Roll Force Measurement and Control System

Product Overview

SMART SOLUTIONS FOR DEMANDING INDUSTRIES

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Advantages

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Roll Force Measurement Systems Increase Productivity

- Increases roll life
- Prevents mill overloads
- Improves product quality
- Reduces mill downtime
- Simplifies retrofit

Designed for High Accuracy and Easy Installation

The RFS-4 is a dedicated roll force measurement system specifically designed for use on both new and existing rolling mills. The RFS-4 System provides the mill operator continuous monitoring and display of roll separating force and differential forces balance. The system eliminates temperature-induced drift during the period that the mill is empty and provides local and remote indications that metal is in the mill or that the mill is overloaded.

RFS-4 System Features

- Total and differential measurement
- Metal-in-the-mill and overload alarms
- Analog output signals representing total, differential, work, and drive forces
- Digital data output over fieldbus (TCP/IP, Modbus, Modbus TCP, Profibus, DeviceNet, Ethernet/IP)
- Modern G4 instrument user interface
- Advanced digital filtering
- Synchronized sampling of all channels

RFS-4 with Extensometers for Hot Rolling Mills

Extensometers are designed to measure the strain in the mill posts rather than the rolling loads. Although similar in operating principal to a load cell, they are calibrated in strain (or stretch) instead of load.

Actually, while maximum roll force can vary considerably from mill to mill, post strain remains within a range of 33 to 130 microinches per inch at rolling mill nominal capacity. Our extensometers are designed for optimum performance over this range.

With extensometers installed, the mill posts become an active part of the measuring system. The entire mill housing with the attached extensometer can be considered the "load cell." Installing extensometers on both the work and drive sides of the mill enables the user to achieve a balanced force at all times.

RFS-4 System with extensometers allows easy upgrade and renovation of existing mills that lack the rolling force measurements. Installation of extensometers can be done during normal periodical maintenance, which minimizes downtime.

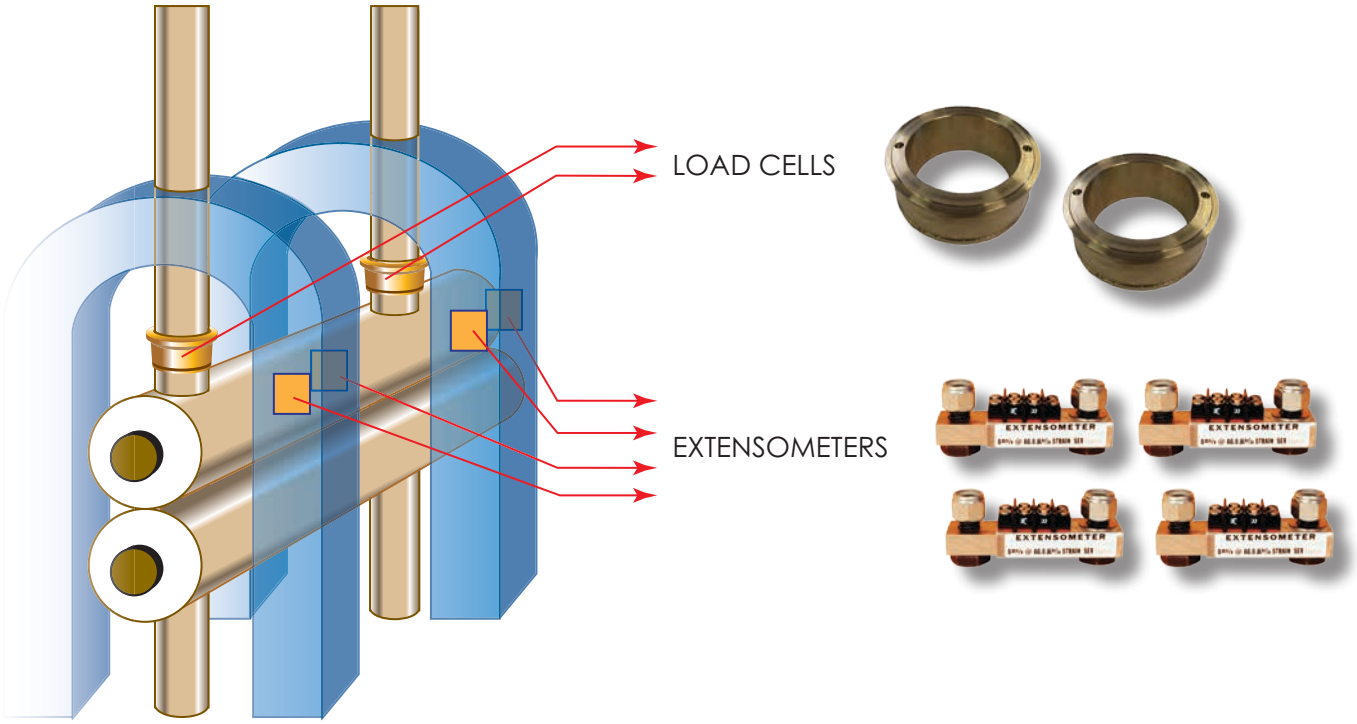
Custom Made Load Cells for RFS-4

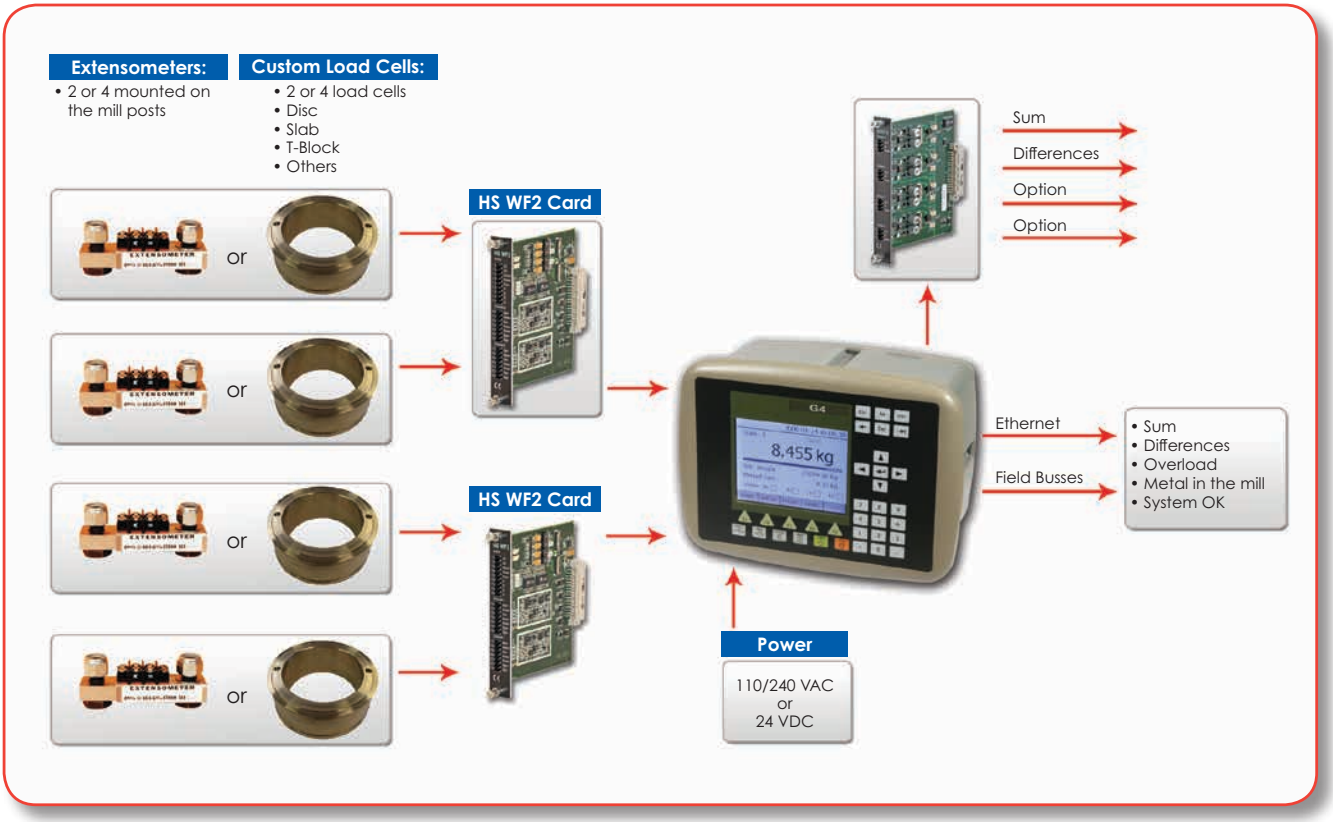
The load cell solution is for use in hot and cold rolling mills and offers high accuracy and repeatability. Our custom-made load cells are designed into the rolling mill or replace existing load cells and offer the best solution in the industry in terms of accuracy and durability.

Instrumentation

The RFS-4 System uses the state-of-the-art G4 instrument with special software designed for roll force measurement. Each extensometer or load cell is connected to a measurement channel of the instrument, enabling accurate reading of the force on both sides of the mill, sum and difference.

Configuration





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