

# SPECIAL FEATURES



## A great AGR coating measurement asset for glass containers

With its dual-headed design and automated operations, AGR's Combined Coating Measurement System (CCMS) will efficiently measure tin oxide coatings on both the finish and body areas of glass containers. It offers precision, versatility and operational ease – all whilst ensuring compatibility and providing comprehensive, colour-coded test data for enhanced operational excellence.

### **C**ONTAINERS: ENSURING THE CORRECT AMOUNT OF COATING

Agr's Combined Coating Measurement System (CCMS) device provides operators with a one-stop, single operation testing station for measuring tin oxide coatings applied to the finish and body regions during the production process.

### HOW IT WORKS

Featuring a fully-automated measurement approach, the CCMS utilizes Agr's proven reflective coating measurement technology as a foundation. By incorporating several technological advances in combination with automation, the company's CCMS measures quickly and precisely by performing one operation, which is more than can be said for many similar systems.

Features incorporated into the CCMS include:

- Finish and/or body measurements in just one operation
- Dual head design
- Universal hold-down mechanism
- Automated test or spot check operation



- Secure Linux-based operating system
- Industry 4.0 ready
- Software-based calibration
- Advanced electronics for better precision

### MEASURING TWO SEPARATE LOCATIONS SIMULTANEOUSLY

To achieve maximum precision on finish and body measurements, dedicated measurement heads for each of the finish and body regions are integrated within the CCMS. One head is optimized to operate with the precision necessary for the limited area of the finish region. The second is configured to cover the larger area of the container, the body. The advanced electronics of the system, in conjunction with dedicated measurement heads for finish and body, make it possible to precisely identify the presence

of minute amounts of coating in the finish region while measuring heavier coating levels applied to the body of the container- all in one operation.

### SYSTEM OPERATION

Once a container is loaded into the system, the CCMS is designed for fully automated operation. Measurement head positioning, including vertical height location, container rotation and capture of measurement data are all performed in single progression. Jobs can be created to measure the body or finish regions - individually or in combination.

### DETERMINING THE TEST MODE

For additional operator convenience, the system offers two testing modes. The 'spot test' measurement mode affords the operator the ability to take a quick spot measurement on a single container location. The 'job-based' test mode provides the operator with the ability to create and store jobs that can be used to measure multiple containers of the same type. In this mode, each measurement is performed at the same locations on the container body and/or finish, as defined by the job, on every container in the set.

### MEASURING DATA RECEPTION

A wealth of test data is provided by the CCMS. Measured values are presented in easy-to-

understand, colour-coded graphic format for each test in progress to permit operators to readily identify measurements that fall outside of acceptable ranges. Job-based numerical results are also available in spreadsheet form, detailing the min/max/average data for each measurement (height and angle) for both body and finish regions on every container.

### OPERATIONAL EFFICIENCY

The CCMS incorporates a Linux-based architecture and operating system to manage the continuous, multi-function operations of this system. Linux is used for its ability to run efficiently on the embedded computing platform that manages the CCMS test operations as well as its proven stability, security and long-term availability.

### DETERMINING COMPANY-PRODUCT COMPATIBILITY

The CCMS is based on years of scientific measurement techniques for glass containers. It combines Agr's innovative, proven coating measurement approach with state-of-the-art electronics, operating system and automation technology. Agr offers a complete line of products for the measurement and testing of glass containers. Its products are designed to assist container producers, converters and fillers stay competitive while meeting the increased quality demands of today's changing world. ■



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