



Your Partner for Online Instrumentation



Product Portfolio

GTG-2000/XTG-2000

GTG-2000/XTG-2000 online thickness gauge measures the thickness of flat strip of ferrous & non-ferrous metals on cold rolling mills/coating lines/strip processing lines.

Maintenance free metal thickness gauges giving deviation control outputs at high speed mills with 5 mSec response time and accuracy of $\pm 0.2\%$. Options available for closed loop control, mill wide interface and comprehensive coil reports.

- * XTG-2000 X-Ray sensor for measuring thickness of material
- * GTG-2000 Isotope radiation sensor for measuring thickness of material



XRF-3000

XRF-3000 coating thickness gauge is a perfect solution for optimizing zinc consumption at any continuous galvanizing line.

XRF-3000 coating thickness gauge is designed for online measurement of coating on both sides of metal sheet. The deviations from preset target values are instantly detected, allowing immediate corrections to the production process to maintain uniform coating. The user interface provides detailed trends, comprehensive coil reports, control feedback and level 2 interface through industry standard protocols. More than 150 systems installed worldwide are impressive evidence of the market acceptance and capability of our products and services.

- *XRF-3000 X-Ray sensor for measuring coated weight of material



SC-3000-BM

Paper QCS and gauges for all types of paper and board Industries e.g. pulp, tissue, cardboard etc., for measurement of basis weight, moisture percentage and ash weight in continuous scan mode along with control system.

- *SC-3000-BMA Scanner with basis weight, moisture and ash sensor
- *SC-3000-BM Scanner with basis weight & moisture sensor
- *SC-3000-B Scanner with basis weight sensor



SC-3000-PLX/SC-3000-PLB

Plastic thickness gauge display and control thickness for cross web, machine direction profiles along with trends, product recipe and roll reports. SPC charts are also available as an option.

- *SC-3000-PLX X-Ray sensor for measuring coated weight of material
- *SC-3000-PLB Isotope Beta radiation sensor for thickness/basis weight



Product Portfolio

Metals

Zinc coating weight gauges for galvanizing lines, thickness gauges (X-Ray and isotope) for cold rolling mills, paint thickness gauges for color coating Lines.

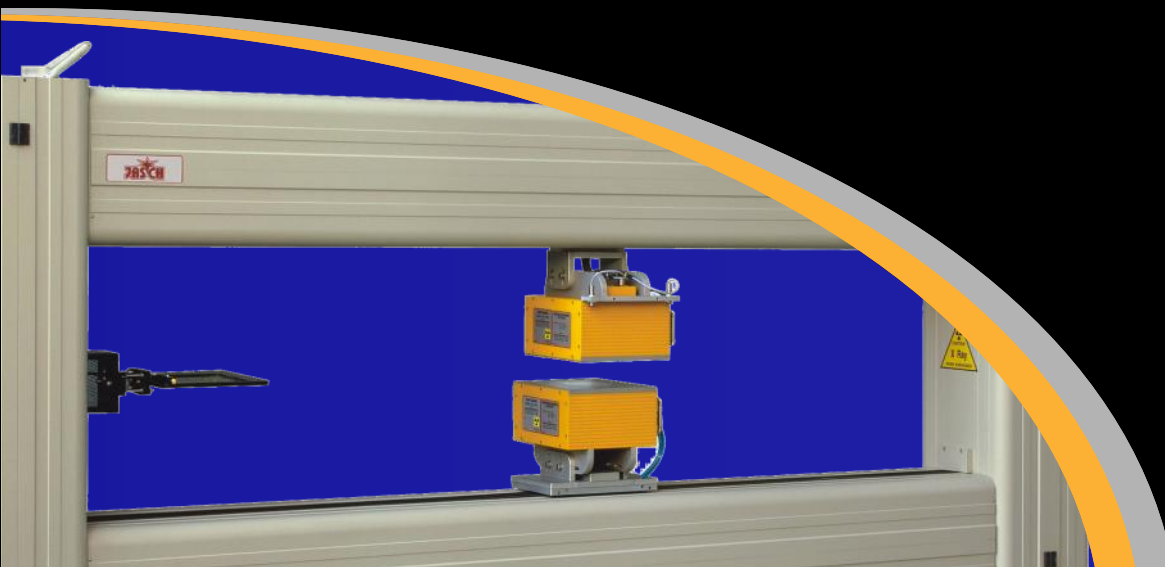
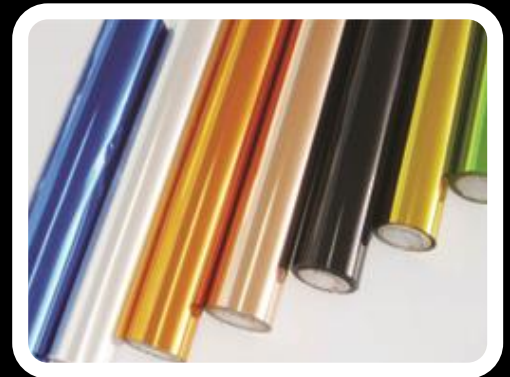


Paper & Board

Quality Control System for paper, board and tissue machines. MD control of Basis Weight, Moisture and Ash Content, CD control of Caliper, Moisture and Basis Weight.

Plastic Foil & Sheet

Thickness gauges for Castor extruded films & sheet. Bi-oriented films stretching, PVC and rubber, calendars. Automatic Profile Control System for castfilm Lines, lamination machines, extrusion coating.



Thickness Gauge



Thickness Gauge

For all rolling machines used in the steel industry, the basic measurement required is the thickness of the sheet. The measurement is displayed as microns (or mm), which is the basic parameter the operators are using to ensure that their production is always within the acceptable thickness range.

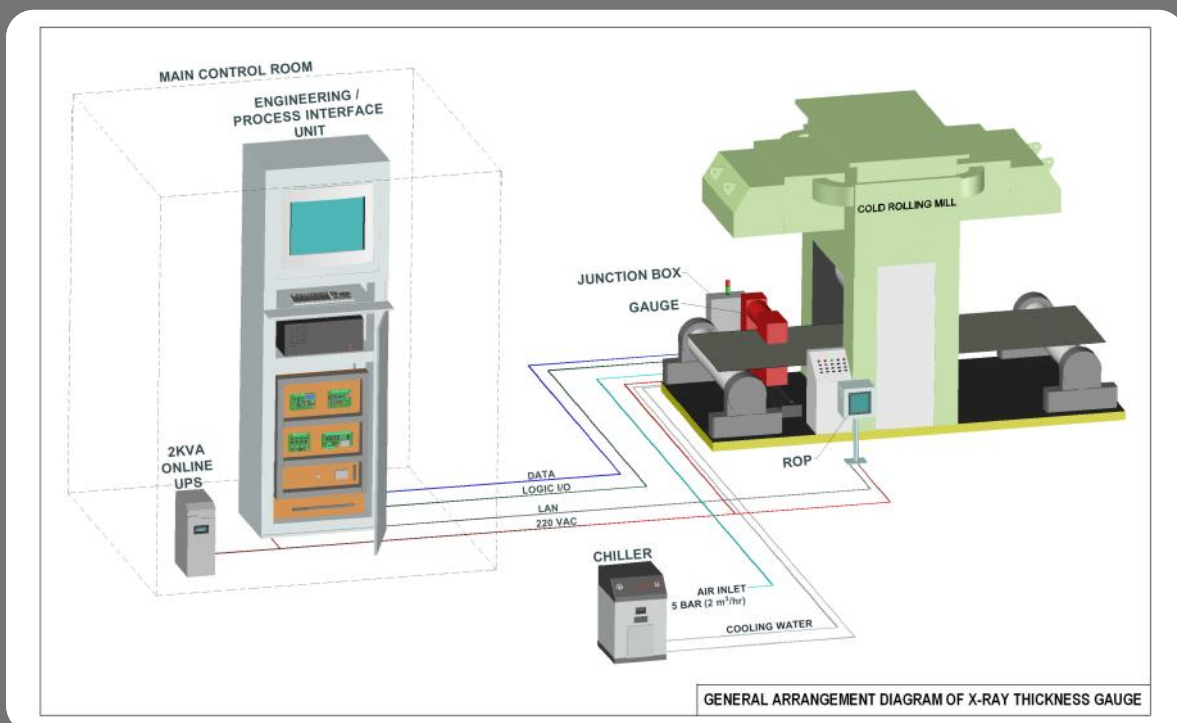
Measuring principle

Our systems for thickness measurement are based on the attenuation of either gamma rays or X-rays radiated by the source of known intensity, as it passes through the material. The thickness is determined by sensing variations in the residual energy, compared to reference samples (calibration and alloy correction).

The gauges are designed to be flexible and with open software architecture, without compromising on system reliability, availability ($\geq 99,8\%$) and ease of maintenance : our systems are using the latest in electronic technology and proven heavy duty mechanical components.

System Architecture

The system is designed to concentrate on the most important task of accurate and stable thickness measurements. The sensors are mounted on a precision platform (C-frame) which carries the sensors to the desired position of measurement. The C-frame has all the function control and signal conversion/processing electronics included in a junction box. All measurement data from the gauge is sent digitally via RS485 link to a PC based engineering unit, which processes all measurements, generates running displays, implements calibration tools, display maintenance data and machine operations.



Thickness Gauge

High Quality Construction

The movement platform (tracks) carries the sensors on a C-frame type mounting and continuously measures the sheet thickness. Frame precision and stability are crucial for obtaining proper measurements from the sensors. The design is based on a Tube construction to form a "C" shape. The resulting C-Frame structure is very strong, rigid and mechanically stable.

It is only with this rigid structure that makes it possible to mount sensors and maintain high precision alignment while measuring. The materials used are chosen for precision and reliability under heavy duty daily use. With the rigid C-Frame design, this precision alignment is mechanically locked into the system. The track movement is on heavy duty linear motion system, based on customer requirement of either motorized or pneumatic drive mechanism.



Typical Specifications

- Thickness range : 150 μm to 12 mm
- Source type : X-Ray
- 40 kV, 60 kV, 80 kV and 120 kV
- Response time : 10 ms
- Reproducibility : 0,2 %
- Statistical noise : $\pm 0,15$ % (2σ)
- Drift : $\pm 0,2$ μm or $\pm 0,2$ % in 8 hours

Operator Online Display

The Operator interface is implemented on another PC based system which is connected to the processing system through Ethernet link.

The Operator interface is based on Labview™ which is highly user customizable and adaptable to varying mill requirements. Comprehensive production reports are generated for storage and hard copy.



Coating Weight Gauge

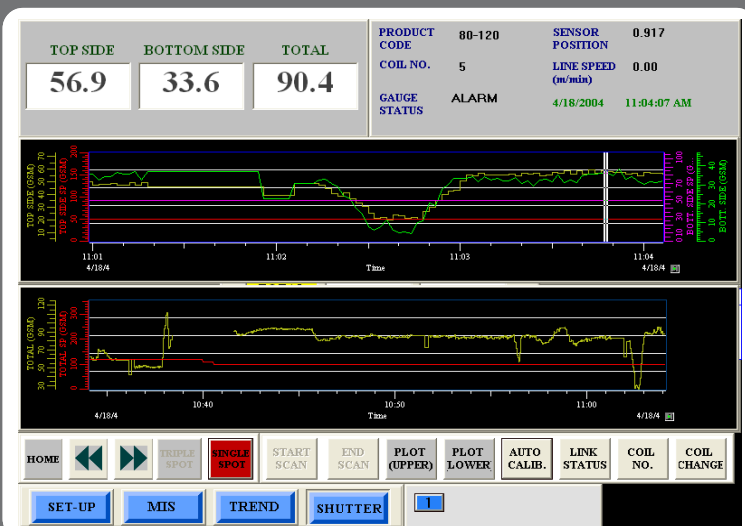


Coating Weight Gauge



The measuring principle is based on the fluorescence produced by reflection from the coated material on which radiation emitted by the X-ray source is projected. The coating weight is determined by sensing variations in the energy radiated by the surface compared to the measured and known pure form of sample value.

The O-frame Scanner is designed to be very strong, reliable and at the same time accurate. The design is based on a double I-Beam structure, welded together to form a box construction. During the manufacturing process the top and bottom sensor carriages are precisely aligned within 0.5 mm in x, y and z directions. The materials used are chosen for precision and reliability under heavy duty daily use. With the rigid O-Frame design this precision alignment is mechanically locked into the system. The carriage movement is on heavy duty linear motion system, based on ball bearings with many times over rating. Single Beam Scanner is available as an option for specific requirements.



Coating weight gauge is a perfect solution for optimizing zinc consumption at any steel coating line. The line trend and value displays, along with control feedback of both sides independently, provide all necessary data for Level 2 interface.



Coating Weight Gauge



When product fluttering is present, split frames (U-shaped) are designed, for mounting at bridge rolls.

Typical location is after the cooling section, but warm and hot gauges are also available upon request. In particular, the hot gauge consists of fixed measuring heads, mounted centerline immediately at the exit of the coating bath, and usefully combined with a classical cold location gauge, to improve the process control significantly.

Typical Specifications

- Coating range : up to 350 g/m²
- Coating type : GI, Galfan, Galvalume, Galvanneal, Aluminium, Tin
- Source type : X-Ray, 28 kV/3W
- Substrate : steel, 120 µm to 4 mm
- Resolution : 0,1 g/m²
- Reproducibility : ± 0,25 % or ± 0,25 g/m²
- Pass line sensitivity : max. 1% for pass line deviation of ± 2mm
- Minimum Update Time : 10 msec

Galvcontrol System For Air Knives

GalvControl is a high-speed, adaptive coating weight closed loop control system for Galvanizing, Galvalume and Galvanneal. GalvControl actively monitors and manages the process, reducing coat weight variation between and within coils, and producing a more uniform coating. More uniform product provides a way of reducing the “insurance” margin applied with overcoating and can save significant amounts of zinc.

GalvControl utilizes the most up-to-date process control adaptive modeling available to the industry. This unique model allows you to improve and maintain your ability to control, resulting in a more uniform coat weight across all coated products.

GalvControl is available for all major Air Knives systems : Köhler, Fontaine, Posjet,...

Quality Control System for Paper/Board Machines

Jasch develops and manufactures measurement and control systems to improve the quality of production on paper machines and bring cost reduction and productivity increase to operations.

Jasch systems continuously monitor and control the quality parameters such as Basis Weight, Moisture, Ash, Caliper & Coating Thickness etc. The deviations from preset target values are instantly detected, allowing immediate corrections to the production process to maintain constant product quality. All relevant measuring results are evaluated and displayed graphically on a monitor and documented by hard copy.

More than 100 systems installed worldwide are impressive evidence of the market acceptance and capability of our products and services.

System Architecture

The modern Quality Control Systems (QCS) for pulp, paper, tissue & paperboard industry, designed to be flexible and with open software architecture, without compromising on system reliability, availability and ease of maintenance. Jasch pulp & paper gauge SC-3000-BM system fulfils all these needs using the latest in electronic technology and proven heavy duty mechanical components.

Sensors

- Beta Transmission Sensor for basis weight measurement
- InfraRed Transmission/Backscatter Moisture Sensor for paper up to 250 GSM
- Scanpro™ Microwave Moisture Sensor for paper with GSM higher than 250
- X-Ray Transmission Sensor for ash contents
- Calisens™ non-contacting Caliper sensor

Scanner Frame

- High Precision manufactured Box Beam design
- Steel reinforced timing belt drive
- Power Track cable carriers for reciprocating cables
- Variable scan speed (max. 16 m/min)
- Maintenance free AC Motor
- Totally enclosed from all sides to shield all mechanical & electronic components
- Excellent dirt exclusion
- Optional pressurized frame

Plastic Thickness Gauge & Quality Control System

Jasch develops and manufactures non-contact and non-destructive measurement and control systems to improve the quality of fast running webs and bring cost reduction and productivity increase to sheet, film, foil, textile or coating operations.

Our control systems continuously monitor and control the quality parameters such as Basis Weight, Caliper, Coating Thickness, Moisture, Ash Contents, Plastic Thickness etc. The deviations from preset target values are instantly detected allowing immediate corrections to the production process to maintain constant product quality. All relevant measuring results are evaluated and displayed graphically on a monitor and documented by hard copy.

More than 100 systems installed worldwide are impressive evidence of the market acceptance and capability of our products and services.

Measurement Principle

The measuring principle of plastic thickness gauge is based on the attenuation of Beta radiation emitted by a nuclear source as it passes through a material. The thickness/basis weight is determined by sensing variations in the energy radiated by the source of known intensity. The measurement is continuously on-line and therefore useful as feedback for automatic control.

Applications

- Cast or extruded film and sheet
- Thickness and profile control of calendared plastic films
- Plastic coatings

Auto Control Benefit

The raw material is the single largest manufacturing cost in any production set up. The automatic process control through IGS plastic gauge reduces the spread in thickness/basis weight variation and consequently the safety margins are lowered. A resulting set point reduction of even a few percent point can save a lot of precious raw material. Therefore the ROI is usually less than a year.

Our Partners

Jasch Industries Ltd.



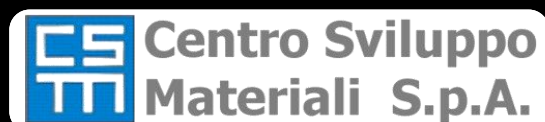
AdVIS



K.Peeraer bvba



CSM



PA-Innovations



Based in Sonipat / India

- **Specialized in non-contact gauging**
- **More than 300 references worldwide**
- **Steel, aluminium, paper, plastic films**
- **Great expertise in automation**
- **High quality manufacturing with low cost**



Gauges for the Sinter Plant

- Manufactured in Belgium by AdVIS
- Worldwide distribution by I.S.I.S.S. bvba
- Raw mix permeability
- Sinter magnetic properties
- % FeO



ADVANCED INDUSTRIAL SENSORS

Centro Sviluppo Materiali S.p.A.

Research & development for your competitiveness

- Based in Roma / Italy
- Granted manufacturing licences to I.S.I.S.S. bvba
- Optical flatness gauges for hot and cold mills
- Roughness gauges for processing lines
- Working rolls assessment
- Surface defects detection - bar mills



**Centro Sviluppo
Materiali S.p.A.**

PA-innovations does the design, engineering and supply of industrial automation systems, and offers consulting services in metallurgical plant engineering.

- Specification and technological development of process-oriented controls
- Basic engineering
- Software for technological control systems
- Software for PLC-controls and HMIs
- Hardware engineering
- Startup and plant optimization
- Consulting and process optimization for new plants and modernizations
- Maintenance of VMEbus systems as well as Multibus systems



Replace contact wheels with Laser Surface Velocimeters by Polytec

- For demanding measurement tasks requiring high precision and reliability
- For cut-to-length and process automation applications
- Measurements for automatic gauge control (AGC), mass flow and elongation control
- Automatic Surface Adaptation (ASA) for measurements on virtually any surface
- For harsh industrial environments
- Easy system & process integration

Compact, Reliable, Rugged and Precise

Polytec's Laser Surface Velocimeters (LSV) are specifically designed for non-contact online measurement in industrial environments.

LSV can continuously control velocity and length of steel, metals, paper, plastic, glass and building materials.

The instruments are easy to install and integrate into control systems. Polytec LSV significantly help to reduce scrap, increase uptime and improve material throughput.



I.S.I.S.S. bvba

INDUSTRIAL SENSORS INTERNATIONAL SALES & SERVICES

**Exclusive Partner for Jasch LTD
Paper, Metal and Flat Sheet Industrial Measurement Systems**

**Britselei 10 b 20 ~ 2000 Antwerp ~ Belgium
Tel +32 3 205 96 80 ~ Fax +32 3 232 80 98**

**info@isiss.be
www.isiss.be**