TRUST
Your Water Level

Steam you can depend on, 24/7
New Intelligence to Improve Steam Efficiency

By notifying operators with unique LED indication that the probes need to be cleaned, the new Eye-Hye system can help provide the most reliable, most accurate water level for your boiler. Not only is safety enhanced, but turbine and generation efficiency are optimized.

- Reliable indication promotes optimum quality steam to the turbine or your process
- Provides an optimized system for heat rate efficiency.
- Remote indicators at multiple locations provide operators information at a glance and save stair climbing, especially on HRSG applications.

New Intelligence to Make Maintenance Safer & Easier

The system’s intelligence can distinguish “dirty” probes from probes that need to be replaced. Also, the Eye-Hye SmartLevel system eliminates the need for frequent blowdowns. Now, blowdowns can be performed when the blue indicator is illuminated (the probes need cleaning) or for scheduled cleaning of the connecting piping.

- Operator exposure to hazardous areas is minimized...unnecessary “nuisance” repair trips are eliminated.
- Longer probe and valve life...blowdowns are performed only when necessary, reducing wear.
- Pinpoints the failure of any module or peripheral in the system to simplify repair.
**Benefits You Can Bank On**

- **Most Accurate Water Level**
- **Consistently Provides Optimal Quality Steam to the Turbine or Your Process**
- **Longer Turbine Life**
- **An Optimized System for Heat Rate Efficiency**

**A Very Easy Upgrade**

No modifications are required to retrofit an existing Eye-Hye probe column or probes. Remote and Local LED Indicators are available in two sizes and fit existing panel cutouts in control room. (Swap out your old Eye-Hye indicator without cutting a new hole!) Consult Clark-Reliance with your original system serial number for exact recommendations to upgrade your existing control unit and indicator. Typical system can be upgraded in a few hours.

**Standardized for Global Applications**

EPCs and OEMs will appreciate that one model of the Eye-Hye SmartLevel can be specified for worldwide use. You can standardize on one water level-sensing device for 85 to 264 VAC 50/60 Hz.

**If it’s Blue, a Blowdown is Due!**

When blue light on remote indicator is illuminated, operators know with certainty that probe cleaning is required to maintain accuracy and reliability.
Remote Indicators Provide Critical Information At a Glance

### Indicator Features

<table>
<thead>
<tr>
<th>Indicator Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>At-a-Glance Normal Water Level Reference</td>
<td>White lights highlight normal water level so operator can see instantly if boiler is above or below expected level.</td>
</tr>
<tr>
<td>System Status Indicator</td>
<td>Control room indication of any system error, i.e. an individual level detection module or peripheral has failed. Is independent from blowdown indicator.</td>
</tr>
<tr>
<td>Blowdown Indicator Light</td>
<td>Warning system intelligently monitors condition of water column probes. When probes need cleaning, a blue light is illuminated on the control room panel, indicating that a probe has become unreliable due to build-up of minerals. The cleaning process (blowdown) brings the probes back to reliable condition, providing longer probe life. The system’s intelligence helps minimize operators' exposure to hazardous areas by eliminating unnecessary “nuisance” repair trips.</td>
</tr>
<tr>
<td>4-Wire Indicator Circuit Between Control Unit and Indicator</td>
<td>Lower installation costs versus up to 25 conductors between control unit and indicator in traditional systems.</td>
</tr>
<tr>
<td>Fail Safe Communication</td>
<td>Indicator cycles with controller for continuous communication.</td>
</tr>
<tr>
<td>Indicator Mode for Colorblind Operators</td>
<td>By turning off the red (steam) lights, colorblind operators can still see normal water levels (indicated by white border lights) and the current water level indicated by green lights.</td>
</tr>
</tbody>
</table>

### Indicator Features At-a-Glance

- Normal Water Level Reference
- System Status Indicator
- Blowdown Indicator Light

### Indicator Features System Status

- Indicates any system error
- Identifies individual level detection module or peripheral failure

### Indicator Features Blowdown Indicator

- Monitors condition of water column probes
- Indicates need for cleaning
- Brings probes back to reliable condition

### Indicator Features 4-Wire Indicator

- Connects control unit to remote indicator
- Uses 18 gage shielded cable

### Indicator Features Fail Safe Communication

- Indicator cycles with controller

### Indicator Features Indicator Mode

- For colorblind operators

### Specify An Indicator with Blowdown Notification for Your Next Project

<table>
<thead>
<tr>
<th>Eye-Hye Indicator</th>
<th>Style</th>
<th>Colors</th>
<th>Width in mm</th>
<th>Height in mm</th>
<th>Power Consumption</th>
<th>Field Wiring</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIM (medium)</td>
<td>Standard Size</td>
<td>Red/Green/White</td>
<td>3.00</td>
<td>76</td>
<td>298</td>
<td>4 wire circuit between Control Unit and remote indicator with 18 gage shielded cable for up to 1 mile (1.61 kilometers) from the control unit</td>
</tr>
<tr>
<td>SIS (small)</td>
<td>Miniature</td>
<td>Red/Green/White</td>
<td>1.75</td>
<td>44</td>
<td>114</td>
<td></td>
</tr>
</tbody>
</table>

Remote indicators can be located up to one mile from the boiler. For operator convenience, additional indicators can be provided in weather-proof enclosures for in-plant locations.
All New SC Series Control Unit

Field-proven, 100% modular design with rugged vibration-resistant connections for probe level detection modules, peripheral accessory boards, and field wiring terminations. Includes wire guides for incoming wiring to relieve stress at wire terminations.

• Provides alarms and trip circuits at field selectable levels and 2 out of 3 voting logic
• Time delay on actuation and release

Control Unit Features

<table>
<thead>
<tr>
<th>Benefits (Base Model)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator can quickly be alerted to loss of power, processor interruption, water indication and blowdown mode.</td>
</tr>
<tr>
<td>Comes standard without cost of additional circuits or field wiring.</td>
</tr>
<tr>
<td>System is field-selectable to set the level of alarm or trip output. Standard feature.</td>
</tr>
<tr>
<td>Can direct alerts to any external system or device, not just control room indicator.</td>
</tr>
<tr>
<td>Assures continuous system operation.</td>
</tr>
<tr>
<td>One model for worldwide use. Simplifies specification requirements for EPCs, OEMs and contractors.</td>
</tr>
<tr>
<td>You can have duplicate indicators wherever you choose for operator convenience.</td>
</tr>
<tr>
<td>Field selectable: • sensitivity for extreme water conditions • time delay on actuation and release</td>
</tr>
</tbody>
</table>

Base Model Includes:

• Weatherproof (NEMA 4 – IP65) enclosure
• Individual probe modules for each level detected
• Single power supply
• Relay module with 6 field selectable switches for alarm or trip levels rated at 10 Amp @ 120 VAC or 28 VDC and 7 Amp @ 240 VAC
• Indicator output module

Options:

• Stainless steel (NEMA 4X – IP66) enclosure
• Second power supply
• 4-20 mA output
• Additional relay module
At the Heart of the System: Reliable, Repairable Conductivity Probes

Clark-Reliance offers a full selection of conductivity probes to meet your specifications. Originally introduced in 1959, our conductivity probe technology has since become the most relied-upon for boiler drum level applications.

Our line of brazed probes offer one-piece construction with high reliability for harsh applications or boilers that cycle frequently. These probes are manufactured to the highest quality standards.

Each probe is tested with three separate methods to ensure reliability for a wide range of boiler applications with variable water chemistry.

Traditional Probes

Brazed Probes

Compression Type Brazed Probe

The T Type has been designed for pressures up to 450 PSI (30 Bar).
The V Type has been designed for pressures up to 1000 PSI (66 Bar).
(“T” and “V” probes are Teflon insulated with an average service life of 5 to 15 years).

The ZB type brazed probe has been designed for pressures up to 1800 PSI (120 Bar).
The FSB type brazed probe (not shown) has been designed for pressures up to 3000 PSI (200 Bar). These probes provide maximum service life on applications with frequent cycling, with an average service life of 5 years.

Non-brazed type probes ZG (not shown) rated to 1800 PSI (120 Bar) and FG (not shown) rated to 3000 PSI (200 Bar) remain available for traditional applications.

The FSB Type has been designed for pressures up to 3000 PSI (200 Bar)

No gaskets means low risk for leakage in especially high pressure and frequent cycling applications. The FSB brazed probe has proven to be successful in many extremely harsh applications with an average service life 5 years.
Electrolev Probe Column

The Eye-Hye® probes are mounted in the Electrolev column to provide access to boiler water. Four pressure classes are available:

**Models**
- EL450 Series for applications to 450 PSI (30 Bar)
- EL1000 Series for applications to 1000 PSI (66 Bar)
- ZB1800 Series for applications to 1800 PSI (120 Bar)
- ESB3000 Series for applications to 3000 PSI (200 Bar)
- Other Traditional Series (EL1800 and ELF3000) are available

**Items to Consider When Specifying**
- Number of probes: Four standard probe configurations are available (10, 12, 20 and 24) to meet typical resolution requirements. Other configurations are offered, ask your representative for details.
- Vessel connection centers
- Indication range and probe locations – 1" (25mm) minimum centers
- Type of vessel connections
  - A) Flanged – size and type
  - B) Female socket-weld-size
  - C) Special drain connections
    - extended pipe (male) 1/2" (15 mm)
    - or 3/4" (20 mm)
    - flange (size & type)
- Extended high temperature probe wires
  - (30’ (.76 meter) extending from unit is standard)
- Integrally mounted NEMA 4/IP65 or NEMA 4X (IP66) weatherproof pre-wired junction box
- Insulation jacket designed for easy access to accommodate maintenance

See page 7 for more economical solutions

**Optional Insulation Jacket**
Custom-made to precisely fit your column and to be easily removed for inspections. The jacket protects personnel while helping to provide maximum system accuracy. Two-inch thick insulation makes it suitable for outdoor service while withstanding contact surfaces up to 700°F (265°C).
Combine Your Local and Remote Systems to Save on Installation Costs

Consider updating your existing Water Gage Glass with a new LevelMax™ system. LevelMax systems combine the Eye-Hye® SmartLevel™ Indicator with a new Water Gage Glass and LED Illuminator to maximize reliability while also providing the most economical method to meet ASME code.

Offers local and remote drum level monitoring:
- Eye-Hye® Smartlevel™ Indicator for remote indicator, and
- Glass Gage for local monitoring (For high pressure service, a Simpliport® Bicolor gage. For low to medium pressure service, a flat glass gage with a DuraStar Illuminator.

Low Installation Cost

The LevelMax™ system provides one of the most economical drum level systems for ASME code compliance and compact assembly design for any application. It eliminates a portion of the field piping and welding which is associated with the traditionally independent instruments — thereby, reducing the installation cost. The Eye-Hye System is the hub of the assembly, and is available for design pressures of: 450 PSI (30 Bar), 1000 PSI (66 Bar), 1800 PSI (120 Bar) & 3000 PSI (200 Bar).

Maintain Optimum Performance and Accuracy with OEM Parts

Critical spare parts for overnight delivery, direct from the manufacturer.

clark-reliance.com/parts