Welded lamination stacks
We have studied the different welding technologies deeply and developed our own receipts to exactly control the geometry of the weld seam and the distortion of the stack. Additionally, we have developed the production machines for this purpose. Today, we master all important welding technologies. Our experience already sets in for the construction of the geometry of the notch for the weld seam and continuous for the development of the high quality, repeatable production process in order to avoid costly changes of the tooling.
For serial manufacturers we can construct and build completely automated welding machines. Another speciality is the welding of electrical sheet containing high rates of silicium.

Plasma welding
We have been using plasma welding for stacks of electrical steel since 2007. Developments of the electrodes lead to higher life time and quality. Our own machine controls the height of the stack and produces up to six welds simultaneously. The benefits are plain:

- Long lifetime
- Narrow ray focus and reduction of spatter
- Control of the process parameters
- Short process time and lowest distortion by using several torches

Laser welding
During the year 2009, we have developed a laser welding machine for stacks of electrical steel. Special lenses allow welding on both sides of the stack. The cross section of the weld seam can be controlled precisely and the bending of the stack can be controlled to stay in the tolerances. The benefits are:

- Higher welding speed
- Less distortion and higher strength
- Capability of deep welds
- Less prone to variation in material properties
- Capability to weld thicker insulations and thinner sheets
- Automated control of the weld seam geometry

TIG- resistance welding
We have been using traditional technologies like TIG and resistance welding since 1975. Through continued improvements of the machines and tools, we could improve quality and lifetime significantly. We are welding both ways, automatically and manually.
We would be proud to support you in developing and producing high quality stacks – contact us!

SWD AG – your partner
SWD AG – Stator and Rotor technology is an innovative medium-sized company in Switzerland. We are dedicated to the development and production of lamination stacks and support our customers with new technologies from prototypes up to series production.

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