

## FGD VSF Side-Entry Mixers





### Like your FGD process, your mixing equipment is an investment for the future.

LIGHTNIN has successfully applied hundreds of Top and Side Entry agitators for flue gas desulfurization processes, from the very first FGD installation in the 1960's at the Lawrence Energy Center to today's modern power plants. Since the first installation, the Boiler Systems have advanced considerably from the multiple Absorber Towers per Boiler in the 1970's and 80's to today's systems with a single tower per Boiler, capable of operation for extended periods without shutdown.

At LIGHTNIN, we bring 85 years of mixing experience to your flue gas desulfurization (FGD) process. We believe that getting the job done right means providing the degree of mixing you need while striking the best balance of capital cost, energy consumption, and reliability.

> C-Face motor mount

Slurry Seal no seal water

required

#### **Oxidation Lance System**

**VSF Side-Entry** 

**Mixer Designed** 

for FGD

Service

Rugged

Gearbox

Coupling to facilitate seal removal

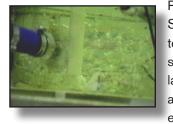
Absorber

FGD Systems have evolved to Forced Oxidation with a Lance designed to feed the proper amount of Oxidation Air into the Absorber Vessel and achieve the desired Mass Transfer.

LIGHTNIN has extensive experience in designing and supplying Gas Sparge Systems for Mass Transfer in many different markets and applications. Specifically for FGD, LIGHTNIN developed a lance sparge system to



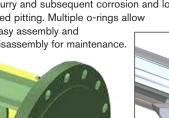
provide the required mass transfer in an FGD Absorber. Supplied initially to Endesa's Compostilla Power



Plant in Ponferrada, Leon, Spain, LIGHTNIN's Lance technology has proven successful in many installations throughout Europe and China. LIGHTNIN's expertise and understand-

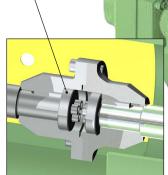
ing of Mass Transfer phenomena allows Scrubber suppliers and Utilities to optimize their Oxidation systems for maximum efficiency.

Impeller hub is sealed to prevent ingress of slurry and subsequent corrosion and localized pitting. Multiple o-rings allow easy assembly and disassembly for maintenance.



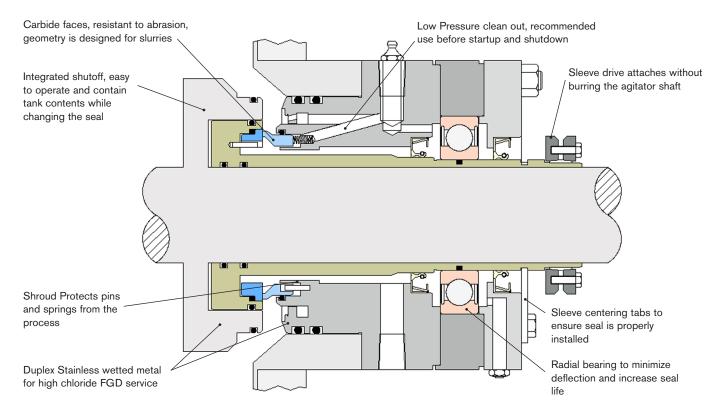


Seal shutoff to provide maintenance on unit while Absorber is in operation.



#### The LIGHTNIN FGD Single Slurry Seal

Mechanical seal designed to excel in a harsh FGD environment. Engineered to operate with no outside flush liquid to reduce your operating expenses, dependency and usage of plant water.



#### A-312 Impeller

This hydrofoil impeller is specifically designed for the requirements of flue gas desulfurization. This impeller generates a strong, focused discharge across the swept diameter that ensures good solid suspension and gas dispersion.



The optimum blade configuration also eliminates the formation of eddy currents on the trailing surface of the blade. This design feature greatly reduces erosion and increases blade life.

#### Testing Scale-Up (And Scale-Down)

Correlating a small-scale mixing system to a large system is a complicated procedure. From LIGHTNIN's years of mixing experience, we're well prepared to scale up, or scale down, accurately.



Adding gas to a slurry not only complicates the process requirements of an agitator, it complicates the scaling procedure as well.

At LIGHTNIN, we can scale gas dispersion and mass transfer applications - both to evaluate full-scale performance and to determine how to improve your particular FGD forced oxidation process.

LIGHTNIN has been supplying mixers to the FGD market for 40 years — installations from the 60's are still running today.

# **Expert Sales and Service Is Available Around The World**



The worldwide LIGHTNIN organization stands ready to spec, quote, and service all your mixers applications in flue gas desulferization. On a global basis, strategically located LIGHTNIN manufacturing and service facilities make equipment delivery and after-order service fast and dependable. Our dedicated global service teams are readily available to support your process equipment. Genuine spare parts and service solutions can be obtained from locations around the world and ensure operating capacity of your valuable production equipment.

#### **Service**

SPX Process Equipment Services

- Repair Services
- Equipment Services
- PM/PDM Services
- Additional Services
  - Installation and Startup Maintenance and Repair
  - Asset Management

For 24-hour response, call 1-888-MIX-BEST (U.S. and Canada)

## Call the SPX Process Equipment Experts

For more information about the LIGHTNIN FGD VSF Side-Entry Mixers or to discuss your application, contact your local SPX Process Equipment Sales Representative. Or visit our website at www.spxpe.com.

Or call 1-888-MIX-BEST (U.S. and Canada)





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For more information about our worldwide locations, approvals, certifications, and local representatives, please visit www.spxpe.com.

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