AMETEK, INC. IS A LEADING GLOBAL MANUFACTURER OF ELECTRONIC INSTRUMENTS AND ELECTROMECHANICAL DEVICES, WITH ANNUAL SALES OF APPROXIMATELY $4 BILLION.

AMETEK HAS MORE THAN 15,000 COLLEAGUES AT MORE THAN 150 MANUFACTURING LOCATIONS AROUND THE WORLD. THESE OPERATIONS ARE SUPPORTED BY MORE THAN 100 SALES AND SERVICE LOCATIONS ACROSS THE UNITED STATES AND IN 30 OTHER COUNTRIES AROUND THE WORLD.

PULP & PAPER
EMISSIONS MONITORING AND HOTSPOT DETECTION

Pulp and paper are manufactured from cellulose fibres which usually come from chipped wood, recycled paper or agricultural products.

The production of pulp and paper is usually carried out by the kraft process, involving a lime kiln, recovery boiler and power boiler, all of which generate emissions. These emissions must be monitored to control combustion and pollution, and for safety purposes.

Temperature measurements also play a vital part during the later stages of paper production. Super calender rolls are used to ensure a uniform surface finish for fine papers, but a single hotspot can cause expensive damage to equipment and product if it remains undetected.

In addition, when producing tissue paper, the Yankee dryer requires the product temperature to be monitored for quality control.

AMETEK Process Instruments is a worldwide manufacturer of process analysers and instrumentation. We focus our experience on designing new, innovative analysers that help our customers achieve the highest levels of productivity and quality.

Through this focus, we have created some of the most capable technologies in the world. Our primary emphasis in analyser design is reliability. We understand that you must have complete confidence that the analyser will provide the information you need, when you need it.

AMETEK Process & Analytical Instruments offers a comprehensive range of detection options for key stages of the pulp and paper manufacturing process. Our specialised advanced solutions monitor flue gases to prevent harmful emissions and ensure efficient combustion.

We also provide high-resolution non-contact scanning devices for accurate temperature monitoring and reliable detection of hotspots.

DETECT EMERGING HOTSPOTS WITH HIGH-SPEED SCANNING THAT IS EASY TO INSTALL AND MAINTAIN AND CONNECTS TO RAPID-RESPONSE ALARM SYSTEMS.

FOR MORE INFORMATION VISIT: WWW.AMETEK-LAND.COM/INDUSTRIES/INDUSTRIALPROCESSING/PAPER
<table>
<thead>
<tr>
<th>LOCATION</th>
<th>APPLICATION</th>
<th>MEASUREMENT</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Lime kiln</td>
<td>Flue gas oxygen, combustibles and hydrocarbon</td>
<td>Paper</td>
<td>WDG-1200/1210</td>
</tr>
<tr>
<td>2 Yankee dryer</td>
<td>Product temperature</td>
<td>Paper</td>
<td>WDG-HPIIC</td>
</tr>
<tr>
<td>3 Super calender</td>
<td>Hotspot detection</td>
<td>Paper</td>
<td>WDG-VC w/ Blowback</td>
</tr>
<tr>
<td>4 Recovery boiler</td>
<td></td>
<td>Paper</td>
<td>WDG-VCM w/ Blowback</td>
</tr>
</tbody>
</table>

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</tr>
</thead>
<tbody>
<tr>
<td>5 Biomass boiler (hog fuel)</td>
<td>Control</td>
<td>Paper</td>
<td>WDG-HPIIC</td>
</tr>
<tr>
<td></td>
<td>Combustion safety monitoring</td>
<td>Paper</td>
<td>WDG-VC w/ Blowback</td>
</tr>
<tr>
<td>6 Stack</td>
<td>Emissions monitoring</td>
<td>Paper</td>
<td>4500 Mkl/l</td>
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<tr>
<td></td>
<td></td>
<td>Paper</td>
<td>4200 +</td>
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<tr>
<td></td>
<td>CO monitoring</td>
<td>Paper</td>
<td>Modal 9100</td>
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<tr>
<td></td>
<td>Oxygen (CEM)</td>
<td>Paper</td>
<td>WDG-VRM</td>
</tr>
<tr>
<td></td>
<td>Flue gas moisture</td>
<td>Paper</td>
<td>CEM/02 HUMOX</td>
</tr>
</tbody>
</table>
AMETEK LAND NON-CONTACT TEMPERATURE MEASUREMENT

**LSP-HD**
Compact infrared linescanner, designed to produce advanced thermal imaging in moving processes and Yankee dryer drums.

**HotSpotIR**
Continuous infrared thermal line scanning detects small, hot spots on a calender roll cover. High speed alarms prevent these from developing into blisters.

AMETEK LAND COMBUSTION AND EMISSIONS MONITORING

**4500 MKIII**
Industry-leading opacity monitor for PS-1 and ASTM D6216 compliance measurements. Installed on the stack or ducts leading to the stack.

**4200+**
Accurate, stable opacity monitor for non-compliance applications. Designed for measuring dust concentrations in stack gas emissions.

**WDG 1200/1210**
In situ oxygen probe for combustion optimization, featuring integrated control and display electronics. Mounted on the stack or downstream of particulate control equipment.

**MODEL 9100**
Cross-stack, in situ carbon monoxide monitor for direct continuous measurement, to provide efficient combustion control of any boiler system.

FOR MORE INFORMATION VISIT: [WWW.AMETEK-LAND.COM/INDUSTRIES/INDUSTRIALPROCESSING/PAPER](http://WWW.AMETEK-LAND.COM/INDUSTRIES/INDUSTRIALPROCESSING/PAPER)
**AMETEK PROCESS INSTRUMENTS ANALYSERS**

**WDG-HPIIC**
A direct-mounted combustion analyser providing a continuous measurement of combustibles in applications with high particulate levels in the gas stream.

**WDG-VC w/blowback**
Fully field-serviceable oxygen and combustibles analyser with a close-coupled extractive design for a fast response in a wide range of flue gas applications.

**WDG-VRM**
Rack-mounted oxygen analyser that can be used alone or an integrated part of a continuous emissions monitoring system.

**WDG-VCM w/blowback**
Adds methane detection to the WDG-VC to ensure a gas fired boiler has been purged before initial light off.

**CEM/O₂ HUMOX**
Designed to measure net oxygen and moisture content in flue gas and process applications, to correct emissions, ensure product quality or minimise stack corrosion.

**SERVICES**
Our in-house service centres provide after-sales services to ensure you get the best performance from your system. This includes technical support, certification, calibration, commissioning, repairs, servicing, preventative maintenance and training. Our highly trained technicians can also attend your site to cover planned maintenance schedules and repair emergency breakdowns.

SEE OUR OTHER RELATED LITERATURE:

**MILLWATCH/SILOWATCH PRODUCT BROCHURE**

**ARC IMAGER PRODUCT BROCHURE**

**WDG VCM PRODUCT BROCHURE**

**CEM O₂ / HUMOX PRODUCT BROCHURE**

150 Freeport Road, Pittsburgh, Pennsylvania 15238  USA

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