PROCESS MEASUREMENT TECHNOLOGY

Real-Time Humidity Management
Moisture meters work in secret. They are barely visible to the naked eye as they work in powder, sand or granules, but are nevertheless indispensable for many industrial and agricultural processes. In real time, they record the moisture content of a mixture and thus enable efficient control of quality.

REFRACTORIES

High Quality Kiln Relines
Nutec Bickley, a kiln and furnace manufacturer based in Santa Catarina NL, Mexico, provides Jointless ceramic fiber kiln lining systems that last more than twice as long as traditional modular linings. These systems offer improved fuel efficiency and reduced lining maintenance for customers all over the world. A proprietary combustion control system has the added benefit of improved process control and thus energy savings. This article presents some examples of relining projects.

THERMAL PROCESSES

New Challenges in Thermal Process Engineering
Ibu-tec is an expert in the thermal treatment of materials in rotary kilns and pulsation reactors. With its services, the German company from Weimar has been offering support for more than 40 years, from development in the laboratory to scale-up and contract manufacturing in industrial quantities, and also takes on complex tasks in the recycling of valuable materials and waste.

HEAT RECOVERY SYSTEMS

Heat Recovery in the Ceramic Tile Production Cycle
This article presents a general overview of the heat recovery systems used in the ceramic tile production sector and gives an introduction into the outputs of the European research project DREAM developed in the frame of EU Horizon 2020 program. DREAM stands for “Design for Resource and Energy efficiency in cerAMic kilns” with the aim of studying new techniques for reducing consumption and environmental impact in the ceramic production cycle.

ALTERNATIVE ENERGY SOURCES

Is Hydrogen a Viable Fuel Alternative for a Traditional Tunnel Brick Kiln?
Hydrogen has an established history as a chemical feedstock in industrial applications, but its use as an energy source on a commercial basis remains largely untested and undeveloped. In 1874–1875 Jules Verne advanced in “Mysterious Island” the concept that water, split into its components, would someday be the fuel of the future. Is the use of hydrogen as an energy source still in the realm of fantasy?