NEX LS Process energy dispersive XRF (EDXRF) spectrometer

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Scanning multi-element process coatings analyzer by EDXRF

Featuring advanced third generation energy dispersive X-ray fluorescence (EDXRF) technology, the Rigaku NEX LS represents the next evolution of scanning multi-element process coatings analyzers for web or coil applications.

Energy dispersive X-ray fluorescence (EDXRF)

To deliver superior analytical performance and reliability, the EDXRF measuring head assembly was derived from the established Rigaku NEX Series high-resolution benchtop instrumentation. With their proven technology, the Rigaku NEX LS delivers rapid, non-destructive, multi-element analyses — for coat weight, coating thickness and/or composition — for elements from aluminum ($_{13}$Al) through uranium ($_{92}$U).

Coating thickness and composition

Rigaku NEX LS is specifically designed to service web and coil applications, with the ability to perform multi-element composition, coat weight or coating thickness. The measuring head is mounted on a rigid beam and is equipped with a linear traversing mechanism positioned over a roller so that the head-to-surface distance is constant. Where needed, elemental composition of a coating is measured directly. In contrast, coat weight (or coating thickness) may be measured directly (where counting rate for an element is proportional to thickness) or indirectly by measuring attenuation of some substrate element (where counting rate is negatively correlated to thickness).

Silicone release coatings

Benchtop EDXRF spectrometers have long been a familiar technology for release coatings, converters, vacuum formed plastics manufacturers and other industries using silicone oils as barrier layers, release coatings or denesting agents. Real-time scanning, for tighter process control tolerances, takes EDXRF technology for silicone coatings analysis to the next level. Silicone coatings are applied to plastic and paper substrates to modify the release characteristics of a product (like labels) or packaging. If too little silicone is applied or if there are areas of the web where the silicone coating is missing, the adhesive release properties will be adversely affected in release applications or the denesting characteristics of the vacuum formed plastic will be compromised causing product rejection or disruption in manufacturing and other downstream processes. If too much silicone is applied, the cost of the manufactured roll increases, reducing profitability and in some cases impacting acceptance and performance of the end product.

Features and benefits

- Silicone release coaters
- Converters
  - silicone on plastic or paper
- Vacuum formed plastics
  - denesting silicone coatings
- Specialty plastics
- RoHS compliance
- Conversion coatings
- Metalized plastic
- Top coatings on metal coil
- Fire retardants on fabric

Coating thickness and composition

In addition to analyzing liquid streams, the Rigaku NEX OL is designed to service web and coil applications, with the ability to perform multi-element composition and/or coating thickness. Typically a head is mounted in a fixed position over a roller so that the head to surface distance is constant.

Elemental Analyzers

NEX QC MFA marine fuel analyzer

(nex-qc_mfa.php)

NEX QC series affordable EDXRF analyzers

(nex-qc.php)

NEX QC+ QuantEZ EDXRF spectrometer

(nex-qcplusez.php)

NEX DE Advanced EDXRF spectrometer

(nex-de.php)

NEX DE VS Small spot advanced EDXRF spectrometer

(nex-devs.php)

NEX CG Cartesian secondary target EDXRF spectrometer

(nex-cg.php)

NEX OL Process EDXRF analyzer

(nex-ol.php)

NEX XT X-ray transmission process sulfur gauge

(nex-xt.php)

NEX LS Multi-element process coatings analyzer

(nex-ls.php)

About Rigaku (about.php)

Since 1951, Rigaku has been at the forefront of analytical and industrial instrumentation technology. Rigaku and its subsidiaries form a global group focused on life sciences and general purpose analytical instrumentation. With hundreds of major innovations to its credit, Rigaku and its subsidiary companies are world leaders in the fields of small molecule and protein crystallography, X-ray spectrometry and diffraction, X-ray optics, as well as semiconductor metrology. Rigaku employs over 1,400 people globally.

Ask for more information about our Rigaku EDXRF elemental analysis products:

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