

Technical News Bulletin

St. Petersburg, September 2009



Emhart Glass releases a new chromatic wall thickness system

- Supports up to four measurement heads and can be set up to measure minimum thickness, maximum thickness, ovality, and thickness ratio (max/min).
- The chromatic thickness inspection offers improved non-round measurement capabilities, as well as easier setup.
- Measurements are more accurate and repeatable.

Introduction

Emhart Glass has completed work on the development and integration of an alternative wall thickness measurement system. The new system has been released as an option for all Veritas iM inspection machines and will be available on the soon-to-be-released Flexinspect inspection systems. This new chromatic system was developed in conjunction with Precitec Optronics GmbH of Germany to incorporate the M4 CHRocodile measurement system.

As of 1 October, the chromatic system will be offered as the preferred wall thickness inspection option on the Veritas iM, in addition to the currently-available optical inspection system based on the VMA thickness measurement technology. Both the Precitec M4 CHRocodile and VMA TMC and WRH thickness measurement system will be available as options for both the Veritas and Flexinspect systems.

Details

The new system supports up to four measurement heads and can be set up to measure minimum thickness, maximum thickness, ovality (distance from the measurement head), and thickness ratio (max/min).

The new Emhart Glass chromatic wall thickness system also includes a single rack-mount electronic console. All inspection setup is completed using the Veritas user interface and screens.

The new Emhart chromatic wall thickness system can be purchased and installed on existing Veritas iM machines by ordering part number 26406A1 - 4. The last digit of the part number indicates the number of measurement heads provided.



The new Emhart Glass chromatic system's transmitters and receivers can be mounted from the check detection rings of the Veritas iM and Flexinspect T and enable greater flexibility for wall thickness inspection.



Electronics are housed in a single rack-mount console.

Benefits

The chromatic thickness inspection offers improved non-round measurement capabilities, as well as easier setup. The greater dynamic measuring range of the chromatic system simplifies thickness measurements in the neck area of containers. Additionally, measurements are more accurate and repeatable.

An underlying benefit is in the design of the measurement head itself. With the chromatic system, the only elements out near the bottle path are a few glass lenses and the protective enclosure that is used to mount the system heads. With a 30 mm stand-off distance from the bottle and the elimination of the sensitive electronics close to the ware travel, the system is less susceptible to damage from broken glass impact.

Accuracy

Testing of the new Emhart Glass chromatic system has proven that accuracy and repeatability of the measurement system exceeds the capability of other measurement systems on the market. A given container will repeat its measured value within $\pm 1.0\%$ of the median value more than 65% of the time repeat within $\pm 3.0\%$ of the median value more than 90% of the time. repeatability applies to both minimum and maximum thickness measurements.



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With the integration of the chromatic system into the Emhart Glass inspection machines, the host machine (Veritas iM or FleXinspect T) now controls all aspects of the inspection and inspection performance. Built into the user interface is a graphical display that shows the operator what the system is seeing. Users now can view raw inspection data in real time, an especially useful feature that allows the operator to verify that the system is accurately setup.

For more information about the new Emhart Glass chromatic wall thickness inspection system, contact your Emhart Glass representative.