

ABB UNIVERSITY COURSE DESCRIPTION

# C313

# QCS Advanced Sensor Operation and Troubleshooting



Learn the theory, electrical operation, alignment, troubleshooting through understanding of sensor operation, and preventive maintenance of ABB QCS basis weight, IR moisture, ash, and caliper.

## Course type and methods

This is an instructor led workshop with short presentations and demonstrations, extended exercises, and hands-on sessions and discussion.

### **Student Profile**

This course is targeted to end customers and Field Service personnel responsible for maintaining a Smart Platform or Network Platform QCS system.

#### **Prerequisites**

Students should have attended the C232 Smart Platform with QCS LAN course, C235 Network Platform with QCS LAN, or have extensive experience working with the Smart Platform or Network Platform QCS system.

# **Course objectives**

Upon completion of this course the participants will be able to:

- Properly align the scanner head carriage
- · Properly align the sensor
- Analyze the sensor operation through standardize data and check samples
- · Ensure the base calibration is correct
- Analyze sensor stability, long and short term
- Recalibrate the basis weight, ash, and caliper sensors

- · Match sensor setup to application
- · Troubleshoot and correct sensor failures
- Calculate new grade code variables based on the application and correlation results

#### **Main Topics**

- Scanner
- Basis weight sensors
- Ash sensors
- IR moisture sensors
- · Caliper sensors

#### Duration

The duration is 5 days

#### **Course Outline**

Day 1	Day 2	Day 3	Day 4	Day 5
Course Introduction	Basis Weight	• Ash	<ul> <li>Moisture</li> </ul>	• Caliper
Course Content	- Theory	- Theory	- Theory	- Theory
Scanner considerations	- Operation	- Operation	- Operation	- Operation
- Alignment	- Standardize	- Standardize	- Standardize	- Alignment
- Setup	- Gap Sensor	- Influences	- Influences	- Applications
- PM	- Influences	- PM	- PM	- Standardize
Scanner Lab	- PM	- Recalibration	- Algorithm	- Recalibration
	- Recalibration	- Algorithm	Moisture Sensor Lab	- Influences
	- Algorithm	<ul> <li>Ash Sensor Lab</li> </ul>		- PM
	Basis Weight Lab			- Algorithm
				Caliper Sensor Lab
				Final Exam
				Course Critique