

– the new revolutionary non-contact thickness gauge for non-ferrous applications

successfully installed at Sapa, Sweden

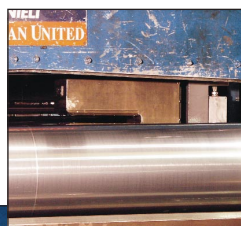
Sapa is an international industrial group and specializes in value added products based on the lightweight metal aluminium. The main products include profiles and heat transfer strip for heat exchangers in motor vehicles. Sapa has a turnover of around US\$ 1.2 billion with 6,600 employees worldwide. Sapa is one of the leading companies within its fields and the customers are found in the automotive, building, engineering and telecom industries. All product development is customer-driven, thus helping the customers to develop their own products and to maintain a competitive edge.

Sapa is going through a considerable investment program in order to increase and improve productivity as well as the quality of rolled material. In this program a big revamp was recently carried out. ABB was the electrical supplier and the total delivery included requirements for thickness and flatness measurements. A good result from this extensive revamp is that the mill speed has increased by as much as 50% (from 600 m/min to 900 m/min).

Mill data

4-High Single stand cold rolling mill, HUNTER

Backup rolls	965 - 885 mm
Work rolls	400 - 376 mm
Mill motor	2600 kW
Max. rolling speed	1000 m/min
Max. strip width	1650 mm
Max. coil weight	15 ton
Max. entry gauge	6 mm
Min. exit gauge	0.05 mm
Thickness gauge	ABB MTG
AGC	FF, FB, Massflow ABB
Flatness system	ABB Stressometer



MTG in action at the uncoiler side in the Sapa mill. Note the layer of coolant in the measuring gap.



Mill operator has full control of strip thickness and flatness.

Sapa's requirements of thickness measurement

Material rolled in this Sapa mill is mainly intended to be used in heat exchangers for motor vehicles. Such material has to be easy to braze and

has to have high mechanical properties. To achieve this Sapa uses a dual property material comprising a variety of different aluminium alloys through the strip.

The ABB mission was to measure the thickness of this

cladded material with an accuracy better than 2 microns, and this in a very harsh mill environment.

The only thickness gauge of today meeting these tough requirements in a satisfactory way is ABB's Millmate Thickness Gauge (MTG). The key to the MTG success is the patented technology behind, the Pulsed Eddy Current Technology.

Comments from the production people

The operators and supervisors are happy with the new system. The ABB commissioning people worked hard, trimmed the equipment in an excellent way and came up with good solutions. Now Sapa can rely on the gauges without tedious calibrations and without hazardous radiation.

After the big revamp there is a considerable accuracy improvement of both thickness and flatness measurement in the mill.