



**ACQUAFLEX:**

**COMPANY  
PRESENTATION AND  
TECHNOLOGIES**



- ↪ Italian company
- ↪ Founded in 1997
- ↪ Headquarters and Research laboratories in Rho (MI)
- ↪ New production site in Vigano (MI)
- ↪ Commercial offices in:
  - Mannheim (D)
  - Katowice (PL)



Acquaflex is member and coordinator of

## **Water Treatment Alliance**

a group of more than 30 European companies specialized in treatment of industrial waters

# MISSION



Supply a full service for industrial water treatment, pulp and paper production, cleaning and sanitizing in food industry, utilizing specialized services including use of advanced technologies and customized chemicals, in order to satisfy needs and expectations of the clients in terms of quality, production, efficiency, safety, ecology.

# R&D LABORATORIES



- ↪ 6 technicians
- ↪ 400 m<sup>2</sup> of surface
- ↪ Pilot plants
  - Biobox
  - Sheet former
  - Closed cooling system
  - Simulated cooling tower
  - Equipment for testing surface cleaners

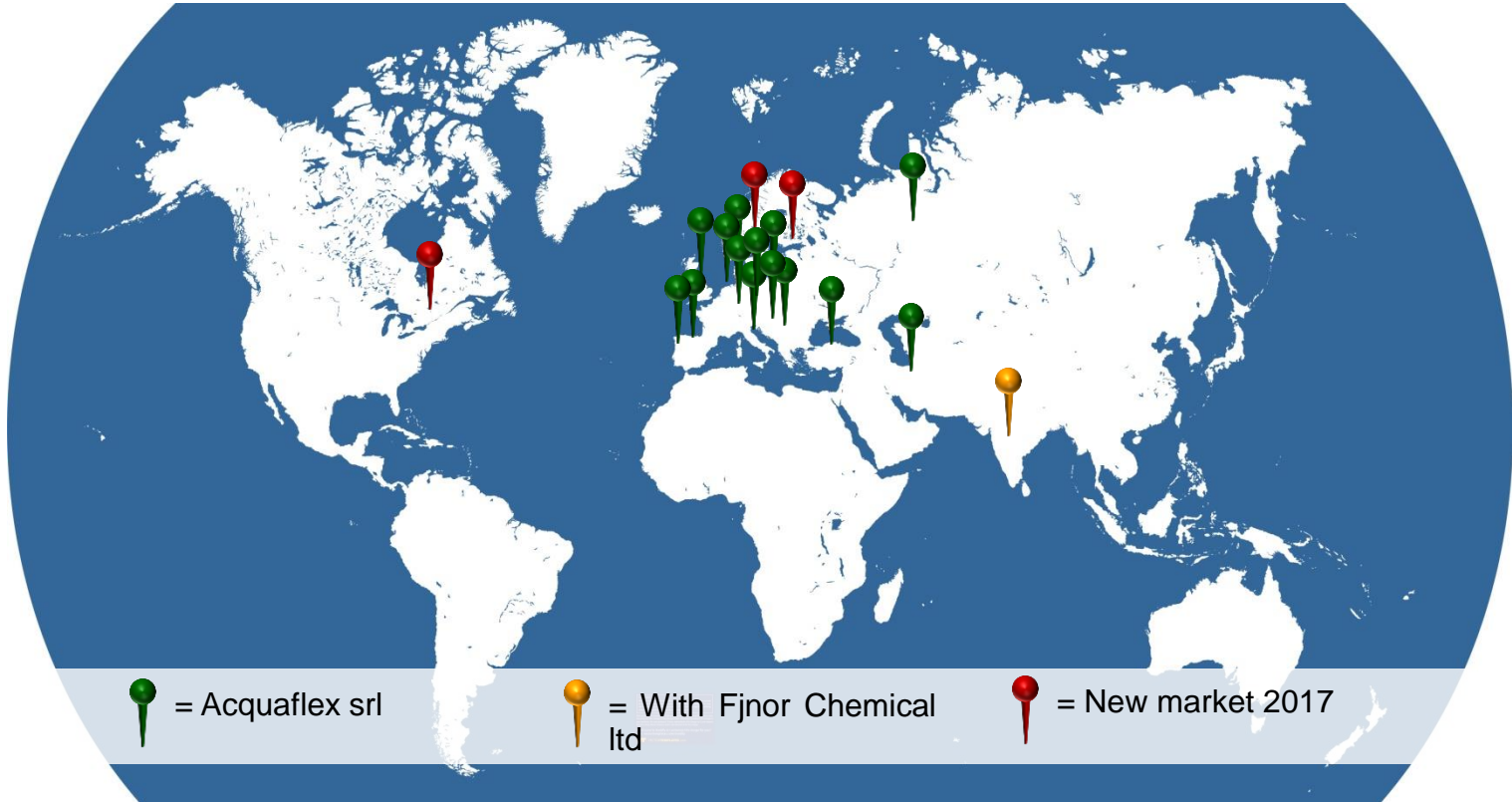
# R&D LABORATORIES



Collaboration with:

- ↳ Research centers
- ↳ Universities
- ↳ Suppliers of raw material
- ↳ Suppliers of equipment for water treatment or papermaking process
  - EVAPCO
  - Green Box
  - Viessmann
  - Ferroli Industrial boilers
  - Feltrificio Cristini

# ACQUAFLEX COMMERCIAL STRUCTURE



# MAIN MARKETS



Industrial waters



Paper production



Industrial coal-fired  
boilers

# ACQUAFLEX TECHNOLOGIES FOR INDUSTRIAL WATER TREATMENT



Cooling towers



Closed systems

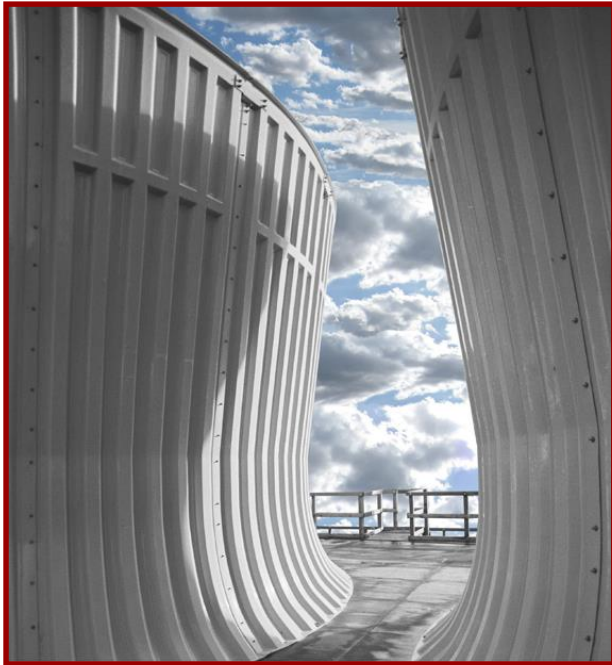


Distribution systems



Industrial boilers

# TREATMENTS FOR COOLING TOWERS

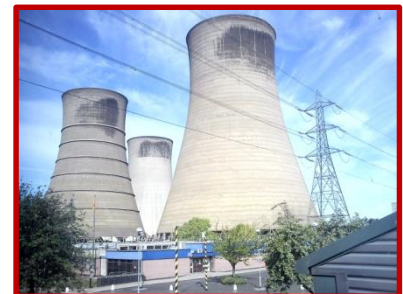


- ↪ Antiscales
- ↪ Dispersants
- ↪ Corrosion inhibitors
- ↪ Biocides
- ↪ Equipments
  - Tracer technologies
  - Remote control

# TREATMENTS FOR COOLING TOWERS

## Equipments for CWT

- ↪ Tailored equipments for chemicals dosing and blow down managing
- ↪ Tracer technologies
- ↪ Remote control



# TREATMENTS FOR CLOSED CIRCUITS



- ↪ CC chemical conditioning
- ↪ CC off-line cleaning
- ↪ CC on-line cleaning

# TREATMENTS FOR BOILER WATER



- ↪ Oxygen scavengers
- ↪ Boiler sludge conditioner
- ↪ Condensate treatment
- ↪ FDA treatments
- ↪ VOS technology

# TREATMENTS FOR DISTRIBUTION LINE AND DRINKING WATER



- ↪ Scale and corrosion prevention
- ↪ Chemical cleaning
- ↪ Shock disinfection of distribution lines
- ↪ Post disinfection treatments
- ↪ Procedures for legionellosis control and prevention

# ACQUAFLEX TECHNOLOGIES FOR INDUSTRIAL COAL-FIRED BOILERS



Dust control

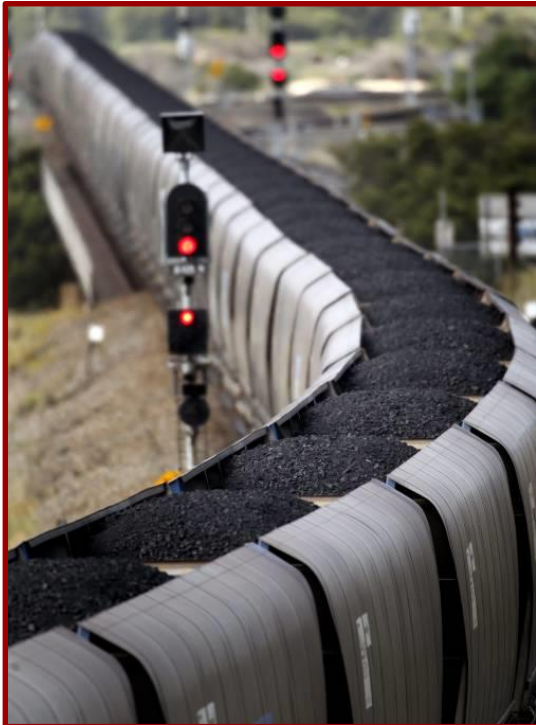


Coal flow aid



Combustion optimization

# DUST CONTROL



Control coal dust permit to:

- ↪ Reduce environmental impact
- ↪ Increase safety
- ↪ Reduce maintenance costs

# DUST CONTROL

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There are many options available for dust control, but there are four basic approaches:

- ↪ Using chemicals sprays to prevent dust or capture airborne dust
- ↪ Using ventilation systems/exhaust systems to remove dust
- ↪ Using a combination of these techniques

# DUST CONTROL

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Our focus is to use specific chemicals with spraying systems to control dust:

- ↪ It is highly effective
- ↪ It is often more economical than other technologies
- ↪ Implementation is typically fast and straightforward
- ↪ It is a long-term solution that can provide years of trouble-free performance with regular maintenance

# ACQUAFLEX TECHNOLOGIES FOR DUST CONTROL

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**Binding Agents**

**Humectants**

**Adhesives**

# ACQUAFLEX TECHNOLOGIES FOR DUST CONTROL

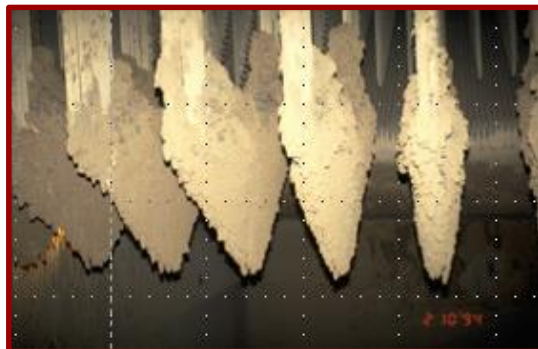
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**Crusting Agents** - binding agents used for long-term surface stabilization.

- The primary active components are water-based latex polymers that cure to form a mechanically stable water-insoluble film.

# OPTIMIZATION OF COAL FIRED PLANTS



Optimize the coal combustion permit to prevent:

- ↪ Slugging
- ↪ Fouling

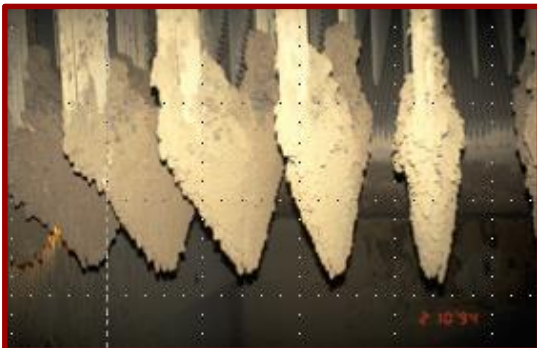
Two dangerous phenomena than may be the cause of:

- ↪ Heat transfer problems
- ↪ Boiler tripping
- ↪ Damage at the bottom tubes
- ↪ Significant losses of production

# OPTIMIZATION OF COAL FIRED PLANTS



Slugging and fouling happen when the metal ash in the coal is liquid at combustion gas temperatures and adheres to the tubes upon striking them and causes deposits to form



# ACQUAFLEX TECHNOLOGIES FOR OPTIMIZATION OF COAL FIRED PLANTS



## **RPT 600 series**

The RTP 600 Series products are specially formulated blends of metallic oxides or metallic salts.

# ACQUAFLEX TECHNOLOGIES FOR OPTIMIZATION OF COAL FIRED PLANTS



## RPT 600 series

In high temperature areas the products of RPT 600 series:

- ↪ increase the melting point of the ash, reducing their tendency to adhere at the metal surfaces
- ↪ Increase the friability of the deposits, making it easy to remove during normal soot blowing and out-of-service cleaning.

# ACQUAFLEX TECHNOLOGIES FOR OPTIMIZATION OF COAL FIRED PLANTS

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## RPT 600 series

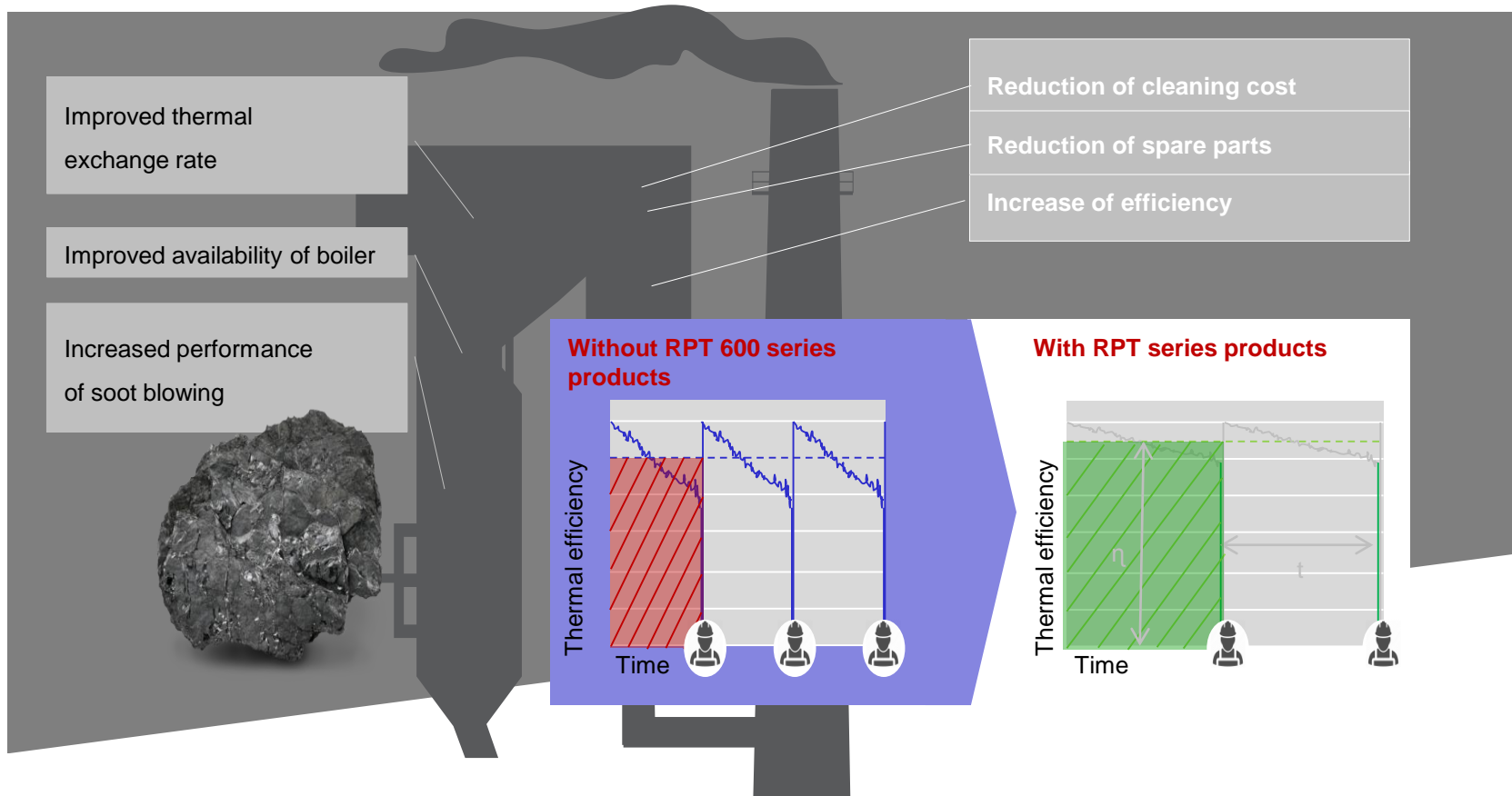
The products are designed to:

- ↪ Control high temperature corrosion
- ↪ Reduce slagging and fouling
- ↪ Minimise low temperature corrosion and fouling
- ↪ Reduce acid smut and acid mist.
- ↪ RTP 600 Series product's metallic oxides or metallic salts combine with the ash constituents. The resulting compounds are solid at gas temperatures. The ash is then carried through the boiler instead of depositing on the tubes

# ACQUAFLEX TECHNOLOGIES FOR OPTIMIZATION OF COAL FIRED PLANTS



## RPT 600 series: mechanic of economic balance



# ACQUAFLEX TECHNOLOGIES FOR OPTIMIZATION OF COAL FIRED PLANTS



## RPT 600 series: environmental benefits

Reduced emission

Unburned carbon by up to 90%
NOx by up to 30%
CO <sub>2</sub> and acid smut fallout

The image shows two large, cylindrical industrial smokestacks against a grey, overcast sky. A thick plume of dark smoke is rising from the stacks. A blue callout box on the left contains the text "Reduced emission". Below it, a white box with a blue pointer contains a list of environmental benefits: "Unburned carbon by up to 90%", "NOx by up to 30%", and "CO<sub>2</sub> and acid smut fallout".

Planning, production, research and development, trading at the highest level of quality are the reasons of **Acquaflex** success in the water treatment and paper markets



**UNI EN ISO 9001:2008  
QUALITY MANAGEMENT SYSTEM  
CERTIFIED BY CERTIQUALITY**



**UNI EN ISO 14001:2004  
ENVIRONMENTAL MANAGEMENT SYSTEM  
CERTIFIED BY CERTIQUALITY**



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