



KL-Lämpö

# WATER TREATMENT SERVICE COMPANY BOOSTING ENERGY EFFICIENCY



# COMPREHENSIVE WATER TREATMENT SERVICES

**KL-Lämpö Oy specializes in water treatment products and services which boost energy efficiency. The company was founded in 1993 and is known as a reliable and valued partner by its customers in industry, energy industry and building maintenance services.**

Our reputation rests on our qualified personnel and on their long experience in the field of energy economy. Our business operations are based on high-quality water analyses and research activities conducted in our own laboratory. **We are a member of Cleantech Finland which aims at promoting energy efficiency and sustainable growth.**

Our values are based on customer-orientation, reliability, sustainability and wellbeing at work. Our mission is to be Finland's leading company in the field of water treatment relating to energy economy.

## Operational reliability and cost savings

Clean surfaces are a prerequisite for the optimal functioning of heat transfer systems. The purpose of our water treatment services is to control the corrosion level in heat transfer systems and to prevent scale and deposits.

1993

**KL-Lämpö Oy** is established in Tampere.

1995

**KK-620** corrosion inhibitor tested by the esteemed Technical Research Centre of Finland (VTT) is introduced on the market.

1997

**New chemicals** for high-pressure boilers are developed and launched on the market.

2003

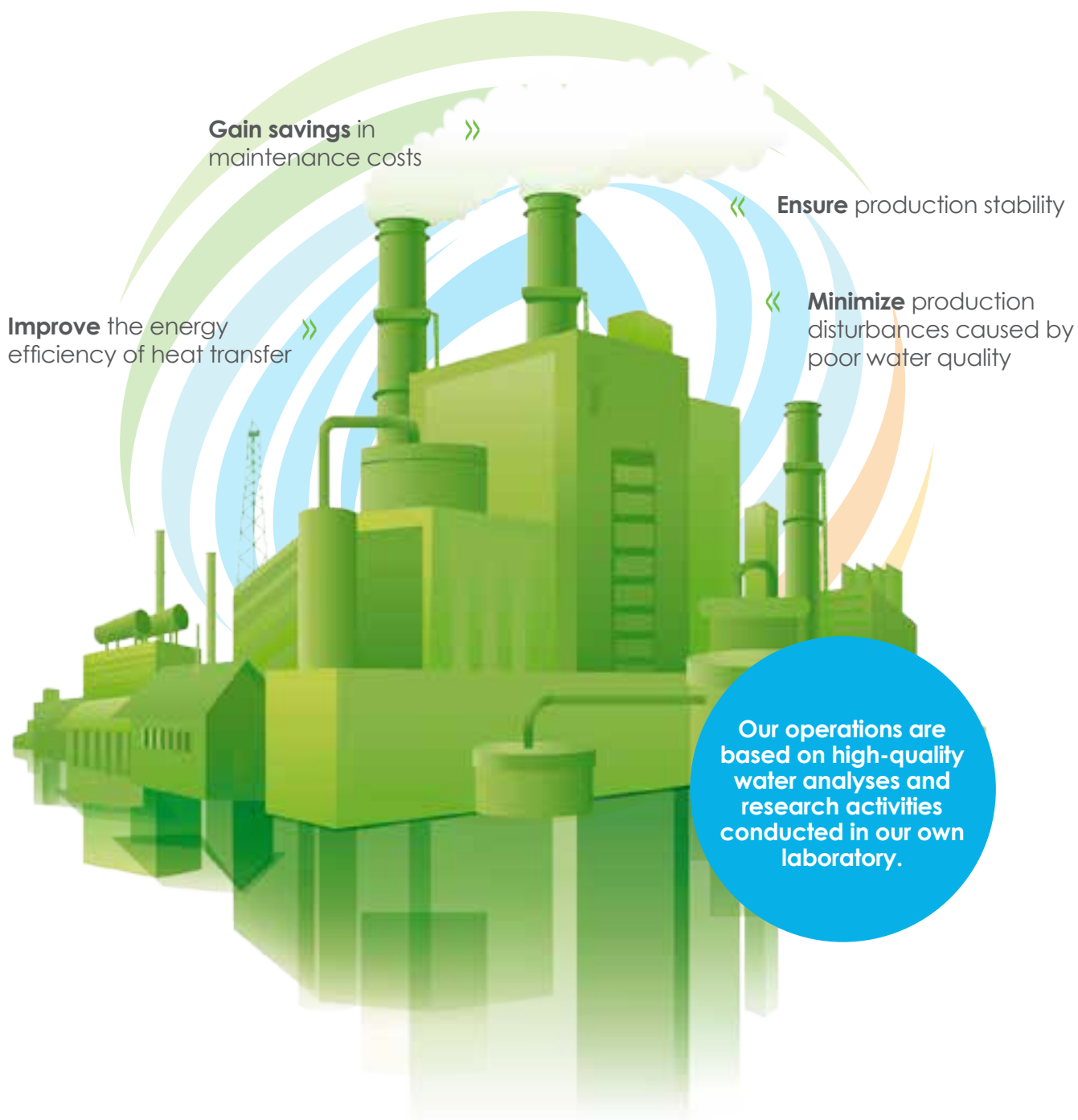
**The overall turnover exceeds** 2 million Euros. The range of water treatment services is extended.

2004

**New premises** are opened at Pirkkala. The range of building maintenance services is extended.

2010

**A new sales office** is established in Espoo.



Gain savings in maintenance costs >>

<< Ensure production stability

Improve the energy efficiency of heat transfer >>

<< Minimize production disturbances caused by poor water quality

Our operations are based on high-quality water analyses and research activities conducted in our own laboratory.

2012

Lanxess ion exchange resins are introduced on the market.

2013

New, larger premises are opened at Pirkkala.

Maintenance services for heat exchangers are launched.

2014

The number of water analyses exceeds 4000 per year.

KL-Lämpö's achieves ISO 9001 certification for its quality management system.

2015

The overall turnover exceeds 5 million Euros; the number of staff is 40.

2016

The range of building maintenance services is extended.

A product development project on advanced chemicals for high-pressure boilers is followed by another project on the same subject.

2018

The premises are expanded to accommodate a new service centre for heat exchangers.



## EXPERT SERVICES

Surveys, planning,  
inspection and reporting

## MAINTENANCE SERVICES

Reports,  
chemicals,  
maintenance  
and installation  
work

## INSTALLATION AND MAINTENANCE SERVICES

Maintenance and  
installation work

## ANALYTICAL SERVICES

Laboratory services

## CHEMICALS AND EQUIPMENT

Deliveries and  
installation work



Our quality management system meets the requirements of ISO 9001 standard and has achieved ISO 9001 certification. Our business idea is founded on constant improvement of our products, services and processes. We always take into account the individual needs and requirements of each customer in our operations.

# HIGH-QUALITY PARTNERSHIP -CUSTOMIZED SERVICES

## **Preventive maintenance**

Water treatment is an essential part of preventive maintenance on heat transfer systems. It reduces maintenance needs for the equipment as well as the production downtime. It also postpones the need for new investments.

## **Versatile and flexible service**

We serve our customers in a comprehensive and customized way. We develop our water treatment products and services on the basis of our customers' needs and in close cooperation with them.

Our focus is always on the quality of our products and services. We rely on our partners to act responsibly and reliably to meet with our quality management system.

We want to build long-term relationships with our customers.





## SURVEYS AND ANALYTICAL SERVICES

**Our customer's heat transfer systems are surveyed by documenting the equipment installed in them. Heat transfer liquids are analyzed in our laboratory.**

Depending on customer's wishes water analyses can be conducted on a regular basis to prevent problems before they occur.

Our customer always receives system-specific maintenance recommendations and a cost estimate for the required measures.



## MAINTENANCE AND REPAIR SERVICES

**The aim of our maintenance and repair services is to ensure that our customer's heat transfer systems and processes function without interruption.**

Our customers may also entrust us with the entire maintenance of their heat transfer systems.

Our installation team performs the required maintenance and repair tasks professionally and cost-efficiently. In their work they use our own equipment and chemicals suitable for the purpose.



## EXPERT, TRAINING AND CONSULTING SERVICES

**We provide our customers with our expert, training and consulting services in the field of water treatment. Our experts are available for finding optimal solutions to customer-specific needs.**

We help and guide our customers with the commissioning and use of our products. The technical support of our business partners is also available to our customers.

We organize customized training sessions on water treatment in general and on plant-specific water treatment needs. We also give lectures at relevant educational institutions and seminars.



## INDUSTRY

# COST SAVINGS AND OPERATIONAL RELIABILITY FOR INDUSTRY

**Water plays an important role in almost all industrial production. Well-managed water treatment reduces maintenance needs for the equipment and the unexpected downtime in production. The operational reliability of systems is improved and pending investments are postponed into the future.**

Our industrial customers are active e.g. in paper, forest, food, metal, chemical and plastics industries. We have solutions for water treatment needs at different stages of industrial processes. We also provide cleaning services for energy transfer systems and protect the systems against corrosion.

We have a comprehensive range of services for the condition monitoring and maintenance of industrial AHR systems. We have developed our own cleaning methods for sealing water lines in forest industry and have been cleaning them for more than 20 years. The cleaning of sealing water lines minimizes water consumption and possible seal damages, which results in considerable cost savings.

We are prepared to customize our products to meet with the individual needs of our customers.



ENERGY INDUSTRY

# OPTIMIZED ENERGY PRODUCTION FOR POWER PLANTS

**There are strict regulations for water treatment in the energy industry to ensure that power plants run economically and without interruption. Well-managed water treatment plays an important role in the preventive maintenance of power plants.**

Our products and services help in optimizing the water treatment processes at power plants. Our customers in energy industry include steampower, district heating and power generation plants as well as wind turbines.

We serve power plants in the production of makeup water, in the pretreatment of water and at various stages of steam generation and utilization. Our comprehensive product range for district heating plants includes for example water treatment chemicals and water treatment equipment.

It is possible to sustain the operating features of wind turbines and to restore their performance by preventive maintenance. It also helps in avoiding unexpected breaks in production, equipment damages and expensive repairs.

We have introduced a new method for the maintenance of the cooling systems in wind turbines. This method enhances the cleaning and filling of cooling systems. We have a well-trained maintenance team which can perform even most demanding maintenance procedures in the cooling systems of wind turbines. They use special equipment and chemicals developed for this purpose.

We work together with major manufacturers of frequency transformers for wind turbines and develop our products and services in close collaboration with them.





## HIGH PRESSURE BOILERS

The boosting of energy efficiency leads to stricter requirements on the cleanliness of water and to changes in water chemistry.

A thorough system survey helps in finding optimal solutions for system-specific water treatment needs.

Our ongoing product development enables us to respond to changing challenges. The chemical activity is monitored by means of water analyses and the internal inspection of steam boilers.

## SCALE INHIBITORS

Deficient water treatment and system leaks can lead to the precipitation of different compounds.

It is possible to prevent heat transfer problems and equipment damages caused by scale and deposits by means of dispersing agents. Dispersing agents keep the scale loose and it can be removed from the system by the blowdown.

## OXYGEN SCAVENGING AND ALKALIZING

The corrosion/passivation balance of the feed water system in steam boilers is mainly influenced by the concentrations of oxygen and reducing compounds in water. The systems are unique and so are their water treatment requirements.

The optimal chemical program is selected by surveying the structure and materials of each system and by conducting water analyses. The purpose of our solutions is to ensure the reliable and durable operation of each system.

## DISTRICT HEATING SYSTEMS

Especially in cold climates district heating is the most common way of transferring heat from a power plant to destinations where hot water is used. The materials and the structures of district heating systems vary from one system to another.

The quality of feed water also ranges from lake water to completely desalinated water. Therefore, the chemical treatment must be chosen on the basis of various requirements.

Our range of chemicals takes into account system-specific differences in the materials of construction and the quality of water. Our services also include cleaning of district heating systems and heat exchangers.



FEWER UNEXPECTED  
MAINTENANCE VISITS

ENERGY-EFFICIENT AND  
STABLE HEAT TRANSFER

SAVINGS IN MAINTENANCE  
AND REPAIR COSTS



## BUILDINGS

# ENERGY-EFFICIENT HEAT TRANSFER FOR BUILDINGS

**The aim of our building maintenance services is to ensure the energy-efficient, economical and smooth operation of various heat transfer systems. In the building sector our customers are e.g. the owners of industrial, commercial and residential buildings as well as the companies responsible for the management and maintenance of such buildings.**

### **Savings in investments and maintenance costs**

It is possible to improve heat transfer by looking after the condition of heat transfer systems. Thanks to preventive maintenance, automatic control systems and devices function better, heat is distributed more evenly and fewer maintenance visits are required. Preventive maintenance hinders breakages of pipelines and devices resulting in savings in maintenance and repair costs.

### **Comprehensive solutions for improving energy economy**

We provide the building sector with surveys of heat transfer systems, analytical services as well as maintenance and repair services. We have versatile maintenance and repair services for heating systems, cooling systems and cooling towers as well as glycol-based aqua heat recovery and condensing systems.

Our wide range of services ensures optimal solutions to customer-specific water treatment needs.

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