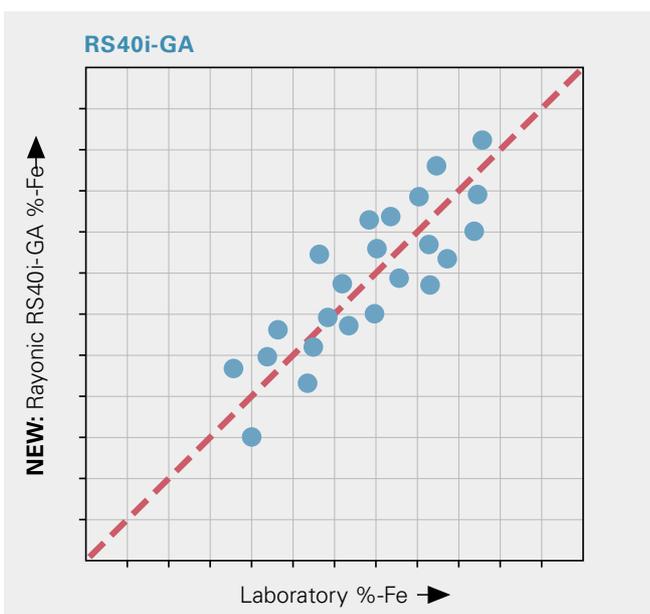
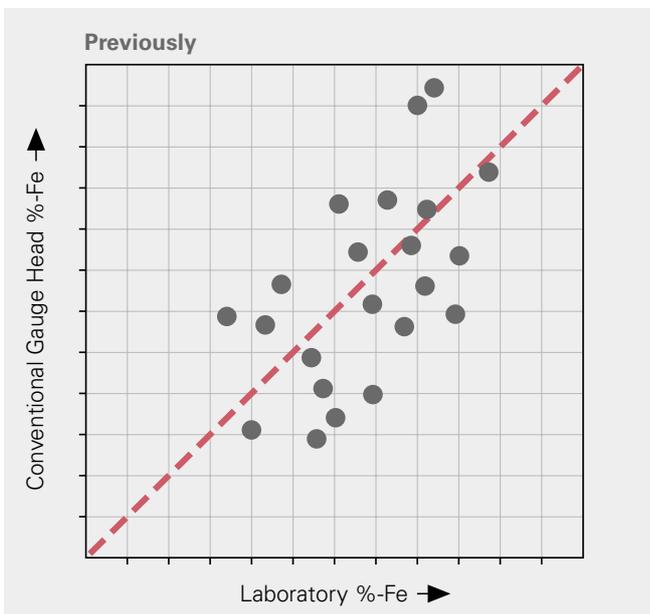


RS-40 X-Ray Coating Weight Gauges

NEW: Galvannealing Gauge-Head RS40i-GA

- Significantly improved measurement of iron-content and enhanced agreement with laboratory analysis
- New energy-dispersive ionization chamber for simultaneous measurement of iron and zinc radiation
- Optimized geometry and increased number of measurement channels to reduce sensitivity to surface texture and topology
- Digitizing of measurement signals inside the gauge-head for interference immunity in the industrial environment



In Galvannealing Lines the new developed gauge-head RS40i-GA allows a significantly improved measurement of the iron content of the coating. The comparison with laboratory analysis shows an enhanced agreement.

Iron content with more significance

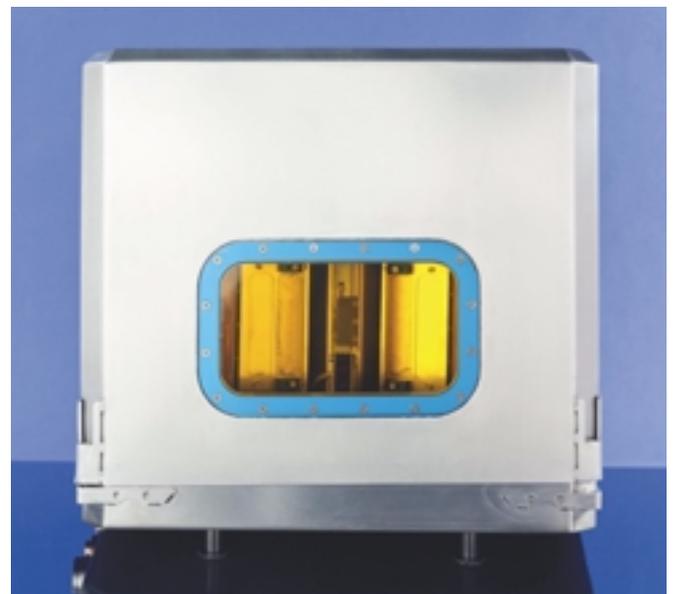
In the production of galvannealed strip not only the coating thickness and homogeneity determine a high-quality product. Also the iron-content of the coating has to be kept within narrow limits. An accurate measurement of both coating thickness and iron-content is therefore a must in every galvannealing line.

For more than 2 decades the Rayonic specialists have contributed substantially to the development of the online iron content measurement. The galvanneal gauge-head of the RS-40 series coating weight gauges has been continuously improved throughout the past years. With the new RS40i-GA gauge-head and its optimized measurement algorithm another breakthrough regarding the accuracy and reliability of the iron-content measurement has been achieved.

The centre piece of the new gauge-head is an energy dispersive ionization chamber that allows the simultaneous measurement of the iron and zinc fluorescence radiation. The signals of radiation components are determined for exactly the measurement area.

The innovative ionization chamber and the increased number of measurement channels allow a strict symmetry and redundancy in the detector arrangement. This results in a reduced sensitivity to surface texture and topology.

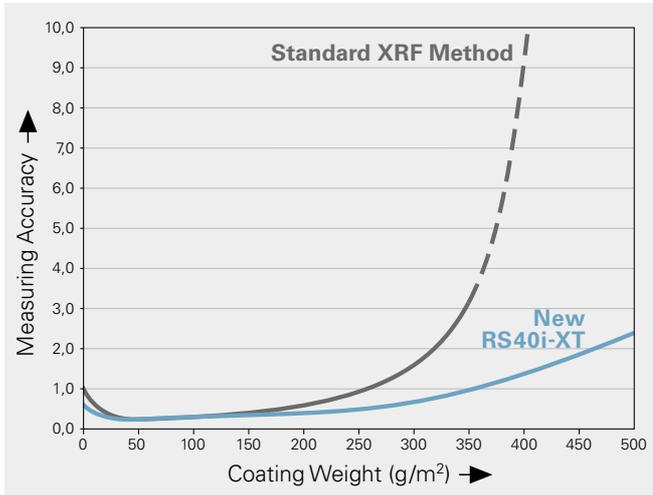
The modular, maintenance-friendly design simplifies servicing of the gauge-head and reduces downtimes and costs.



RS-40 X-Ray Coating Weight Gauges

NEW: Wide Range Gauge-Head RS40i-XT up to 500 g/m²

- Extended measurement range for coatings up to 500 g/m² using XRF and Compton Scattering
- Newly designed ionisation chamber with improved efficiency
- Optimized measurement geometry for minimum sensitivity to distance changes



Up to now the measurement of zinc coatings with the XRF method is not sufficiently accurate for coatings above 275 g/m² and becomes a lottery for coatings thicker than 350 g/m².

The new Rayonic gauge-head RS40i-XT extends the range for highly-accurate and reproducible measurements to 500 g/m².

COATINGS

- Zinc, aluminium, ZnAl alloys and ZnMg alloys



Better accuracy for heavy coatings

The measurement of zinc coatings using the XRF method limits the useful measurement range to 350 g/m². In view of the increased quality standards users increasingly criticize the measurement accuracy and reproducibility even for coatings above 300 g/m².

Rayonic has solved this problem with the new gauge-head RS40i-XT. It increases the useful measurement range for zinc coatings to 500 g/m² and beyond. This has been made possible by including elastic and inelastic scattering in the coating into the measuring effect. The energy of elastic and inelastic scattered X-rays is determined by the primary x-ray beam and the measurement geometry.

Whereas in the XRF effect the energies of the fluorescence radiation are fixed the energies involved in the scattering processes can be adapted to the required coating thickness.

The extension to thicker coatings should however not affect the high accuracy in the thin range. This could be achieved with a specially designed ionization chamber with high efficiency.

The result is a valuable addition of the RS-40 series of coating weight gauges: the RS40i-XT with a measurement range of 10 to 500 g/m².

Existing RS-40 coating weight gauges in hot-dip galvanizing lines can be upgraded.



Our Passion –
Your Success!

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