits

can be used without changes in the standard process

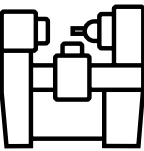
Reduced cycle time

Improved chip fragmentation and higher cutting speeds

OPTICUT

Improved Product Quality with Increase in productivity up to 30 %

Turning



Characteristics

Al <1 % wt
S 0,02–0,04 % wt*

Coating by Oxides

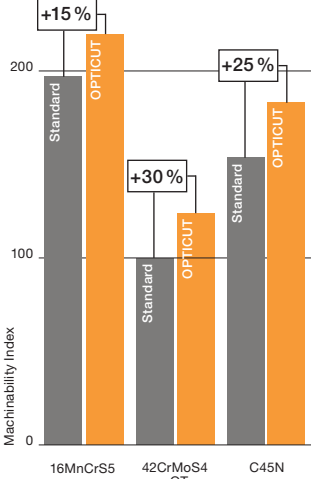
Lubrication by sulphides

Drilling

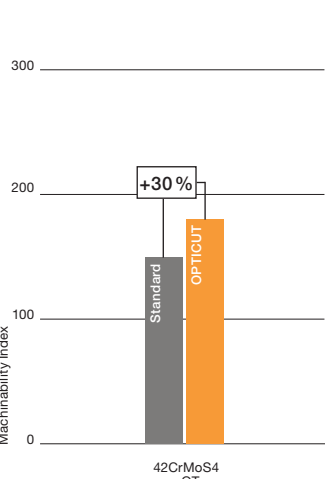


* according to EN standards

Turning



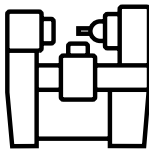
Drilling



OPTICUT+

Improved Product Quality with Increase in productivity up to 50 %

Turning



Characteristics

Al <1 % wt
S 0,06–0,09 % wt*

Coating by Oxides

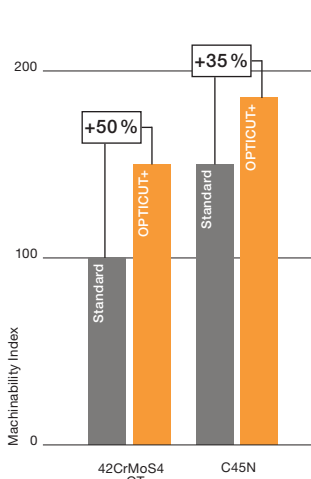
Lubrication by sulphides

Drilling

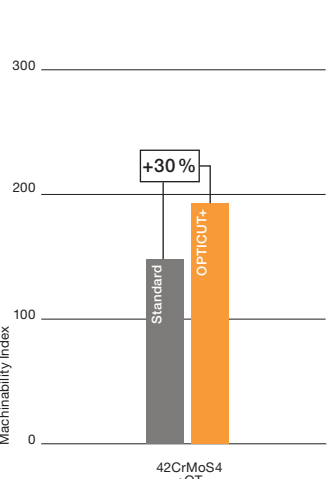


* EN standard with restrictions

Turning



Drilling



Green Steel

The circular process of scrap-based steelmaking begins with melting scrap, ideally using low-carbon electricity. The cast steel is then hot-formed, finished and customized for various industries. At the end of their lifecycle, many of these products return as post-consumer scrap.

92 %
recycled metals

100 %
EAF production route

Up to
81 %
lower carbon footprint

* Industry average: 1.92 t CO₂/t crude steel cast vs. Swiss Steel Group year 2023: 0.227 t CO₂/t crude steel cast in Scopes 1+2 and Scope 3 ranging from 0.134 t CO₂/t (engineering steel) to 1.466 t CO₂/t (stainless steel); source: worldsteel Sustainability Indicators 2024