

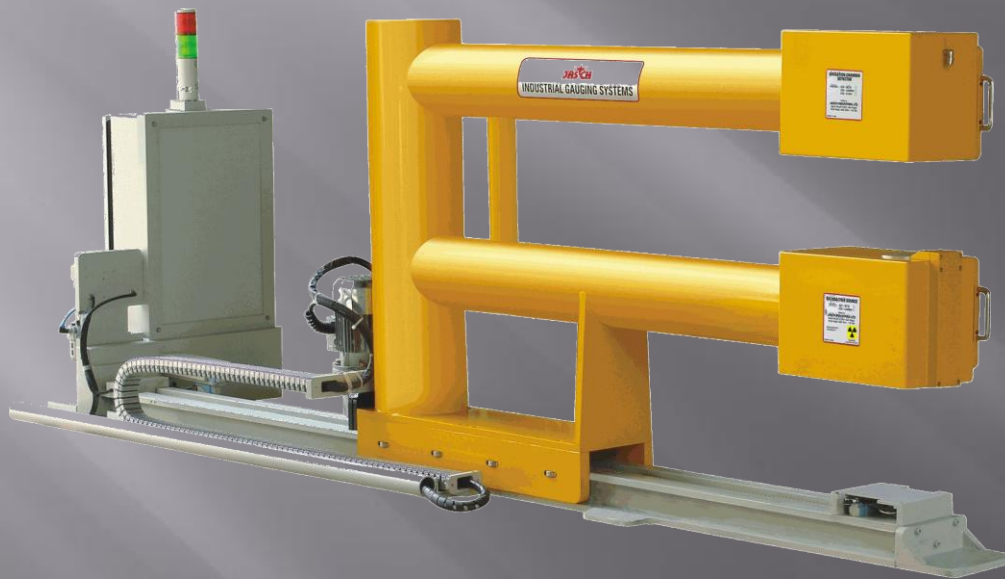


ISIS

Industrial Sensors International
Sales & Services

Your Partner for Online Instrumentation

Thickness Gauges for the Steel Industry



ITG/XTG-2000

Our product line

Permeability, magnetic index, FeO content

Isotope and X-Ray thickness gauges

Coating weight gauges, closed-loop control

Flatness gauges: cold and hot rolling mills

Roughness measurement

On-line control of working rolls

Billet surface defects detection and characterization

Thermal mapping of hot products (slab, billet, strip,...)

Dedicated control systems

Gauges for Rolling Mills

Isotope or X-Ray

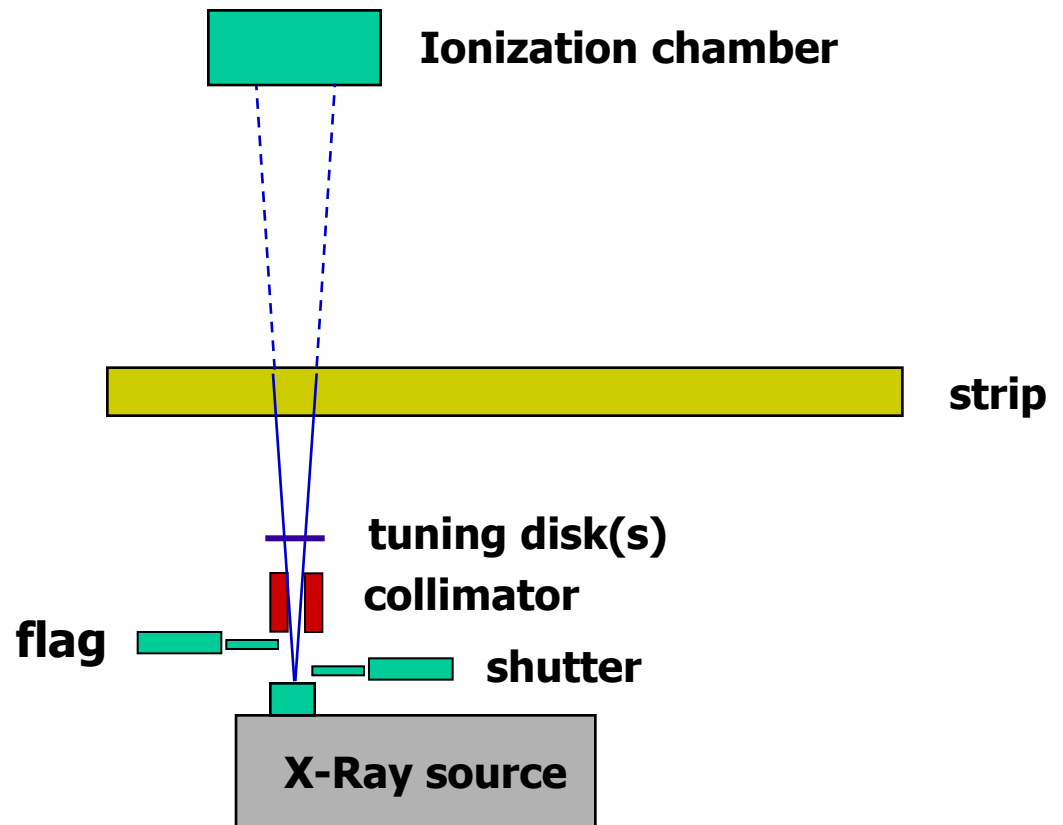


X-Ray energy emitted by the source is partially absorbed by the strip to be measured.

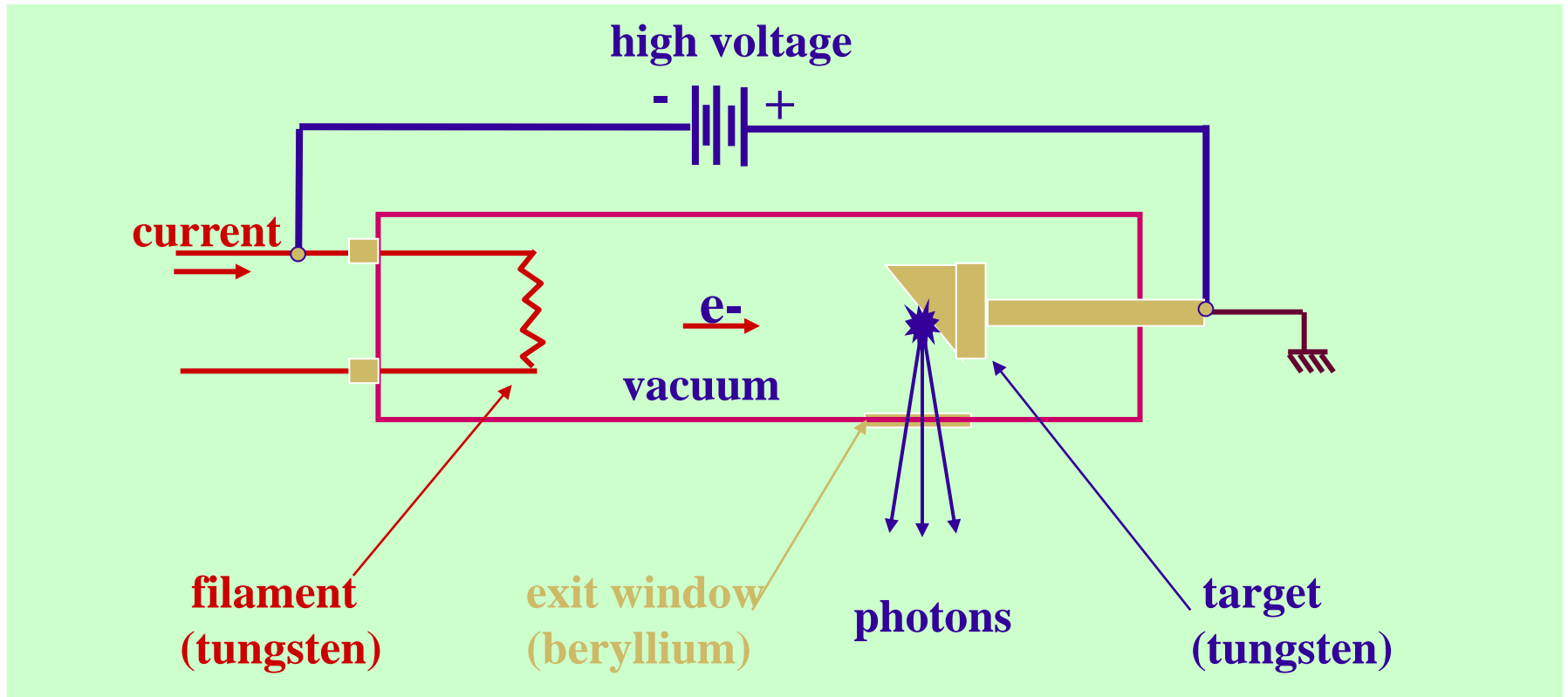
Signal attenuation is calibrated with reference samples

Source high voltage and ionization chamber are adapted to the application

Tuning disk(s) optimizes signal noise in the measuring range



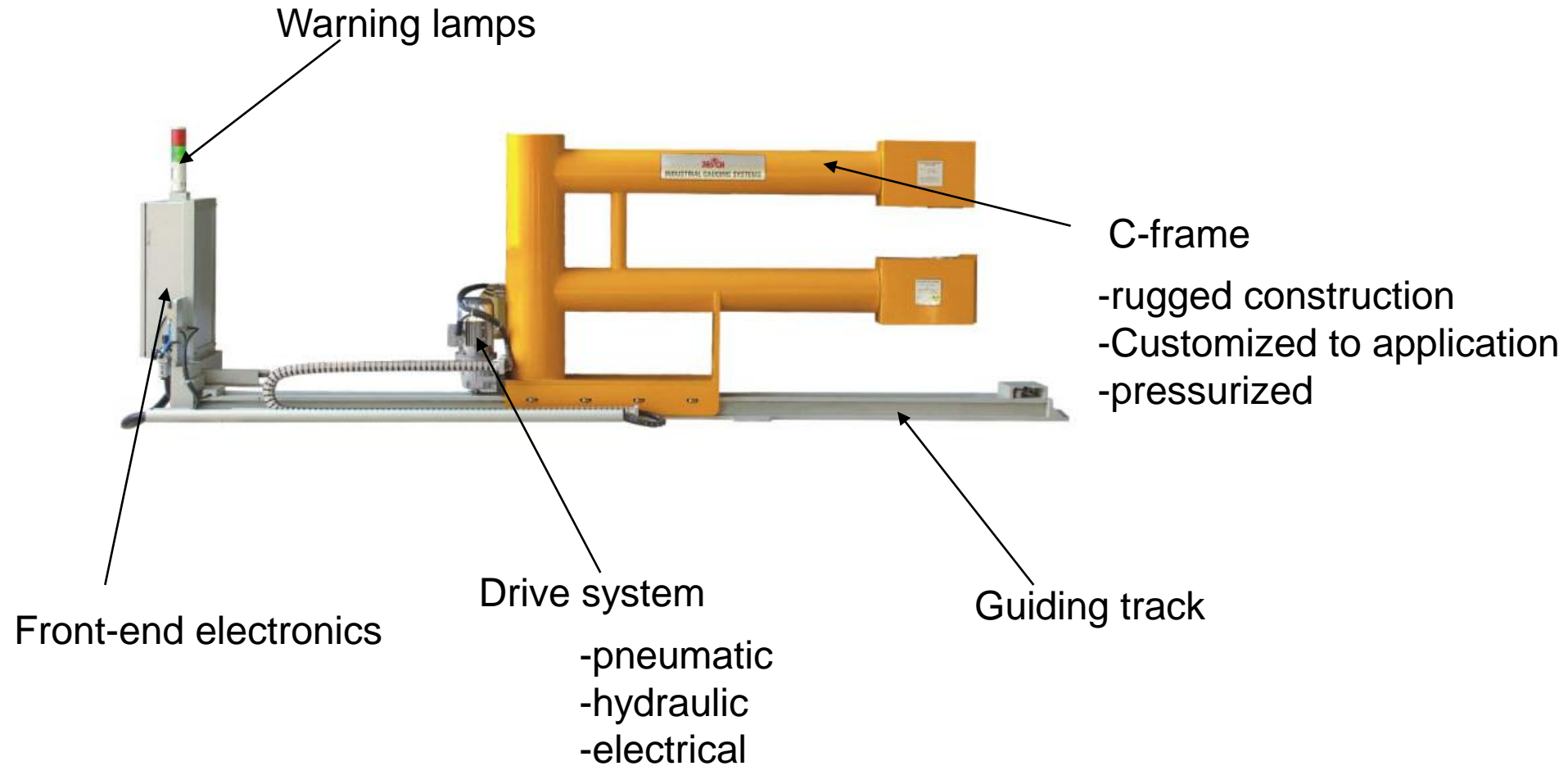
X-Ray tube : Principle



Source Range

	Application
GTG-1000 : isotope 1 Ci	Entry of CGL, inspection lines
GTG-3000 : isotope 3 Ci	Entry of CGL, inspection lines
XTG-3000 : X-Ray 30 kV	Aluminium foil mills
XTG-4000 : X-Ray 40 kV	Aluminium mills: extended range
XTG-6000 : X-Ray 60 kV	Steel CRM: up to 4 mm
XTG-8000 : X-Ray 80 kV	Steel CRM: up to 6 mm
XTG-12000 : X-Ray 120 kV	Steel CRM: above 7 mm

C-Frame



Drive System

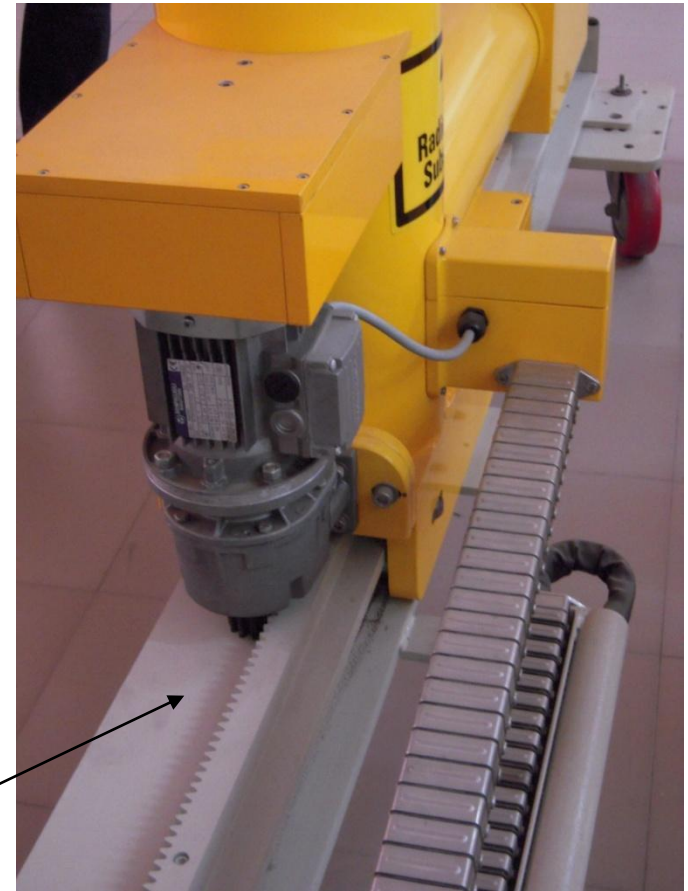
Electrical

Cable drag chain



Pneumatic

Rack & pinion



Chiller Unit

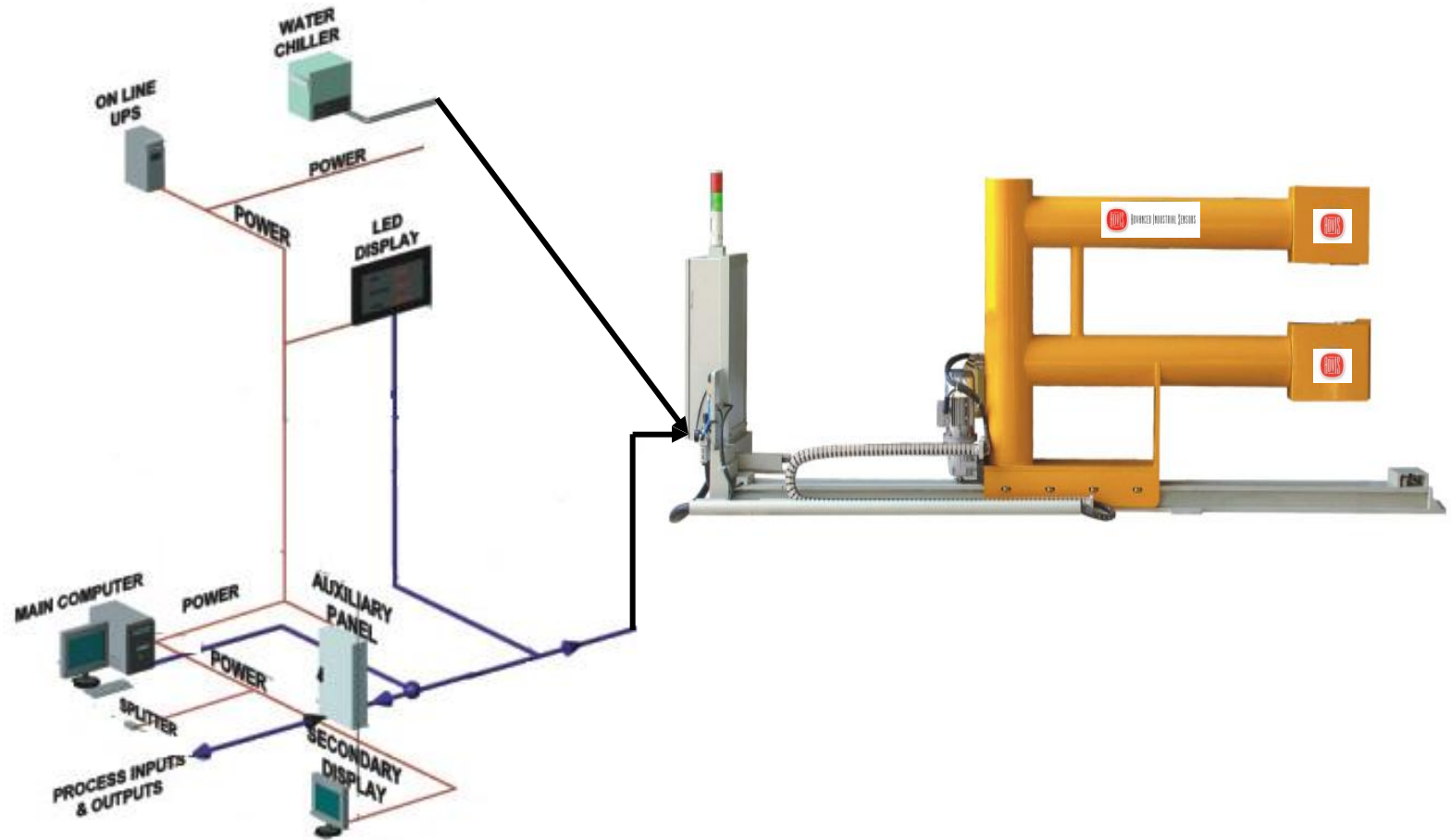


-standard 1.000 W

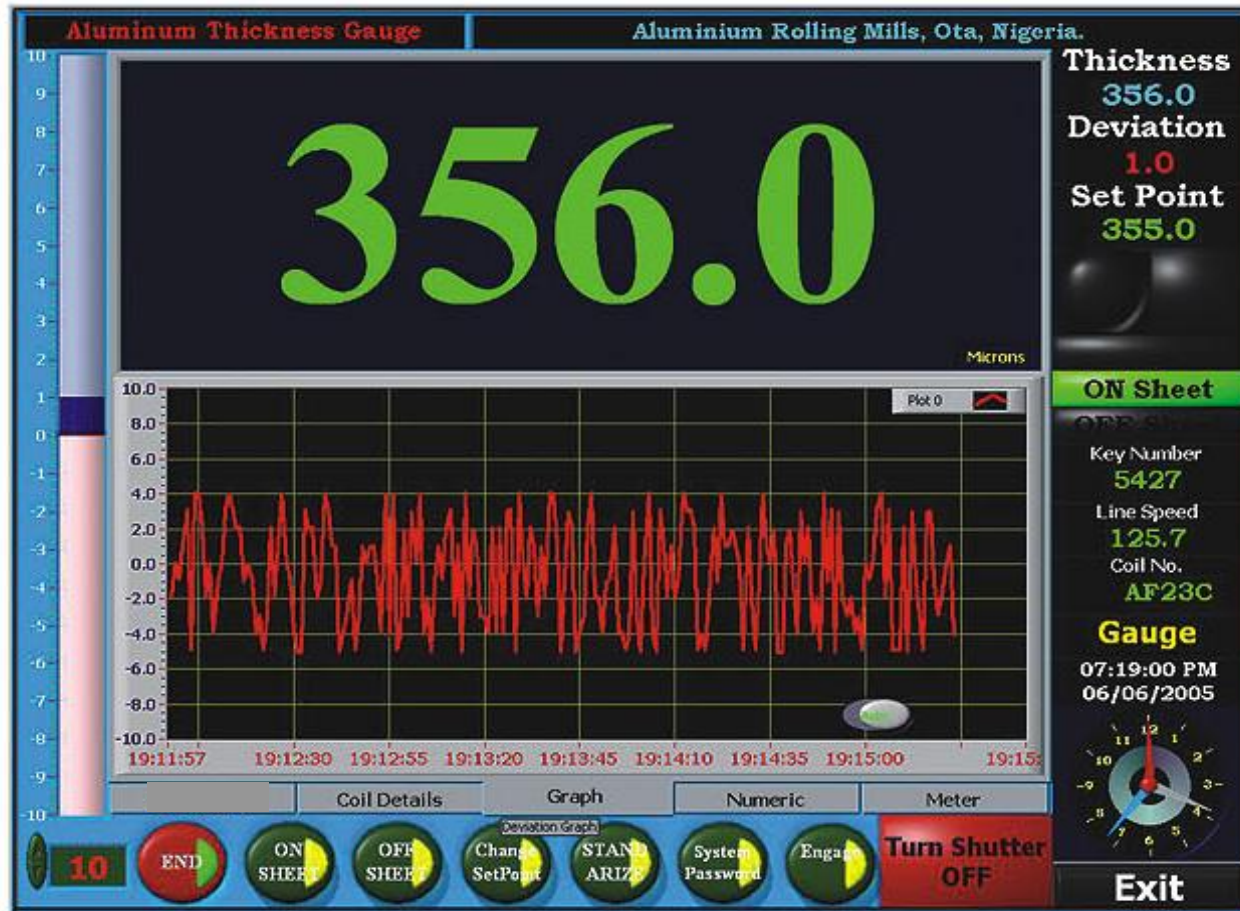
-water, kerosene

-local brands available

System configuration



Typical Display



Performances

- **thickness range: 10 μm to 8 mm**
- **response time: 10 ms standard, adjustable**
- **sampling time: 100 kHz, 2 ms refresh**
- **source power: 5 watts**
- **accuracy: 0,2 % or 0,2 μm**
- **reproducibility: 0,1 %**
- **drift: less than 0,2 % or 0,2 μm during 8 h without standardization**
- **noise: less than 0,15 % at 50 ms response time**
- **spot size: adjustable, typical 50 mm**

- **based on customer samples**
- **3 samples minimum per alloy**
- **optional alloy compensation based on chemical analysis**

- **fixed measuring heads**
- **removable head**
- **customized displays**
- **scanning gauge**



Coating Weight Gauges

XRF-3000

X-Ray Fluorescence
Metal Coating Measurement System

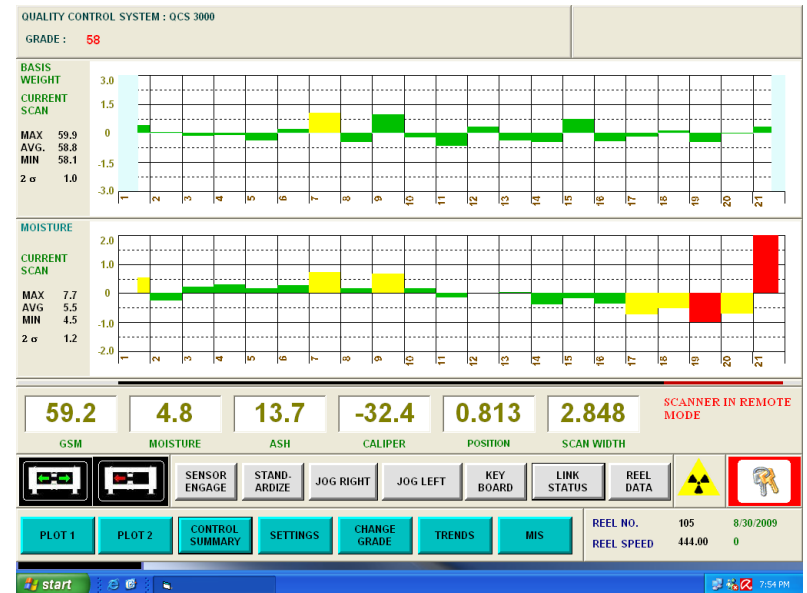
- O-frame or single beam
- Synchronized measuring heads
- GI, Galfan, Galvalume, Tin
- GalvControl Closed Loop Control for Air Knives



QCS for Paper/Board Machines

Gauges for the Paper Industry

- Basis weight and moisture
- Ash and caliper as option
- QCS for manual or automatic control of slice actuators



customised user-friendly displays

QCS for Paper/Board Machines

precision made O-frames

accurate scan up to 8 m



Head synchronisation

QCS for Paper/Board Machines

multi-gauge efficient design



Plastic Thickness Gauge and QCS

- 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
- Monitor and Control Basis weight, Caliper, Coating thickness, Moisture, Ash contents, plastic thickness etc



Plastic Thickness Gauge and QCS

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



- Polytec GmbH



- Centro Sviluppo Materiali SpA



- PA-Innovations





Jasch Industries Ltd.

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



ADVANCED INDUSTRIAL SENSORS

AdvIS Gauges

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



Polytec Laser Surface Velocimeters

Speed, Length & Velocity Gauges

- For cold and hot rolling mills
- Cut-to-length control
- Speed synchronization
- Elongation
- Mass flow control
- Integration in thickness C-frames





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



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

Contact us at

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