



ENGINEERED FOR STEAM

The Eclipse® Model 706 platform couples a robust process isolation seal design and a condensate management technique to accommodate rapid thermal expansion and contraction. Patented signal processing algorithms further enhance an engineered system designed specifically for high pressure, aggressive saturated steam applications.

MEASUREABLE IMPACT ON PLANT PERFORMANCE

- Availability
- Reliability
- Dispatch Response
- Hardware Longevity
- Heat Rate

YOU'RE IN CONTROL

- Start-up Sequence
- Base load operation
- Cycling Events
- Duct Burner
- Shut-down Sequence

ASME BPVC COMPLIANCE

Implementing guided wave radar technology as "independent remote water level indicators" per the ASME Boiler Pressure Vessel Code (BPVC) improves overall performance while streamlining your level control scheme to reduce long-term operating and maintenance costs.

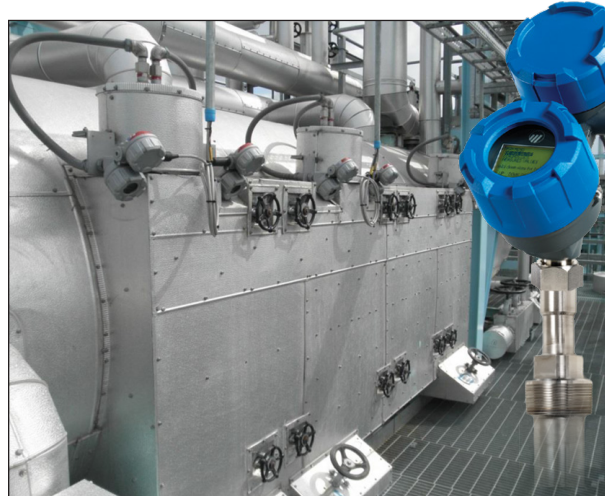
(See reverse for more details)

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ECLIPSE® 706 GWR

Reducing the variables in the level measurement equation for enhanced steam drum performance

A Comprehensive Approach to Steam Drum Level Control

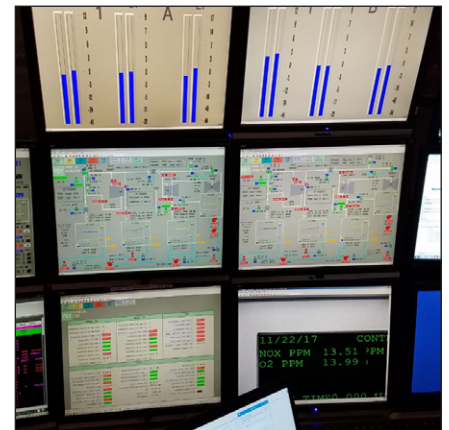


- **Ensure your plant is ready for dispatch based on fluctuations in market demand or renewable assets**
- **Enhance operator insight and visibility to steam drum behavior in all possible operational scenarios**
- **Reduce maintenance costs**
- **Maximize turbine and HRSG lifecycle**
- **Overall improvement in key plant performance metrics**

The large-scale integration of renewable technologies into the energy mix and climate change mitigation has fundamentally changed the day-to-day operation of fossil fuel power stations. As a result, operators prefer a system that offers enhanced performance when managing steam drum level during start-up, base load, cycling, and duct burner operations as well as during shut-down.

Although common in steam drum level control, most traditional technologies are not inherently suited for the wide range of process conditions experienced within a steam drum throughout the course of a day. Differential pressure (DP) relies on an excessive number of variables to infer level which creates multiple avenues for error and points of failure. Additionally, operators can run blind during the start-up sequence to allow condensate legs to recover. Conductivity technology oversimplifies the measurement such that operators have limited visibility to the actual level within the steam drum. Both scenarios can have a negative impact on critical plant performance metrics.

Magnetrol's Model 706 Guided Wave Radar system is an autonomous platform designed to optimize performance throughout a wide range of operational scenarios to ensure availability for all market opportunities.



Enhanced level resolution and operator visibility

A Technology for all Applications

- Steam Drums (HP, LP, IP)
- Feedwater Heaters
- Condenser Hotwell
- Deaerator (DA)
- Gas Conditioning Skids
- Cooling Tower Basins
- Blowdown Tank
- Lubrication Oil Reservoirs
- Demineralizer & Condensate Overflow Tanks
- Recirculating Water Forebay
- Raw Water Intake Level
- Chemical Inventory & Storage
- Sump Level
- And more...





Making "Normal Water Level" the New Norm

SIGHT GAUGE RETROFITS

Modernizing your steam drum level control presents an additional opportunity to eliminate the pitfalls and costs associated with maintaining sight gauges in compliance with the BPVC.

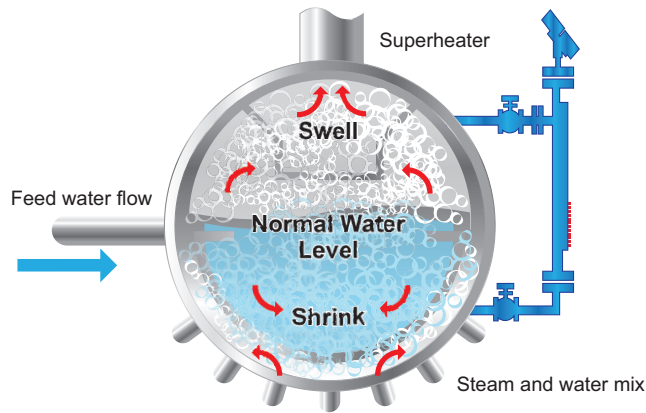
- Steam Cuts
- Integral Valve Failure
- Gasket/Seal Leaks
- Glass Erosion and Fatigue
- Reduced Visibility to Drum Level
- Personnel Safety

ELIMINATE INSTRUMENT INDUCED ERRORS

Traditional steam drum level instrumentation falls into two categories — Pressure & Conductivity. Those relying on pressure require periodic calibration and external compensation to infer level while conductivity offers limited resolution. Both are proven to have higher cost of ownership throughout the product life cycle as they are susceptible to drift, buildup and mechanical wear.

CONTACT US

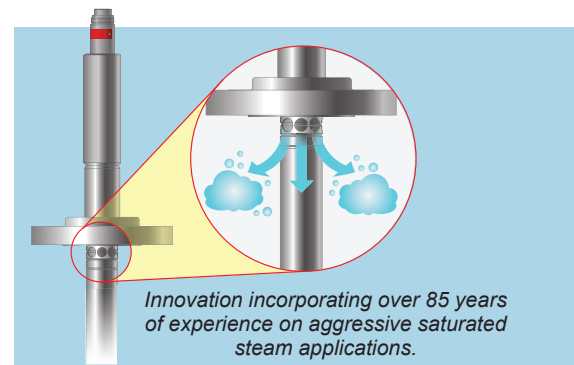
For more information about our steam drum level solutions: steamdrums@magnetrol.com



The Eclipse® Model 706 enhances performance by reducing hardware complexity, removing technologies with known and expensive periodic maintenance requirements, and eliminating instrument induced errors.



- Operator decisions based on the actual level, removing inference from the level measurement equation
- Accurately manage Normal Water Level (NWL) in start-up, base load, cycling and duct burner operations to optimize steam/water separation
- Prevent carryover associated with coating of critical HRSG and turbine components for improved hardware lifecycle management
- Reduce upfront installation and commissioning as well as long-term maintenance costs while adhering to the BPVC
- Excessive blowdowns (level too high) or disruptions in boiler natural circulation (level too low) are concerns of the past



Innovation incorporating over 85 years of experience on aggressive saturated steam applications.

- Automatic steam Compensation (ASC)
- Condensate Control Technology (CCT)
- Diode Switch Technology (DST)
- Robust process isolation seal designed specifically for aggressive saturated steam applications
- Accuracy in all operational scenarios

Other instrumentation technologies from Magnetrol and Orion Instruments include non-contact radar, thermal dispersion, ultrasonic, buoyancy, capacitance, magnetostrictive and visual indication.

