SIWATT

ELECTRICAL STEEL

HIGH FREQUENCY NO GRADES

BRAND OVERVIEW

POWERING THE FUTURE OF MOBILITY

SIWATT non-oriented electrical steel plays a vital role in today's drive towards electrification, especially in the automotive industry. Developed for rotating machines with variable magnetic fields, NO electrical steel ensures high efficiency, low energy losses, and excellent performance in demanding environments.

SIWATT non-oriented electrical steel is a product that continues to evolve, with ongoing advancements in the most demanding NO grades tailored specifically for e-mobility.

APPLICATIONS

Traction motors for electric vehicles, drones

DESIGNED FOR DYNAMIC PERFORMANCE – 6 REASONS TO CHOOSE SIWATT

- Low core losses
- High permeability
- High yield strength
- Excellent stamping properties
- Narrow dimensional tolerances
- Sustainable material choice

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NO GRADES FOR E-MOBILITY

In regular production

SIWATT NO 20-15
SIWATT NO 35-22

Available for order and testing

SIWATT NO 25-13
SIWATT NO 27-14
SIWATT NO 27-15
SIWATT NO 30-15
SIWATT NO 30-16
SIWATT NO 35-18
SIWATT NO 35-19

In development (planned by 2027)

SIWATT NO 20-12
SIWATT NO 25-12

STRIPS

Dimensions and weights

Coil width [mm]	30–1000
Inside nominal diameter [mm]	508
Outside nominal diameter [mm]	max. 1300

	Outside diameter [mm]	**Coil weight [kg/mm of width]**
Entire coil	1100–1300	6–8.6
½ coil	870–1000	3–4.5
⅓ coil	770–850	2–2.9

Tolerances

Tolerance on nominal width

Nominal width	**Tolerance**
[mm]	**[mm]**
w ≤ 150	+0.4 0
150 < w ≤ 500	+0.6 0
500 < w ≤ 1000	+1.5 0

Tolerance on nominal thickness

Nominal thickness	**Tolerance**
[mm]	**[mm]**
0.20	±0.020
0.25	±0.020
0.27	±0.020
0.30	±0.020

SHEETS

Cut length [mm]	600–6000
Cut length tolerance [%]	+0.5 0
Width of sheet [mm]	1000
Package weight [kg]	max. 3000

Dimensional and geometrical tolerances are in accordance with standard EN 10303 and EN 10251.

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Insulation coatings

AISI Designation ASTM A976	C-3	C-5	C-6
Thermal class (IEC 60085)	H	N	H
Thickness of layer on each side [µm] (ISO 2178)	0.5–3	0.5–3	2–4
Composition	Organic without fillers	Organic/inorganic	Organic with fillers
Surface insulation resistance [1] [Ohm cm²/lam.] (ASTM A717)	< 20	< 70	10–200
Heat resistance [°C]	180 [2]	210 [2] 850 [3]	180 [2]
Influence on punchability	Very favourable	Favourable	Favourable
Influence on weldability	Conditional	Good	Conditional
Resistance to mediums [4]	Good	Good	Good
Colour [5]	Yellow	Light grey to green	Light grey to dark grey

[1] Surface insulation resistance depends on coating thickness.

[2] In air for a long time (testing for 20,000 hours at a given temperature in accordance with IEC 60085).

[3] In a protective gas atmosphere (as stress-relief annealing).

[4] It relates to the resistance to most different lubricants, refrigerating mediums and oils. The varnish producer tests the resistance to the specific medium only upon the customer's requirement.

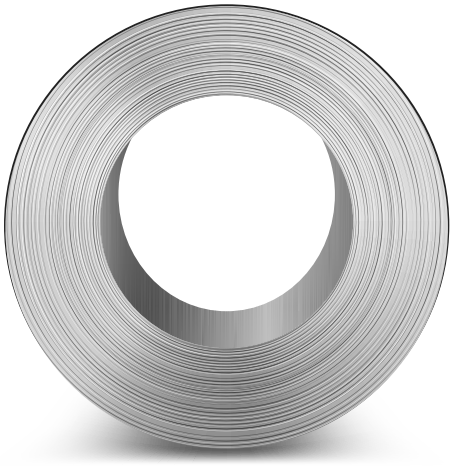
[5] Colour shades depend on the coating thickness and the type of varnish employed.

SUPPORTING SUSTAINABLE SOLUTIONS

SIWATT embodies the essence of green steel. Made from recycled steel scrap, SIWATT electrical steel has an exceptionally low carbon footprint, which places it among the most sustainable electrical steels worldwide.

*Average value for SIWATT electrical steel, based on LCA

Steel scrap: 97 % **Other: 3 %**



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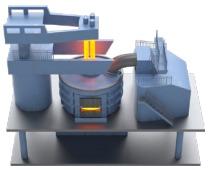
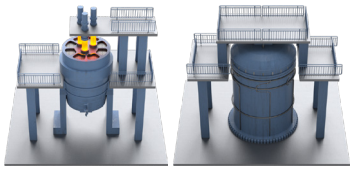
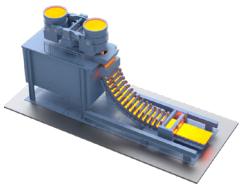
PRODUCTION PROCESS

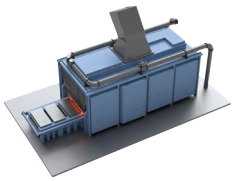
Steel plant

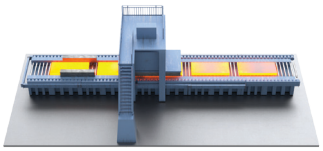

Electric arc furnace

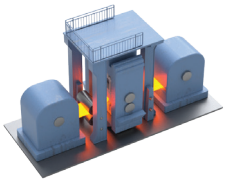

Secondary metallurgy


Continous casting machine

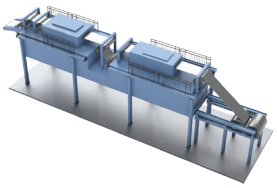
Hot rolling mill

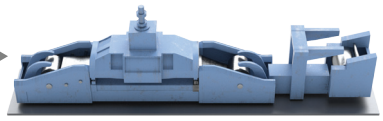

Pusher-type furnace


Rougher rolling mill

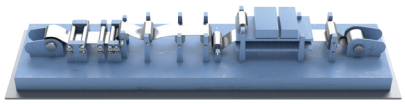

Reversible rolling mill

Cold rolling mill


SCL (Shot-blasting)


Cold rolling


Annealing and coating line


Slitting line


Cold rolled coils

Approvals, standards and certificates

Scan • Click

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green²

Recycled content

Green² steel is made from recycled steel scrap, without the use of iron ore.

100 % renewable electricity

Green² steel is made with 100 % renewable electricity.

Single site production

Green² steel is produced entirely in one location avoiding unnecessary emissions from transporting semi-finished products.

SIJ Acroni is the largest steel producer in Slovenia, specializing in producing hot- and cold-rolled flat steel products. We are among the leading European producers of stainless-steel quarto plates and one of the most important producers of tool, electrical, wear-resistant and high-strength structural steels. SIJ Acroni guarantees a constant level of quality by focusing on continuous development and improvement of processes and materials. We are certified according to IATF 16949, ISO 9001, ISO 14001, ISO 45001, ISO 50001, EN ISO/IEC 17025 and ResponsibleSteel. SIJ Acroni is a member of the vertically integrated group SIJ – Slovenian Steel Group.

Living Circular Economy

We value flexibility and sustainability, which is why we make small batches of high-quality steel products with high added value and a low CO_2 footprint for niche markets. SIJ Acroni is proud to have one of the lowest carbon footprints in the industry.

- 100% of our steel is made from recycled steel scrap in an electric arc furnace. We use magnetic separation to purify and increase the quality of scrap. This helps us reduce our environmental impact and increase the quality of the final product.
- 98% of waste generated during our production process, such as steel scrap and slag, is recycled or otherwise reused.

Responsible Steel™ CERTIFIED SITE ACE/2024/108799.1

SIWATT_NO grades-mapa-web_2/4-2026

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