Thickness gauging

Innovative solutions through a long-standing partnership

Thanks to innovative x-ray sources, **x-ray technology in thickness gauging** is becoming an ever more attractive alternative to isotopes. For many years, **IMS Messsysteme GmbH** has relied on COMET x-ray tubes for numerous applications in the steel, aluminum and metal industries.

With temperatures of 1,000 degrees, stubborn dirt and large production volumes, production conditions in steel or aluminum rolling mills are extremely demanding. Moreover, the increased strength and improved forming characteristics of industrial materials have led to the production of ever thinner products – and thus to the need for greater accuracy and diminishing dimensional tolerances.

The demands on modern, high-technology measurement systems for inline production are therefore extremely high: not only do they have to withstand intense heat and deliver exact precision, they must also ensure maximum stability, reliability and availability. “A production line at a standstill quickly generates high downtime costs,” says Rainer Fackert, Managing Director of IMS Messsysteme GmbH in Heiligenhaus, Germany. “In a high-speed production process, an assembly line runs at 20 meters per second. Our customers demand perfect quality and cannot afford any downtimes. That’s why we are not prepared to compromise when it comes to choosing our suppliers.”

For many years, IMS Messsysteme GmbH has been one of the leading manufacturers of multi-functional x-ray and isotope-based measurement systems for the metal, aluminum and steel industries. As the Managing Director emphasizes, extensive experience gives IMS a competitive advantage. “We are constantly working to enhance our systems. We enjoy a good reputation as a reliable partner for our customers, guarantee high quality standards and focus on stable partnerships with leading firms in the sector. Among other things, the technical evaluation of our systems has improved thanks to ’COMET Inside’.”

Positive reaction to 600 kV high-energy x-ray source

The partnership with COMET began in the mid-1990s. “We wanted to increase the service life of our systems, so we looked for a way of replacing fragile glass x-ray tubes with more robust metal and ceramic tubes. We chose COMET – a decision that has been absolutely justified,” says Rainer Fackert. He is convinced that x-ray technology is an attractive alternative to isotopes and sees its potential for growth. The reaction of IMS to the development of an innovative 600 kV high-energy x-ray source by COMET was accordingly positive. “We can now replace isotopes in new applications, such as pipeline inspections. Although x-ray systems are more expensive than isotopes, they have the advantage that the tubes are easier to produce. Dose stability can be improved, plus they are safer, more environmentally friendly and easier to dispose of. X-ray sources can also be switched off when not in use.”

The partnership between the two companies has grown closer and evolved over the past 20 years. “We are a well-coordinated team and trust each other implicitly. In particular, we value the continuity in customer support that COMET offers,” reveals Rainer Fackert. “Our partnership means reliable production processes for our customers.”

Challenges are tackled together

IMS also relies on this established, close partnership in its manufacturing offensive in the USA, where it is setting up a company to produce simple measuring systems. The goal is to increase the company’s market share for measuring systems in the low-energy sector significantly (IMS already dominates the sector in high-energy devices). One important element in this market expansion will be an innovative, maintenance-free x-ray source: based on a 75 kV x-ray source, this was developed in accordance with COMET’s Customer Solution Engineering approach. “We are both breaking new ground here and will meet the challenge together,” confirms Rainer Fackert. “We stated what we needed for the product at the engineering meetings and we were surprised by COMET’s creative new approach, which meets our needs extremely well.”

Temperatures of 1,000 degrees: measuring systems in steel rolling mills must meet the highest quality standards despite extreme production conditions.

More about IMS Messsysteme GmbH

IMS Messsysteme GmbH was founded in 1980. Based in Heiligenhaus (near the German city of Düsseldorf), the company has more than 350 employees across five continents. In addition to market expansion in the USA (see main text), the company continues to focus on key markets in China, India and the booming Korean market, all of which are driving the demand for steel. There are some 3,000 steelworks in China which are responsible for half the global production of crude steel. IMS is the market leader in Asia.

Learn more:
www.ims-gmbh.de