

# Optimize natural gas/fuel oil usage in boiler operations

## Direct Coriolis measurement gives decision-making information

### Benefits at a glance

- Replacement of mechanical systems, which can obstruct and block the furnace oil flow line
- No moving parts for unimpeded flow and operation of the furnace
- Safe measurement, even with poor quality oil
- No inlet/outlet runs necessary
- Multi-parameter measurement, simultaneous measuring of mass flow, density, temperature and viscosity
- High measuring accuracy
  - Standard:  $\pm 0.1\%$  o.r.
  - Optional:  $\pm 0.05\%$  o.r. (PremiumCal®)



Combination burners for coal and oil are used to fire the boiler. In order to initiate the combustion process and to support the coal fire, oil is used for the booster and supporting burner. A precise oil mass flow and/or viscosity measurement can optimize the burner combustion process in the boiler ring heating system. This makes monitoring of the supply and feedback lines necessary.

**The challenge:** Older mechanical devices for measurement can have issues like:

- Wear and tear on moving parts, maintenance
- Blockage within devices
- Pressure loss
- Accurate measurement is required to not only optimize costs of fuel oil, but also for proper reporting to environmental agencies

**Our solution:** Proline Promass F Coriolis flowmeter

- Endress+Hauser Promass F Coriolis meter offers the highest accuracy of any metering system on fuel oil/natural gas metering systems both for burner installations as well as custody transfer (pipeline metering) areas
- Availability of Coriolis meter in small to large meter sizes provides flexibility while offering the smallest footprint & weight for comparable systems from competitive manufacturers

**Conclusion:**

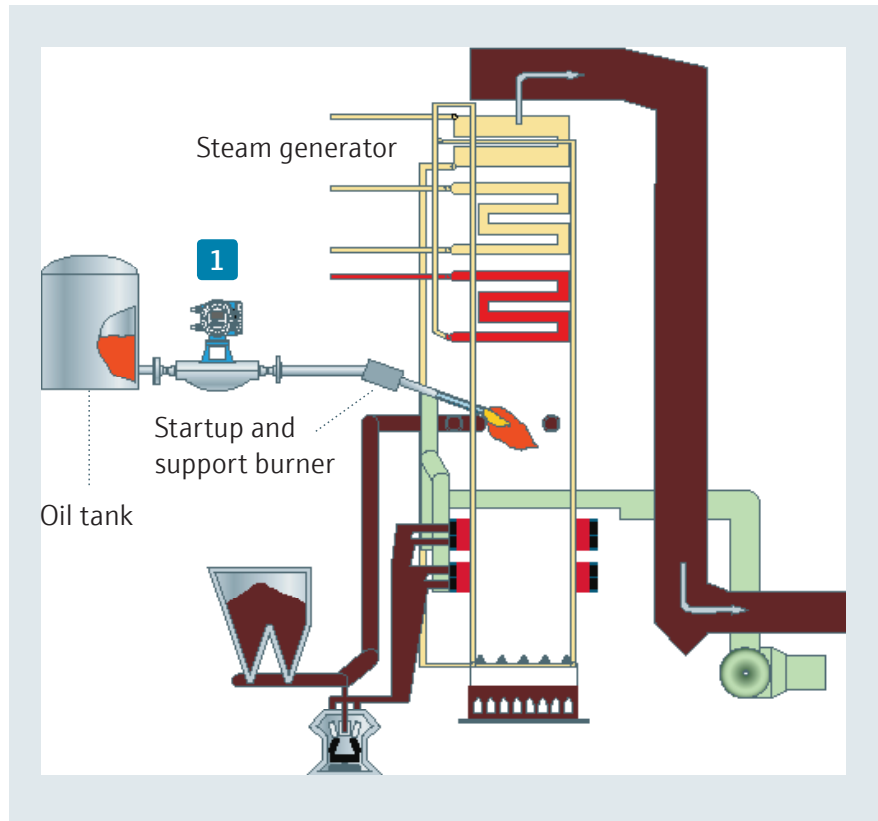
Promass F

- Smallest footprint
- Lowest weight
- Eliminates any errors due to vibration in pipes
- Promass enable customer to monitor mass flow and density as standard



Promass I

- Single tube system for low pressure loss
- In-line viscosity option can be added to mass flow and density measurement for a single meter in the pipe



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