

## Case Study

### C2® Calibration

Solution for major steel company improves tracking of inventory and reduces calibration time

#### Challenge

- Track amount of product transferred from the hoppers
- Calibrate system without excessive downtime
- Increase safety of personnel

#### Solution

- Install C2 load cells on hoppers for quick and easy calibration
- Direct coal to the correct locations using weight and rate data
- Provide accurate input into inventory control

#### Results

- Improved tracking of coal inventory
- Reduced time to calibrate hopper system
- Increased safety



At their large ship unloading docks in the port city of Sao Paulo, Brazil, a major steel company unloads large amounts of coal for their steel manufacturing operation. The coal is unloaded from the ships using a large crane that stands more than 200 feet high, and can be moved into place by a drive/track system. After the coal is unloaded into the massive hoppers in the structure, conveyor belts transfer the product from the hopper to the staging area in the facility.

#### THE CHALLENGE:

"In order to track the amount of product transferred, we need to weigh the amount of coal loaded into the hoppers and conveyed to the fields," the customer states. Using a ControlLogix® PLC, the customer incorporates the weight input into the control system, which is integrated throughout the facility. Because of the size, location and capacity of the hoppers, they also need a way to calibrate their system without creating excessive downtime or jeopardizing the safety of their personnel.

#### THE SOLUTION:

Hardy C2® load cells are installed under the hoppers and tied into an IT® (Integrated Technician) Junction Box with C2 cables to provide quick and easy electronic calibration. To calibrate the hoppers, the operator simply initiates the C2 calibration through the PLC when the hoppers are empty. This saves downtime and increases safety of their personnel. The weight and rate data for the operation is used by the PLC to properly direct the incoming coal to the correct locations, and to provide accurate input into their inventory control system.

#### THE RESULTS:

"This installation substantially reduces the time it takes to calibrate the hopper system," says the Operator. The accurate weight and rate data also helps the company increase the tracking accuracy of its coal inventory. Hardy's INTEGRATED TECHNICIAN® helps to quickly isolate any problems with the weighing system.

#### EQUIPMENT USED:

Hardy C2 load cells, IT junction box, and HI 1756-WS ControlLogix plug-in modules.

#### EXAMPLE CUSTOMERS and APPLICABLE INDUSTRIES:

Any ship or barge break bulk unloading facilities for coal, ore, wood chips, etc.

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