

# STEAM GENERATION

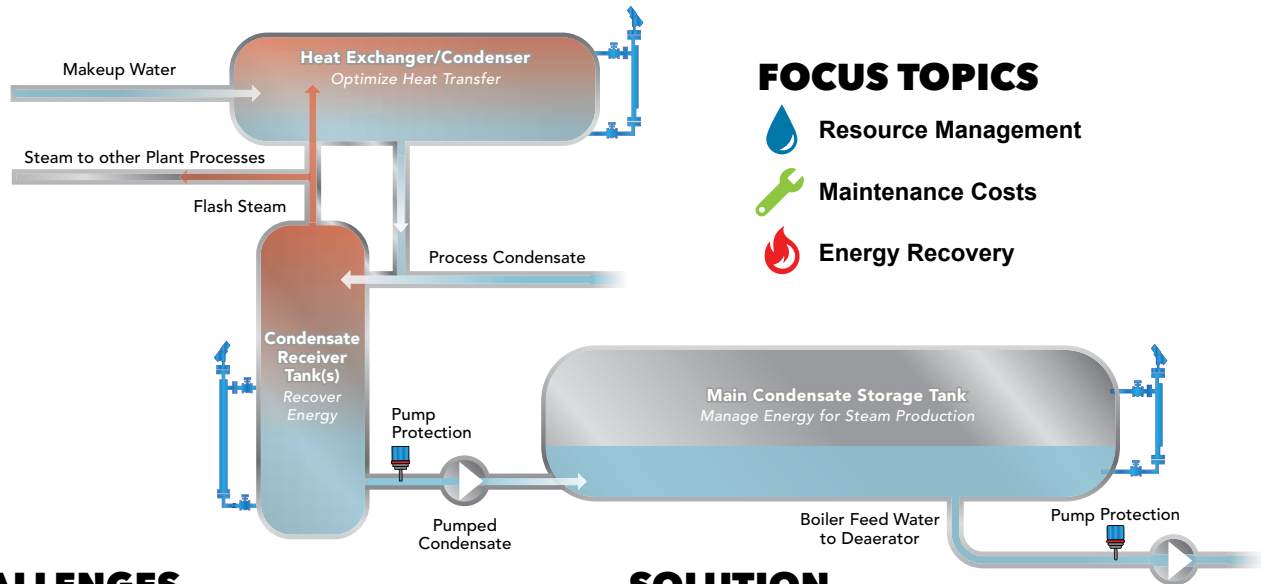
## CONDENSATE AND WASTE HEAT RECOVERY SAVINGS

### CUSTOMER PROFILE

**INDUSTRY:** Utilities/Steam Generation  
**LOCATION:** Chemical, Pulp & Paper, Metals, Refining, Food & Beverage, etc.  
**APPLICATION:** Condensate and Waste Heat Recovery System: receiver/flash & storage tanks, heat exchangers/condensers

### ICEBREAKER

*"If Magnetrol can reduce hidden maintenance costs and energy losses in your condensate and waste heat recovery process, would this help meet the financial expectations of the system?"*



### FOCUS TOPICS

- Resource Management
- Maintenance Costs
- Energy Recovery

### CHALLENGES

Realizing the financial expectations of your condensate and waste heat recovery system investment:

- Implementing advanced technology level solutions with minimal work force training
- Managing real-time operational situations with a high degree of data certainty: confidence in level indication
- Eliminating potential, hidden maintenance costs associated with a level technologies vulnerabilities to process dynamics and subsequent damage to expensive hardware
- Managing the consumption of natural resources and associated costs to include water, water treatment and discharge, fuel and chemicals.
- Identifying the variables in the "level measurement equation" that contribute to a technologies' total lifecycle cost
- Translating system performance to optimize boiler performance and utilization

### SOLUTION

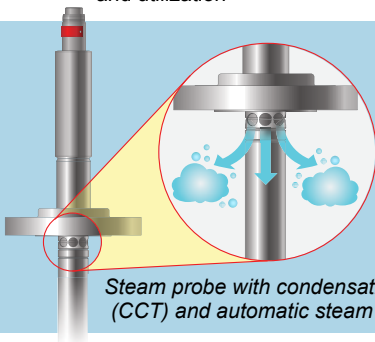
Leverage generations of Magnetrol experience and expertise to optimize overall system performance using advanced level technologies strategically placed throughout the system

- Improve heat exchanger/condenser performance (energy transfer) by eliminating variables associated with an existing level technologies' performance on aggressive steam applications
- Better management of flash/receiver and blow down tank capacity to maximize recovery of available energy in condensate in the form of flash steam
- Prevent direct exposure of pumps & pump seals to high temperature steam resulting from poor level control on receiver/flash tanks
- Eliminate avenues for potential level measurement errors and reduce periodic maintenance inspection (PMI) intervals: calibration, external corrections, process dynamics, ambient conditions and hardware complexity
- Better manage condensate inventory to ensure sufficient supply to meet steam generation demands

### RESULTS

Meet or exceed the return-on-investment (ROI) expectations in months, not years

- Reduced environmental footprint through improved resource management (water, chemicals & fuel)
- Lower operational costs by better managing controllable losses: optimized waste heat recovery through enhanced heat exchanger/condenser performance
- Extended hardware longevity (pumps & pump seals) by leveraging the inherent advantages of advanced level technologies and low cost, redundant protective measures
- Lower installation, commissioning and lifecycle (periodic maintenance requirements) costs
- Minimize production downtime due to issues associated with more traditional type level controls



Steam probe with condensation control technology (CCT) and automatic steam compensation (ASC)