

Building the Perfect Roof

Controlling the length cutting of the trapezoidal sheet metal profiles



Significantly higher demands are being placed on quality and dimensional stability in the production of premium trapezoidal sheet metal profiles. A wide variety of different profiles and surface properties must be considered. Further complicating the picture, there are different types of plastic coatings and finishes. In addition, sheet metal profiles can also be laminated with fibrous or plastic sheets.

Many different sensor technologies for measuring length and velocity can be used for profile production process management. Tactile methods, such as the conventional measuring wheels, often leave behind unattractive marks on sensitive surfaces. When using a measuring wheel, it is always necessary to compensate for the unavoidable measurement error caused by slippage and wear by entering into the controller a measurement factor adapted to the profile type and the different surface characteristics of coated or laminated materials. Installation and maintenance is also very extensive when using measuring wheels. The optical laser Doppler measurement procedure used by the Polytec LSV avoids these disadvantages.

Montana Bausysteme AG is an experienced manufacturer of profile products, producing profile plates for roofs, ceilings, and façades since 1964. The Swiss company, affiliated with Tata

Steel Europe, possesses extensive expertise in the production of trapezoidal and sheathing profiles, corrugated strips, wall panels, composite profiles, and sandwich elements in steel and aluminum.

Montana has been relying on Polytec's Laser Surface Velocimeter (LSV) to control its length cutting since 2005. The individually parameterizable, incremental output of the LSV facilitates a quick, easy connection to the existing control system, allowing the actual length to be easily displayed on the control board. The non-contact measurement procedure using a laser achieves the highest possible measurement stability and precision on all surfaces. It offers significantly higher precision than the measuring wheel. Along with the reducing maintenance costs, the device has allowed Montana to achieve a convincing increase in efficiency. As a result of the impressive precision and reliability of Polytec's LSV, Montana Bausysteme

AG will soon equip additional production lines with the LSV. ■

LSV measurement on fiber-laminate trapezoidal sheets



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