### ACHIEVE THE PERFECT ENERGY BALANCE WITH THE RIGHT TEMPERATURELAUDA excels in industrials thermostats for special applications in research and development

Lauda-Königshofen, October 19th, 2018 – LAUDA Heating and Cooling Systems, or HCS for short, is the industrial branch of the constant temperature equipment manufacturer, LAUDA. With more than 60 years of development expertise, the division produces custom-made systems for industrial applications. Heat transfer systems, secondary circuit units or state-of-the-art molten salt systems cover an extensive temperature range from -150 to 550°C. A particularly fascinating aspect is the wide range of applications of LAUDA heating and cooling systems.

LAUDA heat transfer systems are typically used in applications in the pharmaceutical or fine chemical industries. Depending on the required outflow temperature, heat transfer systems use either thermal oil, water or water/glycol as the heat carrier. The systems are heated by electric energy, water vapor or other fuels, depending on the project, and generate a precisely controlled heat flow and a temperature profile in the consumer. For example, a heat transfer system was recently produced for a renowned European research institute according to very specific requirements.

Energy balancing during ongoing operation

The customer, who works in the field of research and development, required a special reactor to be heated and cooled, to achieve a highly accurate mass and energy balance via the heat carrier. To achieve this, the system, which has a device from the ITH 400 series at its core, needed to actively separate aqueous components from the heat carrier oil. The challenge: Aqueous components needed to be evaporated and subsequently condensed and discharged from the oil circuit in a controlled manner, all during ongoing operation. This would enable the customer to achieve an exact balance of the heat flow in the reactor to guarantee a defined mass flow.

The data was recorded using a flow meter from Endress+Hauser, a component that LAUDA has had many years of good experiences with and installs in its system several times a year. To control the system, LAUDA opted for modern Siemens PLC controls with a touch panel for easy operation on site. Alternatively, the system can also be controlled via the central process control system. This gives the customer direct access to the volume flow or pressure controls, allowing process optimization at any time.

The entire system was specially designed for the customer application by the LAUDA engineering team, and produced in a project duration of only 18 weeks. The customer, based in Italy, was heavily involved in the project, from conception to final delivery. This proximity to the customer, as well as the construction of industrial heating and cooling systems according to the customer's requirement profile, is one of LAUDA’s strengths, explains Ralph Herbert, project manager at LAUDA Heating and Cooling Systems. “In every project, we design our systems according to the precise requirements of the customer. In doing so, we apply planning steps that have been tried and tested over many years, so that we can support the customer from the initial idea to the final commissioning and beyond,” concludes Ralph Herbert. Find out more about LAUDA heating and cooling systems [on our website](https://www.lauda.de/de/individuelle-temperiersysteme/industrielle-heiz-und-kuehlsysteme.html).

About LAUDA

We are LAUDA - the world leader in precise temperature control. Our constant temperature equipment and heating and cooling systems are at the heart of many applications. As a complete one-stop supplier we guarantee the optimum temperature in research, production and quality control. We are your reliable partner, particularly in the fields of automotive, chemical/pharma, semiconductor and laboratory/medical technologies. We have been inspiring our customers for more than 60 years with our competent mentoring and innovative, environmentally-friendly concepts - new every day and all over the world.

Image 1: pic\_LAUDA\_ITH400\_01\_18-10-19-rho

The ITH 400 industrial thermostat was developed for a customer in Italy for a special application to measure the mass flow.

Image 2: pic\_LAUDA\_ITH400\_02\_18-10-19-rho

The system was produced in only 18 weeks. The objective for LAUDA: To heat and cool a special reactor to achieve the perfect energy balance via the heat transfer fluid circuit.

Image 3: pic\_LAUDA\_ITH400\_03\_18-10-19-rho

The system is controlled by an innovative Touch PLC from Siemens. This provides the customer with easy access to parameters like volume flow, mass flow, density, pressure and temperature level.

LAUDA direct contact detailsROBERT HORN

Online and Content Manager

T + 49 (0) 9343 503-162

F + 49 (0) 9343 503-283

robert.horn@lauda.de
www.lauda.de