

Application News

Magnetic Flow Meter Improves Material Quality in Hot Rolling Process

Industry: Steel

Service: Cooling Water Flow Rate

Fluid: Water

Overview

Hot rolling processes involve starting with steel slabs 8 to 9 inches thick and up to 36 feet long, then rolling them into strips as thin as 1/16 inch and up to a half mile in length. It is important to descale the steel throughout the process to maintain the desired quality.

Situation

A global leader in steel production saw inconsistency in cooling water applied through their descaling process. Too little cooling water was adversely affecting their descaling process. If the correct amount of cooling water was not applied it resulted in product quality rejections. On occasion, they found that they had no indication when flow had stopped therefore resulting in costly scrapped material.

Solution

Flow Technology carefully considered the application requirements and chose the EL1100 wafer series electromagnetic flow meter to fulfill the customer's flow measurement needs. The customer had only a small space available for the flow meter installation. Because water is conductive and the MC 608 is a robust design, the electromagnetic flow meter provided the customer a very compact and reliable solution. Due to the high temperature of the process area, the customer preferred to send a signal back to their control room. This allowed them to monitor the continuous flow rate and alarm when upset conditions occurred.

System Description

The compact wafer style meter provided accurate flow rate feedback. The meter had a local display but also incorporated a pulse and analog output to a data collection/monitoring system. The MC608 converter also has the capability to data log and can be daisy chained using MODBUS for multiple unit outputs utilizing a single conductor.

Technical Information

Flowmeter: EL1100J Wafer Mag Meter
Electronics: MC 608A Transmitter with display
Fluid: Cooling water



Model EL 1100J Wafer with MC 608A Electronics



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