



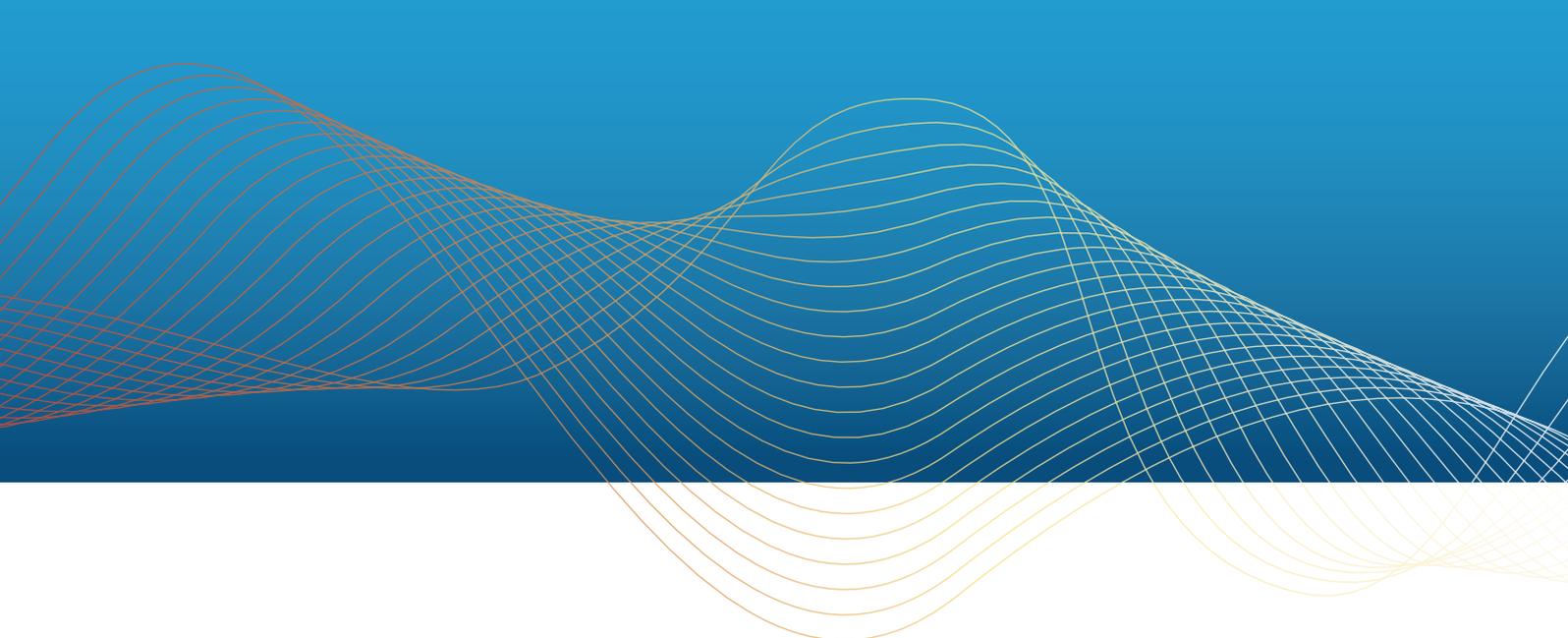
FURNACES & OVENS

LEADING INNOVATORS IN THERMAL TECHNOLOGY TO
THE OIL & GAS, CHEMICAL AND POWER INDUSTRIES

ASSET INTEGRITY PARTNER

STORK

COOPERHEAT



Stork Cooperheat design and manufacture industry leading furnaces and ovens to a range of sectors including oil and gas, power, chemical, heavy fabrication, forging, foundry and any other industry where heating processes are required. With extensive global experience and expertise, Stork Cooperheat offer unparalleled product excellence.

Stork Cooperheat have the skill and expertise to supply a range of innovative and versatile furnaces and ovens specifically designed with the needs of the operator and industry in mind. This ensures we deliver tailored solutions to meet individual client requirements and specifications.

As a market leader in the field of heat treatment, our range of products and services are recognised around the world for their quality, durability, reliability and the highest standards of safety.

Our sales engineers' extensive experience in the field of heat treatment ensures they are fully qualified to provide consultations prior to placing orders, ensuring specific requirements are understood and met, whilst providing comprehensive before and after sale support.



FURNACES

Low thermal mass furnaces reduce overall heat treatment costs by increasing production and improving product quality. Their special linings require less total heat input to reach operating temperatures quicker than old-style refractory lined furnaces. Therefore, the lower thermal conductivity of the linings delivers much lower heat loss from the furnace, achieving impressive energy savings. Close temperature uniformity can be achieved using Stork Cooperheat's advanced programmable temperature control systems with multi-zone controls.

The theory of high velocity heating is now accepted practice industry wide and Stork Cooperheat has been one of the pioneers of high velocity heating within fuel fired furnaces. The rapidly recirculating gases break down the layer of still air surrounding the object being heated and increases the heat transferred by convection. Shorter heat up times and improved temperature uniformity are the resulting benefits.

FEATURES

- High burner discharge velocity requires no extra recirculation fans
- Close temperature uniformity throughout the furnace
- Positive furnace pressure via pressure control prevents cold air ingress and improves temperature uniformity
- Hot spots eliminated by low flame temperatures
- Fewer burners needed reducing the cost particularly in expensive burner safety systems

FINANCIAL BENEFITS

- Reduced energy costs using low thermal mass materials in furnace construction, ensuring energy is used to heat the load, not furnace brickwork
- Recuperative high velocity gas burners reduce power costs



OPERATIONAL BENEFITS

- Uniform distribution of heat controls the heating cycle and heating zones providing by a fully automatic temperature programmer.
- Design and operational flexibility associated with low thermal mass furnaces
- Modular construction enables the furnace to be extended in length to cope with larger work pieces or alternatively a temporary extension for one off applications can be added. The larger furnaces use preformed panels as standard. In many instances it can be more economical to extend existing furnaces rather than replacing them
- Wide range of fuel sources which can be more economical. It is Stork Cooperheat's philosophy to design a system around the fuel choice of the customer, or if necessary to convert existing units

APPLICATIONS

- Stress Relieving (PWHT)
- Annealing
- Hardening
- Tempering
- Aging
- Quenching
- Normalising
- Solution Annealing
- Pre-heating
- Refractory Dryout



OVENS

The high thermal efficiency and lightweight construction of Stork Cooperheat ovens is achieved by the use of low thermal mass insulation. Our ovens make the most efficient use of the available energy, giving fuel savings due to the use of proven materials. A variety of energy sources can be used, for example electricity, light fuel oil, gas or steam.

FEATURES

- Wide range of custom built ovens with various configurations of loading access and load support furniture
- Forced air circulation achieves efficient and uniform heating. This means fan (or fans) force air through the heating unit and circulates in a convection pattern within the load area, eliminating any stagnant air pockets
- Both non-exhausting and exhausting ventilation systems are available
- Electrical industrial ovens feature high performance mineral insulated seamless sheathed heating elements, rated to give a prolonged working life;
- Fuel fired with indirect gas or oil fired heater units and products of combustion do not enter the work chamber. With direct units, the products mix with the air in a remote chamber and not in the work chamber. All systems have full flame failure safety;
- Close control of temperature with automatic controls providing close uniformity at equilibrium conditions. Adjustable programming for heat up and timed soak periods, temperature recording, over temperature limit and alarm, as well as solid-state load switching are all available options

FINANCIAL BENEFITS

- Using low thermal mass materials in oven construction, ensures that the energy is used to heat the load, not the oven, providing lower energy costs

APPLICATIONS

- Drying
- Curing
- Drum Warming
- Pre-heating
- Tempering
- General Purpose
- Welding Rod Quivers and Ovens





SPARES, REPAIRS & CONSUMABLES

Stork Cooperheat provide a complete heat treatment service, supplying consumables and spare parts for heat treatment equipment from an extensive stock held at our UK headquarters, various manufacturing sites and overseas operational bases.

SALTBATH PUMP OUT

Stork Cooperheat deliver a highly specialised process to remove molten salt from a saltbath at temperature whenever a saltbath needs to be drained for inspection or repair. This can either be environmentally disposed of or placed in a heated holding tank for temporary storage.

CONSULTANCY

Stork Cooperheats' experienced teams provide a consultancy service either directly or as part of a larger integrated project package. This includes general advice and expertise on a variety of industry challenges including:

- Reducing energy consumption
- Best practice operational procedures
- Optimising efficiency

TRAINING

The range of customer training available from Stork Cooperheat includes:

- **In-house courses:** A series of regular operator training courses at the Southport Office are designed to educate both new and existing users in the latest technology relating to furnaces and ovens. Delegates from both the U.K. and overseas attend, covering the use and application of furnaces and ovens, together with detailed appraisals of controls and instrumentation
- **On-site courses:** Alternatively, onsite training is also available. Stork Cooperheat is committed to running regular on site training courses covering operating procedures, installation and commissioning as well as routine refresher training courses.

OTHER SERVICES

PORTABLE GAS & OIL BURNERS

Stork Cooperheat offer a range of portable, high velocity gas and oil burner equipment that can be used for a variety of refractory dryout and heat treatment processes, either as stand-alone units or in conjunction with a modular design portable furnace.

Gas burners come in standard sizes of 1.0 and 6.0 Million Btu per hour, suitable for either natural gas or LPG whilst the standard oil burner is rated at 6.0 Million Btu per hour and is suitable for light fuel oil. The combustion control equipment and combustion air fans are trolley mounted for ease of portability and come complete with connecting hoses. Both manual and automatic control options are available together with a range of complementary accessories.

LADLE PREHEATERS

Stork Cooperheat's ladle heating station consists of a refractory lined cover with a burner mounted on it. This can be positioned on the ladle by winches, pneumatic cylinders, cranes, etc. and retracted when the ladle is ready for use.

The structural steelwork required to support this unit and provide access is also supplied. A self-contained control and safety package incorporating mechanical and electrical items is included with the burner. This packaged system takes care of pressure safety, flame safety, temperature programming and control, fuel / air ratios, excess air facility and all the manual combustion system functions. Special features can be included as these units are usually tailor made to suit individual requirements.

REFURBISHMENT & UPGRADES

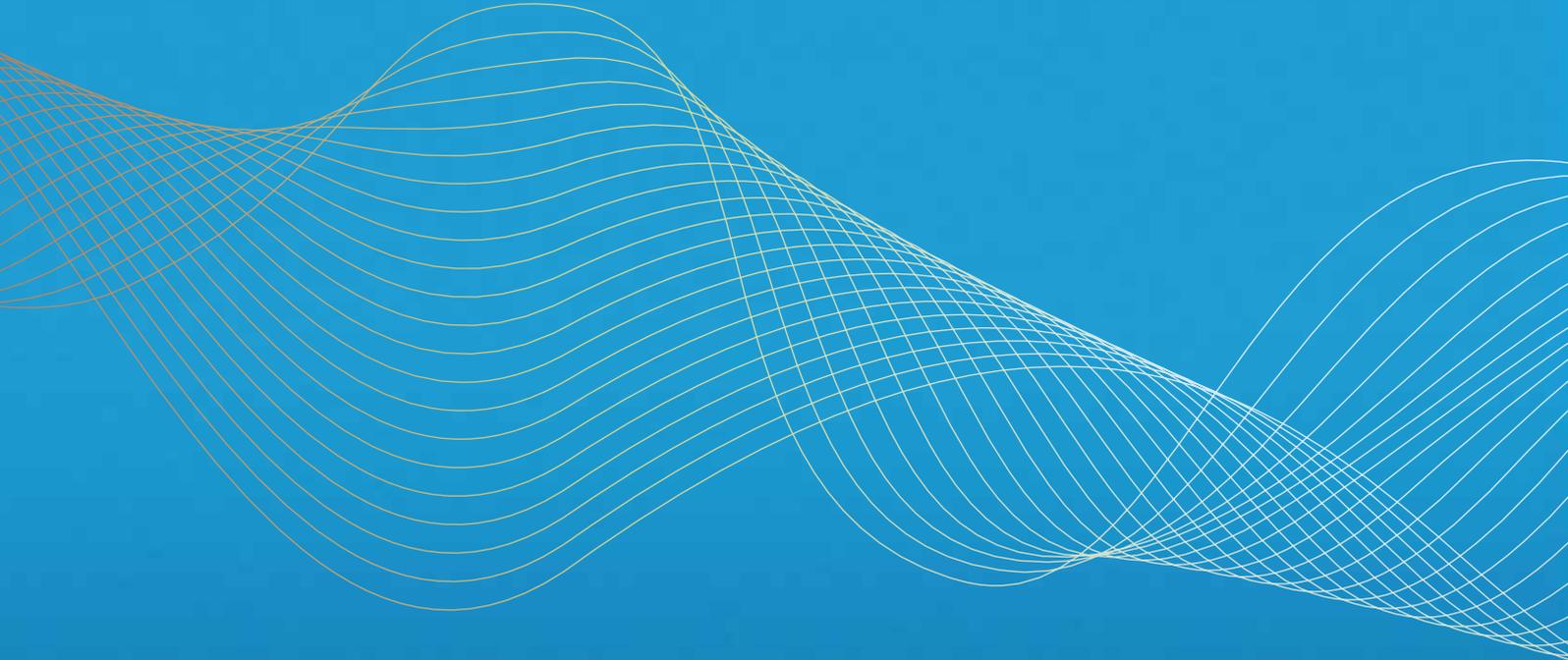
Stork Cooperheat offer a refurbishment service for existing furnaces to allow structure re-use minimising capital spend for clients. Inefficient linings, combustion or heating systems and obsolete control equipment can be replaced by modern systems which provide improved performance. This service also extends to modernising ovens and can include changing the fuel source of the existing equipment.

CALIBRATION SURVEYS

Stork Cooperheat provide a range of calibration services to end users, including:

- Temperature uniformity surveys
- Instrument calibration
- Advice on achieving NADCAP compliance





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