

## KANTHAL® PROCESS LABS AND KANTHAL® PILOT PLANT DEVELOPING AND TESTING YOUR HEATING PROCESSES

**Kanthal's two new offerings Process Labs and Pilot Plant have all the necessary equipment and resources to test your new heating process ideas, regardless of scope. Save time and avoid making large capital investments or disrupting your operations with the help of our global network of test centers.**

Kanthal® Services operates four Process Labs around the world, in addition to our state-of-the-art Pilot Plant in Hallstahammar, Sweden, that offers power and footprint to handle extremely large industrial processes. Between them, these centers have the capacity to help you find the best solution from the smallest-scale process tests to full, industrial-scale production site testing.

We have access to over 50 advanced test furnaces and lab engineers with more than 80 years of experience in complex heating process technology. Testing your new high-temperature processes or process improvements at one of our centers will enable you to secure quick feedback that will increase your knowledge and minimize risks in your process development.

We seek to deliver solutions that are sustainable and energy- and cost-efficient to our customers, using our industry-leading expertise and experience in complex heating process technology and electrical industrial heating.



### **ADVANTAGES OF USING KANTHAL® SERVICES' PROCESS LABS AND PILOT PLANTS**

- Process testing before making decisions on major capital investment
- Test a new process idea without disrupting operations
- Use 50 test furnaces and lab engineers with more than 80 years' experience
- Choose the right center for your needs, from small-scale lab testing to industrial-scale production site testing
- Make your process more sustainable and energy- and cost-efficient
- Take the opportunity to replace fossil fuels and electrify your process
- Access to power and footprint at an industrial scale in a state-of-the-art pilot plant
- Direct access and input from Kanthal's R&D department with advanced material analysis



### **HALLSTAHAMMAR PILOT PLANT**

Our state-of-the-art pilot plant in Hallstahammar, Sweden, is the only testing site of its kind in the world with the capacity for full-scale industrial heat testing. Situated in close proximity to a hydroelectric power plant, it has almost unlimited access to renewable industrial-scale electricity, available at a competitive price. Combined with considerable on-site expertise, cutting-edge equipment and a wide range of industrial process gases, including nitrogen, argon and hydrogen, our Hallstahammar pilot plant is uniquely positioned to test and validate the most complex heating process technologies and electrical industrial heating solutions.

### **KANTHAL® PROCESS LABS**

Our four Process Labs are situated in Hallstahammar, Sweden; Walldorf, Germany; Sonora, California, USA; and Perth, UK. Here we have the capacity to carry out small- and medium-scale tests of heating processes, such as high-temperature heat treatment and thermal processing, as well as testing and identifying appropriate electrification solutions for customers seeking to replace fossil fuels in their heating processes.

### **TOOLS AVAILABLE AT KANTHAL® SERVICES CENTERS**

- Fibrothal® panel and ROB elements
- Kanthal APM™/Kanthal APMT™ material
- Kanthal® Super elements
- SiC elements
- Advanced control and measurement systems

# CUSTOMER CASES

## FURNACE CONCEPT

One of our customers wanted an electrical solution for heating up its product prior to hot forming. A furnace concept equipped with process-logging equipment was set up at one of our Process Labs. The test was a success and the application progressed to an on-site test at the customer facility. It was later extended to a full-scale electrical furnace system tested at our Hallstahammar Pilot Plant.



## PROCESS DEVELOPMENT

We carried out a process development project for a customer seeking to identify the optimal furnace and process parameters to achieve the required product specifications. Process times, furnace temperatures, cycles and flue gas emissions were measured at one of our Process Labs. This increased the customer's understanding of the process, resulting in an interest in further developing the process parameters. The test, which began as a small-scale lab test, eventually developed into a phase-two, upscaled Pilot Plant test in Hallstahammar.

## KEY ADVANTAGES

### 11 GOOD REASONS TO CHOOSE KANTHAL® PROCESS LABS AND KANTHAL® PILOT PLANT

STATE-OF-THE-ART  
TECHNOLOGY

CUTTING-EDGE  
PROCESS EXPERTISE

COST-EFFICIENT  
TESTING

ONE-OF-A-KIND  
FACILITY

ADVANCED  
TEST FURNACES

EXPERIENCED LAB  
ENGINEERS WITH FULL  
ACCESS TO KANTHAL'S  
R&D DEPARTMENT

FROM SMALL-SCALE  
TO FULL-SCALE  
INDUSTRIAL TESTING

POWER AND FOOTPRINT  
AVAILABLE AT AN  
INDUSTRIAL SCALE

SOLUTIONS TO  
REPLACE  
FOSSIL FUEL

THE WIDEST RANGE OF  
HEATING MATERIALS  
AND SOLUTIONS  
AVAILABLE

THE NUMBER ONE  
PROVIDER OF  
ELECTRICAL  
INDUSTRIAL HEATING  
SOLUTIONS