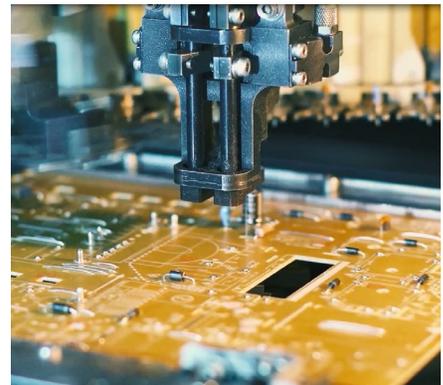


APPLICATION SPOTLIGHT

Variable Area Flow Alarms Ensure Optimum Efficiency for Semiconductor Chillers and Production Processes



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APPLICATION:

Semiconductor fabrication facilities use special chillers to maintain consistent temperature requirements and keep equipment from overheating. Typically located near the manufacturing line, these specialized chillers circulate cooling water through equipment such as process chambers, UV cure systems, and burn-in machines to remove heat. To ensure efficiency, semiconductor chillers need a method to monitor the flow rate of the cooling water.

PRODUCT SUPPLIED:

- **AW-Lake Flow Rate Alarm** – variable area flow meter equipped with on/off logic and a field-adjustable alarm setting.

CHALLENGE:

Maintaining optimum chiller performance is important as process cooling systems consume about 30% of the total energy of a facility. Flow monitoring becomes essential in detecting chiller system issues to maximum efficiency for lower manufacturing costs and to avoid maintenance issues and possible downtime.

SOLUTION:

AW-Lake's Variable Area Flow Alarms are used to monitor the flow of cooling water in industrial chillers. Depending on flow range, chiller size and installation location, four different-sized flow alarms are used in this application that include a ½" or 1" for meter fabricated in either brass (3500 psi) or stainless steel (6000 psi). The Flow Rate Alarms send alerts of incorrect volumes when flow

rates are above or below a user-set parameter. Alarms can signal a programmable logic controller (PLC) to trigger or activate a valve actuator or other control to correct the issue in maintaining optimum process efficiency, protect expensive equipment and reduce production downtime.

RESULTS:

By monitoring flow rates of water used in semiconductor chiller systems against set parameters, AW-Lake's Flow Rate Alarms can detect irregularities against setpoints and notify automated control system to maximize process efficiency that results in lower costs and optimum product results.