

# Power Plant Reduces Maintenance and Energy Costs with Main Steam Line Annubar<sup>®</sup> Primary Element

## RESULTS

- Decreased maintenance cost
- Reduced energy consumption
- Lowered risk of capital damage

## APPLICATION

Return steam line flow

## CUSTOMER

Power Plant located in Europe

## CHALLENGE

This coal fired power plant faced a routine challenge in the preparation of a boiler blowdown. A successful blowdown removes impurities from the system to maintain high boiler efficiency and heat transfer capability.

Preparation of a boiler blowdown was a difficult task because of their return steam line flow measurement. To prevent damage to the flow nozzle during each boiler blowdown, operations personnel had to remove the flow nozzle and replace it with a temporary pipe section. Following the boiler blowdown, the temporary pipe section was removed from the line and the flow nozzle was reinstalled. A considerable amount of welding and labor was necessary every time a blowdown was performed. Further, the flow nozzle also had a high permanent pressure loss which reduced the energy in the steam flowing through the system.

The need to remove and reinstall the nozzle for blowdown resulted in increased maintenance costs. This difficult task also increased the startup complexity and increased the risk of capital damage. In addition, the high permanent pressure loss from the flow nozzle resulted in reduced heat rate and higher energy costs.



*Operations personnel can now easily remove and reinsert the 585M from the steam line with minimal labor and without welding.*



*The Rosemount 585 Main Steam Line Annubar*

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### SOLUTION

The power plant solved their blowdown challenge by replacing the flow nozzle with the Rosemount 585M Main Steam Line Annubar Primary Element. Operations personnel can now easily remove and reinsert the 585M from the steam line with minimal labor and without welding. A simple blind flange closes the process insertion point to prevent leakage while the blowdown is performed. Also, the design of the 585M reduced the permanent pressure loss within the boiler system.

This customer experienced several positive business results by implementing the Rosemount 585M. The startup process was simplified and maintenance costs were reduced from routine labor and welding. The risk of damaging capital equipment was greatly reduced by eliminating the flow nozzle. Lastly, energy consumption was reduced by decreasing the permanent pressure loss within the system.

### RESOURCES

#### Emerson Process Management Power Industry

<http://www.emersonprocess.com/rosemount/industry/power/index.html>

#### Rosemount Annubar

<http://www.emersonprocess.com/rosemount/products/flow/m485ann.html>

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