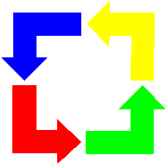




WET FLUE GAS DESULFURIZATION

KARE-ENGINEERING
ENVIRONMENTAL SOLUTIONS



WET FLUE GAS DESULFURIZATION



At Siirt Electric Power Plant, a KARE-Engineering Wet FGD is used to convert this 57,5 MW station into Clean Air Act compliance.

25 YEAR EXPERIENCE IN ENGINEERING

KARE-Engineering, represents 25 years knowledge and experience. KARE is a company specializing in flue gas desulfurization (FGD), Europe, the Middle East and the Asia-Pacific region with its wide database of performance and operating data in the industry.

KARE -Engineering is based in Adana /Turkey and Melbourne / Australia with its highly qualified and specialized engineers.

KARE systems are based on our own technology and

our designs are engineered for perfection and meet individual customer concerns, include low life cycle cost, reliability, ease of maintenance and long life.

“ We create solutions to meet the individual customer’s air pollution control needs ”

KARE Engineering has developed a multi-technology approach to solving the industry environmental needs, because design requirements and site-specific issues can vary widely around the world.

Wet FGD Technology

The FGD process is to remove undesirable characteristics like dust, soot, odor, pollutants like SO_x , CO, H_2S from stack gas, resulting from combustion, in an environmentally friendly manner.

The preferred method is packed or unpacked wet

type scrubber, depending on the size of the plant and the chemicals used.

Our systems accept using a wide variety of alkaline, especially wastewater, that will have the following three way benefits.

1. Acid is not added to wastewater to lower pH, because the acid produced during gas treatment will neutralize the wastewater.
2. Operational costs of reagents of alkaline, which are used in conventional methods, are lowered.
3. There will not be any solid waste production.



At Van (Ener Energy) Electric Power Plant, a KARE-Engineering Wet FGD is used to convert this 57,5 MW station into Clean Air Act compliance.



At Kayseri Orta Anadolu Mensucat Plant, a KARE-Engineering Wet FGD is used to bring this 21 MW station into Clean Air Act compliance.

Advantages

- ◆ The specially designed spiral-jet nozzles are chosen to prevent clogging.
- ◆ Nozzles are cleaned, checked and replaced without stopping the system.
- ◆ The system is so designed that variable emission levels, from 1.700 mg/Nm³ even to 150 mg/Nm³, can be attained.
- ◆ By-pass stack is not necessary.

- ◆ Our system has a less initial cost, compared with the equivalent systems.
- ◆ The systems are based on our own technology.

Reagents Used

- Caustic Soda - NaOH
- Soda Ash - Na₂CO₃
- Lime – Ca(OH)₂
- Limestone - CaCO₃

Turnkey Projects

Most of our projects have been supplied in a state ready for operation by KARE -Engineering, in other words "Turnkey".

Our systems rely on KARE -Engineering design, supply and erect all systems and support facilities. KARE also provides training and startup services that keep the project " on track".

Auto-CAD

KARE -Engineering has very capable engineers to digitally create a

fully -integrated design based upon standard building blocks.

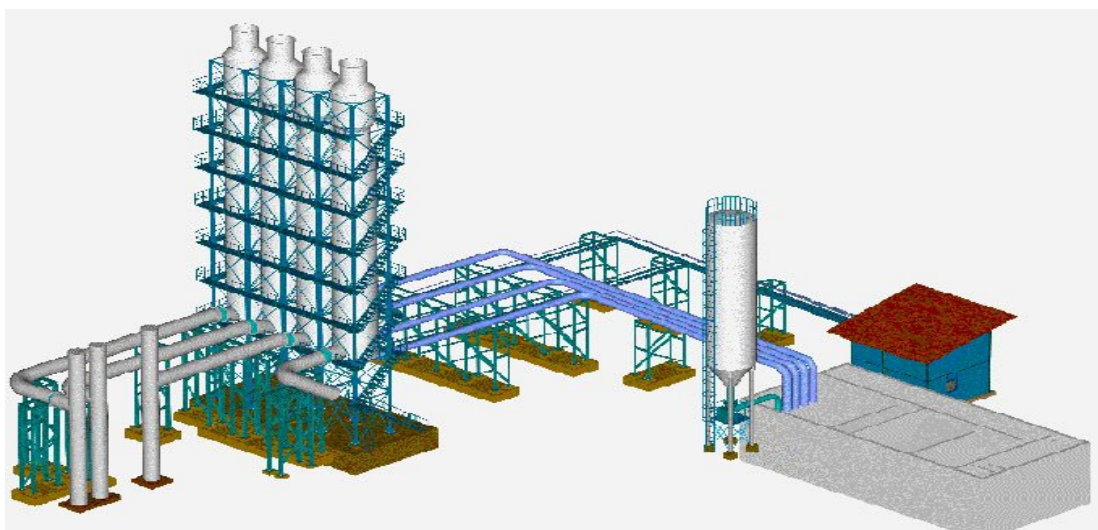
The stakeholders could electronically visit three-dimensional illustration of the project.

This ability gives many advantages to our engineers - designers. They can ensure adequate space among equipment for operations and maintenance, early detection of interferences that may occur, visualization of equipment placement, so on and so forth.

Research and Development

KARE is continuously looking for the most advanced Wet FGD systems technology to offer customers.

With this enthusiasm, KARE is taking technical assistance from The Neft Academy of Azerbaijan, which has a reputable research and development center on the subject.



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