

## Horizontal Ball Mill

**Industry:** Mining / Cement  
**Products:** YTA510 (Temperature Transmitter)  
 YFGW710 (Field Wireless Integrated Gateway)



### Introduction

A horizontal rotary miller used to grind the limestone rocks with metallic balls as grinding stones. This is used as the raw ingredient to produce cement powder. The temperature needs to be monitored in order to control the process and the quality of the final product.



The user was using an induction temperature measurement based on a rail system that was very fragile and therefore unreliable.

### Benefits

- Minimized mill downtime due to breakage of cables, rails and signal loss
- Reduced maintenance effort (No cable maintenance issue)
- Improved quality of measurement
- Increased number of measurement points with minimum cost
- Increased operational uptime with simple and flexible installation

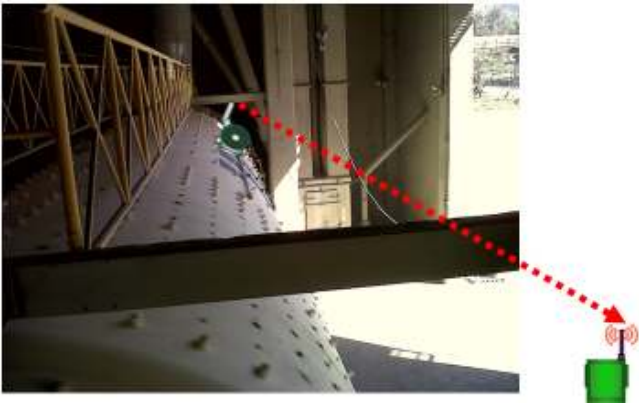


*Old system of transmission by rails and power induction.*



**Solution**

Install two YTA510 wireless temperature transmitters at the mill wall. They then communicate directly with the wireless gateway. Modbus signals from the gateway are sent to the "MW100" that converts the measured values into 4 to 20mA signals that the existing control system can accept without any modification.



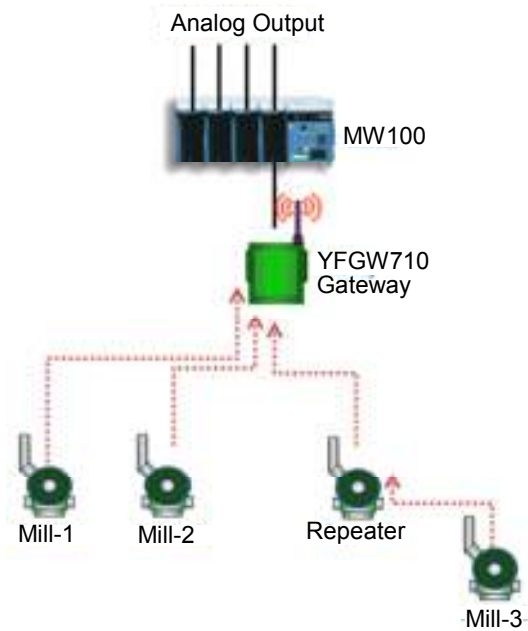
**Result**

After installing wireless transmitters there was a 40% improvement in the efficiency of the mill operation. There were no records of communication error. The ISA100 wireless solution reduced total maintenance cost by 68% and increased the measurement reliability by a further 85%.

**Conclusion**

In mining and cement factories there are a lot of rotating equipment. The customer approved the wireless solution and a conceptual design that uses our wireless solution within this type of application was standardized.

The initial cost of deployment was quickly paid back by the increased operational time and reduced maintenance cost and effort.



3 YTA510 for Mill Balls and 1 YTA510 to Route.



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