

AGI ADVANTAGE



Protecting Your Milling Operations



Hazard Monitoring System – Typical Installations

- Bearing temperature
- Belt misalignment
- Shaft speed
- Vibration
- Equipment:
 - Bucket elevators
 - Conveyors
 - Drag conveyors
 - Fans - dust collection



Belt Misalignment



Bearing Temperature



Shaft Speed



Vibration Monitoring



CMC Intrinsically Safe Network

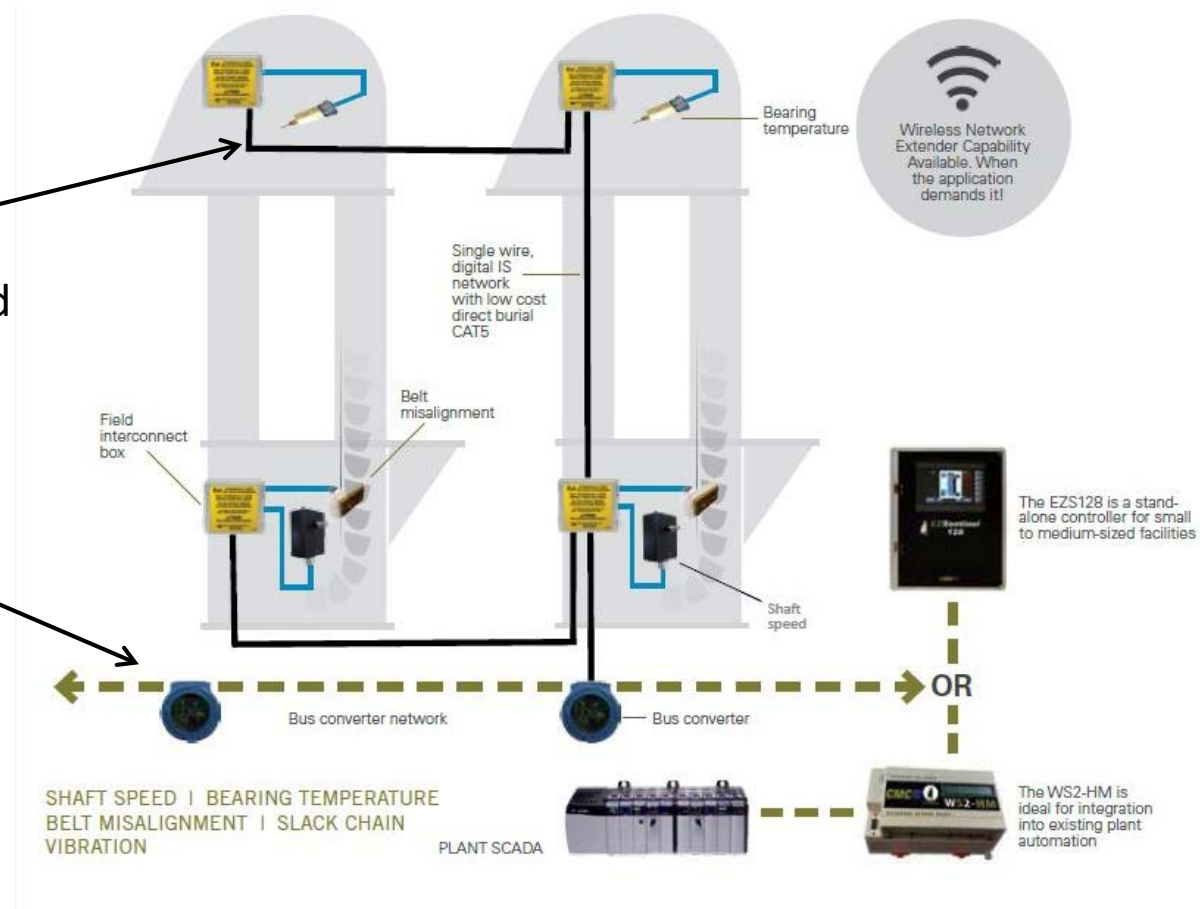
Branch and tee system layout

CAT5 Cable

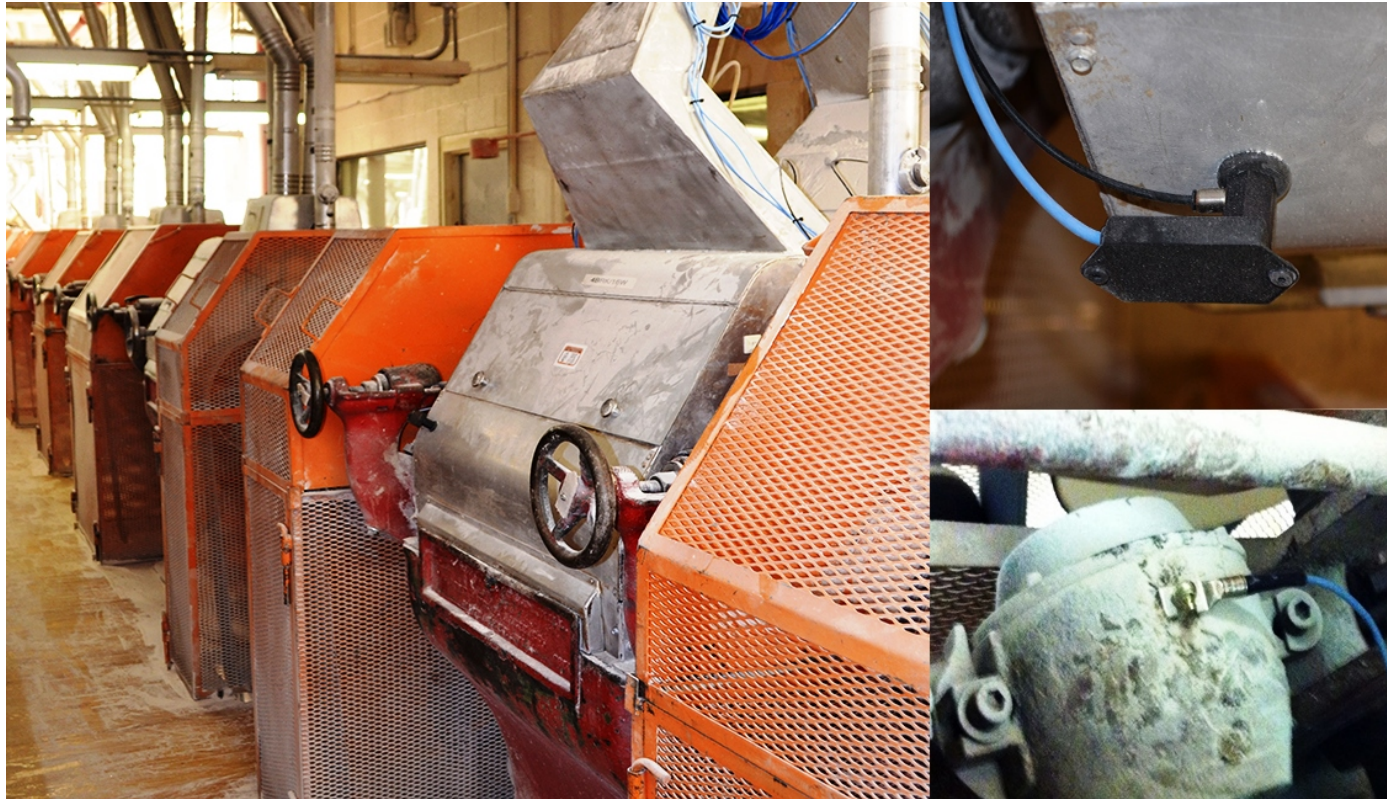
- Waterproof
- Rodent-proof
- Economic to install
- Conduit not required

RS485 Modbus

Very flexible in design and expansion capabilities



Millguard Pro™ Roll Stand Monitoring Solution



The Need For Roll Stand Monitoring

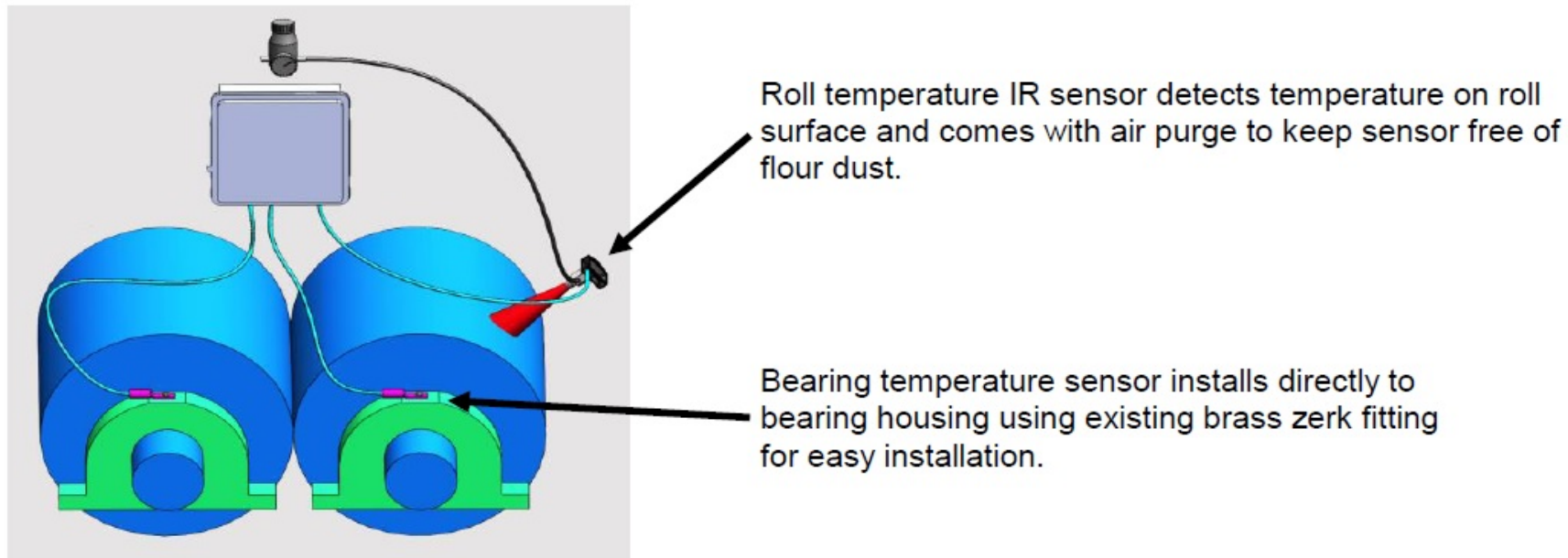
- **Roll damage due to roll on roll contact**
- **Roll brush fires due to wear**
- **Machine damage due to bearings overheating**
- **Lost productivity due to downtime**
- **Inefficient milling operations**
- **Reactive maintenance**

System Design Challenges

- **Harsh, dusty Class 2, Div. 1 environment**
- **IR Sensor technology traditionally expensive**
- **System failures due to dust build-up**
- **Systems expensive to install & maintain**
- **Frequent disassembly for maintenance**

Millguard Pro™ Roll Stand Monitoring Solution

Roll Face & Bearing Temperature Monitoring provide real time feedback for informed decision making and system fine-tuning



Millguard Pro™ Roll Stand Monitoring Solution



Stand alone controller & PLC integrated options

- Intuitive touchscreen with alarm and machine shutdown capabilities
- PLC interface option – seamlessly talks to any plant controls system

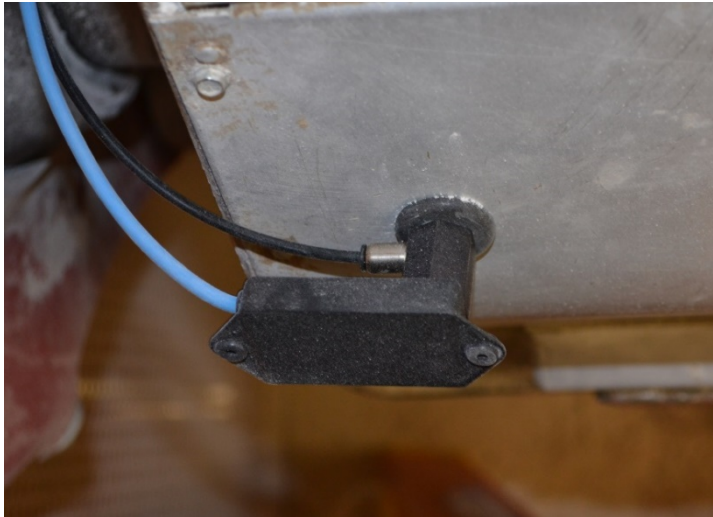
Millguard Pro™ Roll Stand Monitoring Solution

Integrated system designed for Class 2, Div. 1 locations



Millguard Pro™ Roll Stand Monitoring Solution

IR Roll Surface Temperature Sensor



- Early indication of misaligned rolls
- Innovative air purge keeps sensor surface clear of dust

Millguard Pro™ Roll Stand Monitoring Solution

Bearing Temperature Sensor



- Early indication of unsafe & inefficient milling conditions
- Mounts using existing brass zerk fitting

Design Elements – Millguard Pro™

- **System designed for Class 2, Div. 1 flour mill environment**
- **System tried and tested in harsh, dusty flour mill environment**
- **Can be installed and maintained by mill operators**
- **Accommodates frequent machine maintenance**
- **Controller provides alarm and machine shutdown functionality**
- **Operators can log trending data for proactive maintenance**

Benefits – Millguard Pro™

- **Economic system protects mill operations**
- **Monitors roll stand to prevent catastrophic machine damage**
- **Enables scheduling of proactive maintenance**
- **Reduced downtime and product waste**
- **Improved long term mill efficiency and safety**
- **Contact CMC for more information & case study**

Also Making Milling Facilities Safer With Industry-Leading HazMon Technology

- Bearing Temperature
- Belt Misalignment
- Shaft Speed
- Vibration
- Bucket Elevators
- Belt Conveyors
- Drag Conveyors
- Fans – Dust Collection

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