

## INFERRING STEAM FLOW USING LIQUID FLOW METERS

### The Application...

A textiles company based in the UK wanted to measure the steam produced from the manufacturing process in a 6-inch pipe. They were looking for ways to monitor the steam output from a boiler, so a load profile could be produced in order to specify a suitable replacement boiler. However as this steam was above the acceptable temperature threshold for RS Hydro's steam metering technology, we suggested inferring the steam flow by monitoring incoming boiler feedwater instead.

### The Requirements...

- Feedwater pipeline has a nominal diameter of 3"
- Maximum feedwater temperature approx 80°C.
- Data-logging equipment was required, as a load profile would be produced over an extended operating period.

### The Solution...

RS Hydro specified a PT878 clamp-on ultrasonic flow meter, which the customer could hire for as long as required. This was far more cost effective for the customer than purchasing outright. The clamp-on nature of the flow meter meant that the flow did not have to be shut down, and that the pipe work did not have to be modified. The PT878 is also completely non-intrusive.

The PT878 also has an integrated datalogger with 100,000 memory data points. All the client had to do was set up the flow meter with the pipe diagnostics, then select the option to start logging. Once the data-logging period was over, the client was able to simply transfer the data using the infrared port.

From this data the customer was then able to analyse the data in an Excel format, and from this the steam usage was deduced.

### The Technology...



**Fig. 1:** Clamp-on ultrasonic flow meter, PT878. This is available for hire or purchase.

# Case Study

**rs**hydro

environmental measurement consultants  
www.rshydro.co.uk +44(0)1905 774002