

Shapeline Strip Sheet Metal

Profit from a lower profile!

For over a decade, Shapeline has specialized in the research, development and marketing of non-contact, precision flatness measurement technology. Headquartered in Linköping, Sweden, we have qualified ourselves as one of the world's foremost authorities in this field with a proven track record and an ever-increasing list of international references.



From the outset, our mission has been to assist steel and metal manufacturers to turn out even flatter products. Flatness is a critical property that has a direct bearing on the user's ability to utilize material efficiently with the consequent achievement of significant cost savings.

Experience has shown that the capacity to manufacture material with a high degree of flatness not only significantly enhances your competitive edge, it also expands your satisfied customer base. Thanks to our efforts, reliable on-line planity measurement is now a reality in a fast growing number of strip and plate production facilities across the globe.

In our endeavour to make your world as flat as possible, we can provide you with the means to:

- measure the flatness and crossbow of the material in your production line,
- access information that streamlines process control,
- compile flatness statistics for long-term process enhancement,
- evaluate your processes from a flatness standpoint,
- quality assure your production with respect to flatness,
- optimize yield and,
- document the material for your customers.

Our programme of planity measurement systems represent the ultimate in functionality and flexibility, making them suitable for a wide range of metal production applications in the most demanding industrial environments. Designed for integration into virtually any production line, they will satisfy all kinds of customer demands and requirements in terms of flatness and crossbow (traverse bend measurement).

Much of Shapeline's expertise is concentrated in our modular software architecture. In addition to our range of standard systems, we can also provide solutions customized to your individual application demands.



Visiting SSAB Oxelösund Steelworks

SSAB Oxelösund Steelworks ranks as the world's foremost manufacturer of quenched and tempered heavy plate. It is also the only facility in Sweden with an entire production line stretching from raw materials to rolled plate. Shapeline's systems are in operation on no less than seven of the production lines at the SSAB steelworks in Oxelösund and they constitute an important reference and co-operation partner for the company. Some of key management members at SSAB Oxelösund express their opinions about Shapeline and its measurement technology.



Ola Hägglund

Head of Plate Division
SSAB Oxelösund

When SSAB entered the market some years back with thin plate products, we embarked on a co-operation with Shapeline that allowed us to solve a number of levelling issues. Since then we have, together with the help of Shapeline, improved our ability to resolve levelling process problems to a point where we are now able to provide our customers with a product that is defined.

Without Shapeline technology we wouldn't be able to produce and deliver closely defined products in accordance with the most stringent customer specifications as we do today. It also sharpens our competitive edge in terms of increased production line capacity. In short, our production costs would be higher without Shapeline.

Having begun with on-line measurement systems for conveyor belt lines, we have together now found a solution for non-contact measurement on roller tables. This is an example of where use of Shapeline technology can be extended and an illustration of how co-operation has improved our flexibility in the measurement of plates.

In terms of benefits, it would be true to say that reductions in overheads and lead times combined with a higher quality product have not only enabled us to gain a better price for our products, they have also established us as the preferred supplier with a larger number of customers. This is especially important when the market is in decline.



Jan Steninger

Strategic Investments Manager
SSAB Oxelösund

Based on our positive experiences to date, we can already say that on-line flatness measurement technology will

be a feature of any new plate lines we design in the future. It enables us here at SSAB to achieve savings in terms of workshop floor space, manpower, and heavy equipment.

There is no doubt without the ability to measure accurately you cannot improve the product. Shapeline technology has enabled us to deliver products over and above accepted norms and specifications and attain the highest standards in terms of quality, uniformity and flatness that are better suited to market demands.

Anders Carlestam

Project Leader
SSAB Oxelösund

Bearing in mind the effects on material and limitations with regard to material handling make manual measurements on-line impossible, Shapeline's contact-free planity measurement has meant a great deal for SSAB Oxelösund.

The technology enables us to deliver material with tolerances finer than our competitors can guarantee.

Implementation of on-line measurement technology not only allows us to detect the very smallest defects and improve the already high standards of performance, but has also allowed us to resolve some technical issues we weren't even aware of earlier. This has subsequently enabled us to help our customers optimize their own production procedures.

In terms of amortization, the Shapeline system paid back during the start up phase of the quenching line. But we can see on-going major economic benefits are resulting from reduced scrap metal volumes and improved productivity.





Let us lower your Profile!

Shapeline Strip Compact

is a system for narrow, flat strip material up to approximately 100 mm in width consisting of one or several measurement sensor heads, each approximately the size of an A4 page and connected to a common computer and a common user interface. The sensors are pre-calibrated and have measurement accuracy down to one or a few microns. Each line equipped with a sensor warrants 100% quality control for widths up to 100 mm (glossy surfaces) or 300 mm (matt surfaces).

Shapeline Strip Flex

is suited mainly to strip widths exceeding 700 mm incorporating a sensor consisting of two parts that have no direct mechanical contact with each other. The placement of the optical units is calculated by Shapeline for optimized measurement accuracy, measurement range and physical dimensions. Each system installation is unique and adapted to individual conditions at the customer site. In addition, the units are optimized with respect to size, since the amount of supporting mechanics has been minimized.

Shapeline Strip 500

is a system for advanced metal strip manufacturing applications where productivity, quality control, and total economy are crucial factors in meeting stringent customer requirements. Designed for smooth integration into production lines for continuous flatness with extremely high precision, the Shapeline Strip 500 is a tool for 100% quality control for 200-500 mm widths. The system performs over 1,000 measurements simultaneously resulting in a high-precision surface profile, independent of strip movements and vibrations.

Benefits

Accurate 100% production quality assurance

Maintenance-free operation

Provision of data for optimal cutting, slitting and grading

Flexible modular software ensures smooth future upgrades

Opportunities to improve all process steps in terms of flatness

Measurement protocols warranting improved customer support

