

**PRODUCT APPLICATION NOTE**

**SN0602**

**Industry:** Electric, Gas and Sanitary Services

**Type of Application:** Level monitoring in a scrubber

**Optech Equipment Used:** SENTINEL 3100

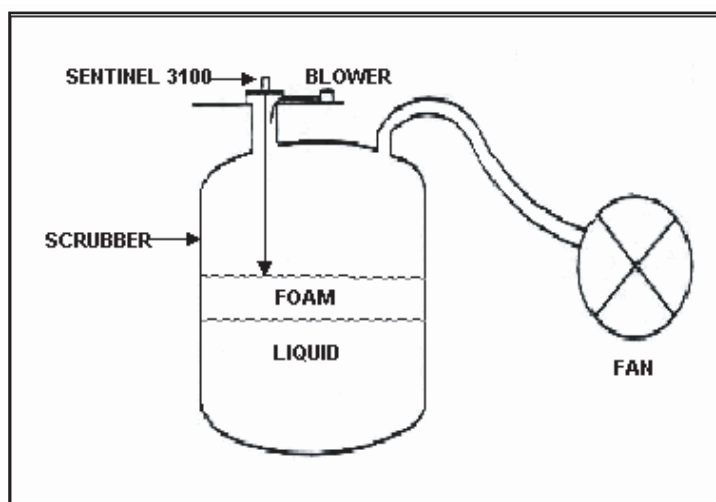
**Application Description:** The customer required continuous monitoring of the level of foam in a scrubber to avoid overflow.

Power generation requires many processes that must be monitored continuously. One process requires cooling water and reagents in a very large vessel (a scrubber). Drawing vacuum on the scrubber is a large (typically 1,000 hp) fan. During cooling, steam and foam are generated. If not monitored continuously, the foam can escape into ductwork and damage the fan.

The customer required a sensor to measure the level of the foam under these adverse conditions. Technologies such as radar and ultrasonics were tested, but were found unsatisfactory in such an application. Then the Sentinel 3100 was mounted above the scrubber. In a non-intrusive setup, this laser sensor ranged through a 6" sightglass looking down a pipe that went into the scrubber. Positive pressure was applied through the pipe to keep steam and other particles from coming up through the pipe. The Sentinel 3100 measured successfully to the foam, enabling the customer to know the foam height at all times. This knowledge averts a potential overflow that can cost several million dollars in repair and down- time.

**KEY ADVANTAGES OF LASER TECHNOLOGY IN LEVEL MEASUREMENT**

- Measurements unaffected by temperature variations
- Measurements unaffected by vapour pressure
- Measurements unaffected by off-gas layers or steam
- Measurements unaffected by background noise
- Non-contact measurements
- Short setup time with no calibration required



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