

Monitoring of steam usage: Recording and control in food, beverages and drink processing plant



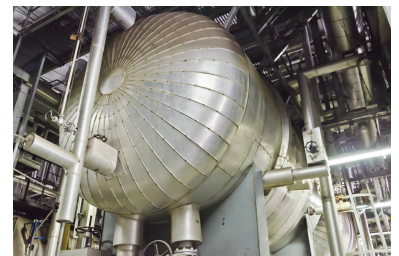
https://library.e.abb.com/public/2d0434f65e9d4960875185dedf2baafb/AN_RandC_007-EN%20Rev.%20B.pdf

- ▶ Reduce operating costs and improve profits
- ▶ Measurement made easy

INTRODUCTION

Steam systems are a part of almost every major industrial process today. Knowing the correct usage and cost of steam is important for many reasons; it is one of the few areas of opportunity where management can reduce operating costs and improve profits.

These energy savings are also presented as CO₂ emissions reductions to show the potential for energy efficiency measures and reduce the industrial contribution to emissions.



THE PROCESS

Flow from each boiler passes through an orifice plate and flow signals generated at the flow transmitter are passed to the RVG200 recorder to enable the flow to be displayed.

Pressure and temperature in the flow line are monitored where the two flow pipes join and the signals are transmitted to the RVG200 recorder.

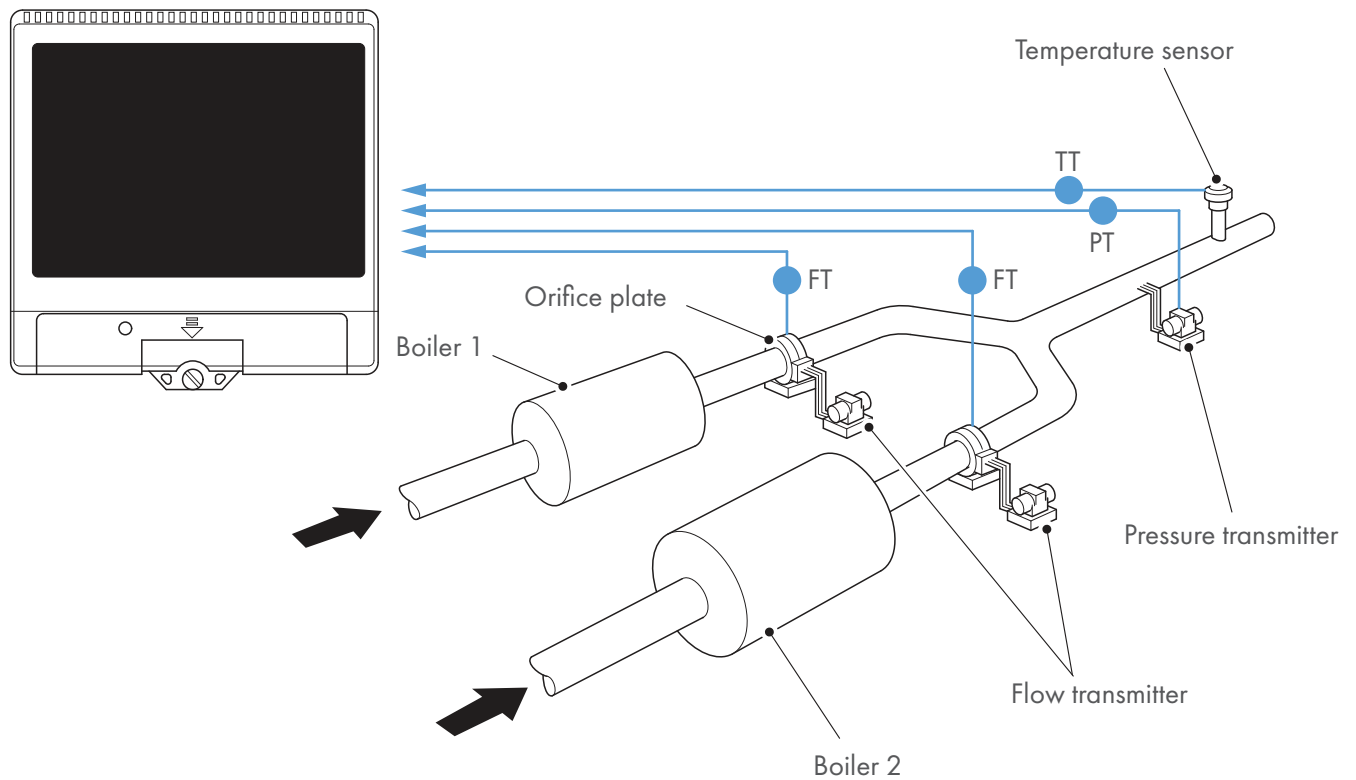


Fig. 1: Steam usage process overview

WHAT ABB PRODUCTS ARE SUITABLE?

ScreenMaster RVG200

ABB's ScreenMaster RVG200 recorder offers a versatile, secure and proven alternative to traditional paper-based devices. RVG200 is ideal for recording steam pressure, temperature and flow.

The newly-integrated energy calculation functionality enables easy calculation of energy usage in saturated steam systems.

ScreenMaster RVG200 features include:

- ▶ energy calculations, calculation of energy usage in steam and water flows
- ▶ high specification 21CFR Part 11 compliant data security
- ▶ high visibility process displays
- ▶ remote access and operation via Ethernet
- ▶ hose-down protection to IP66 and NEMA 4X
- ▶ automated process data management
- ▶ flexible recording capability including alarms, totalizers, math and batch recording
- ▶ flow totalizers can be configured easily to reset automatically at specific intervals (for example, daily, weekly or monthly) – when reset, the totalizer value is recorded in the totalizer log to provide a convenient history of flow totalizer values

Totalizer Log		05/09/14 08:45:09		
No	Tag/Value	Source Tag	Date	Time
32	Daily	Flow 1	02/09/14	00:00:00
Σ	35908 kJ			
33	Daily	Flow 1	03/09/14	00:00:00
Σ	35999 kJ			
34	Daily	Flow 1	04/09/14	00:00:00
Σ	36099 kJ			
35	Daily	Flow 1	05/09/14	00:00:00
Σ	36014 kJ			
36	Daily	Flow 1	06/09/14	00:00:00
Σ	36000 kJ			
37	Weekly	Flow 1	06/09/14	00:00:00
Σ	258054 kJ			

Fig. 2: Example of Totalizer Log

For more information on ABB measurement products, please visit:
<http://new.abb.com/products/measurement-products>

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Reduce operating costs and
improve profits through
easy measurement
capabilities