

# **LIGHTNIN**

AN SPX BRAND

## FGD VSF Side-Entry Mixers



# **SPX**

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

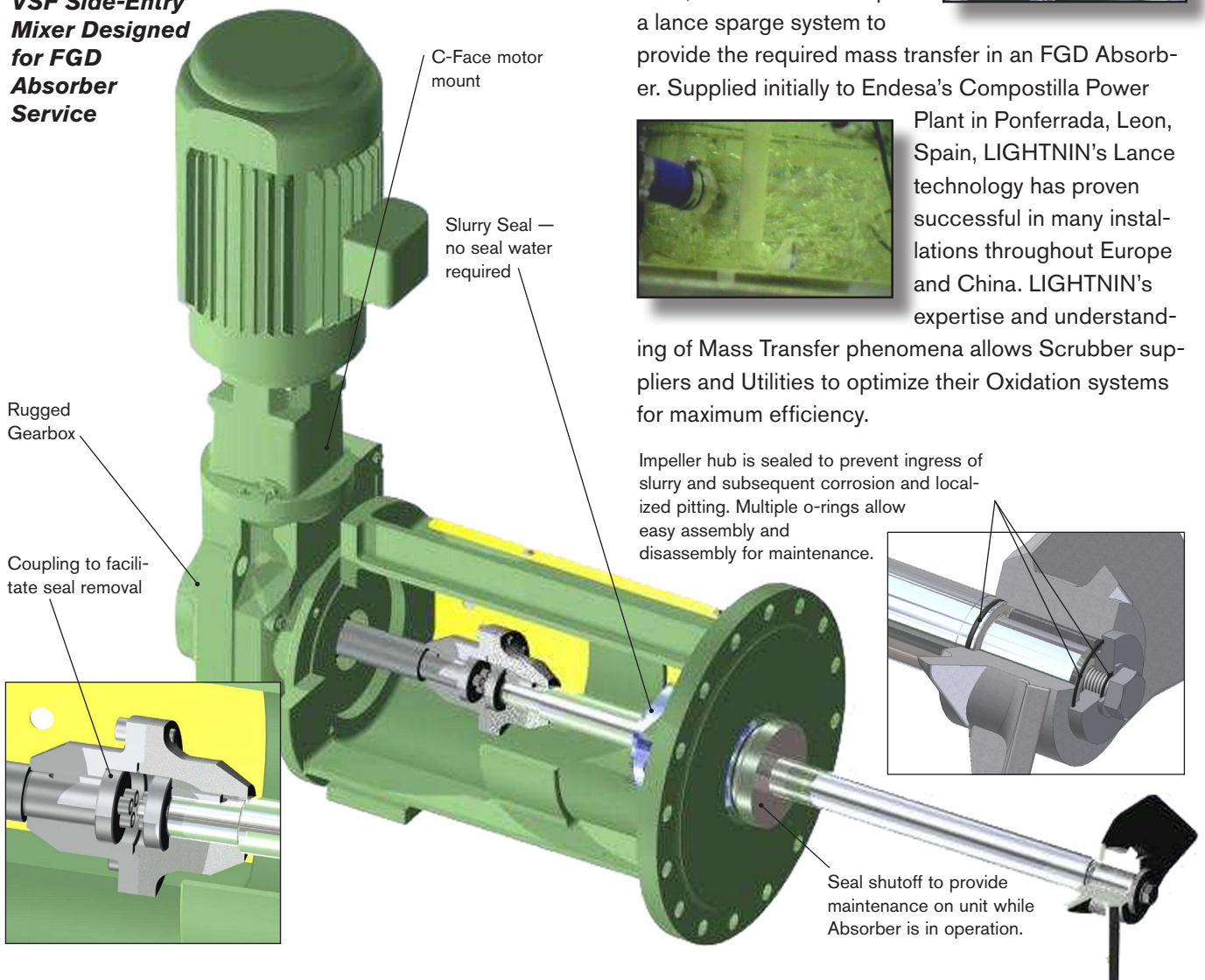
LIGHTNIN has successfully applied hundreds of Top and Side Entry agitators for flue gas desulfurization processes, from the very first FGD installation in the 1960's at the Lawrence Energy Center to today's modern power plants. Since the first installation, the Boiler Systems have advanced considerably 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.

## Oxidation Lance System

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.

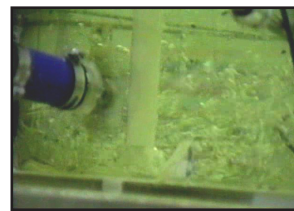
### **VSF Side-Entry Mixer Designed for FGD Absorber Service**



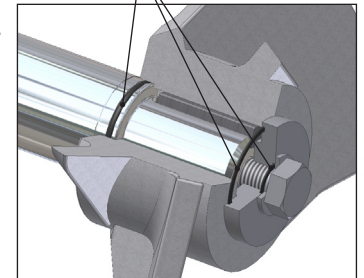
LIGHTNIN has extensive experience in designing and supplying Gas Sparge Systems for Mass Transfer in many different markets and applications. Specifically for FGD, LIGHTNIN developed a lance sparge system



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 understanding 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.



## 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.

Carbide faces, resistant to abrasion, geometry is designed for slurries

Integrated shutoff, easy to operate and contain tank contents while changing the seal

Shroud Protects pins and springs from the process

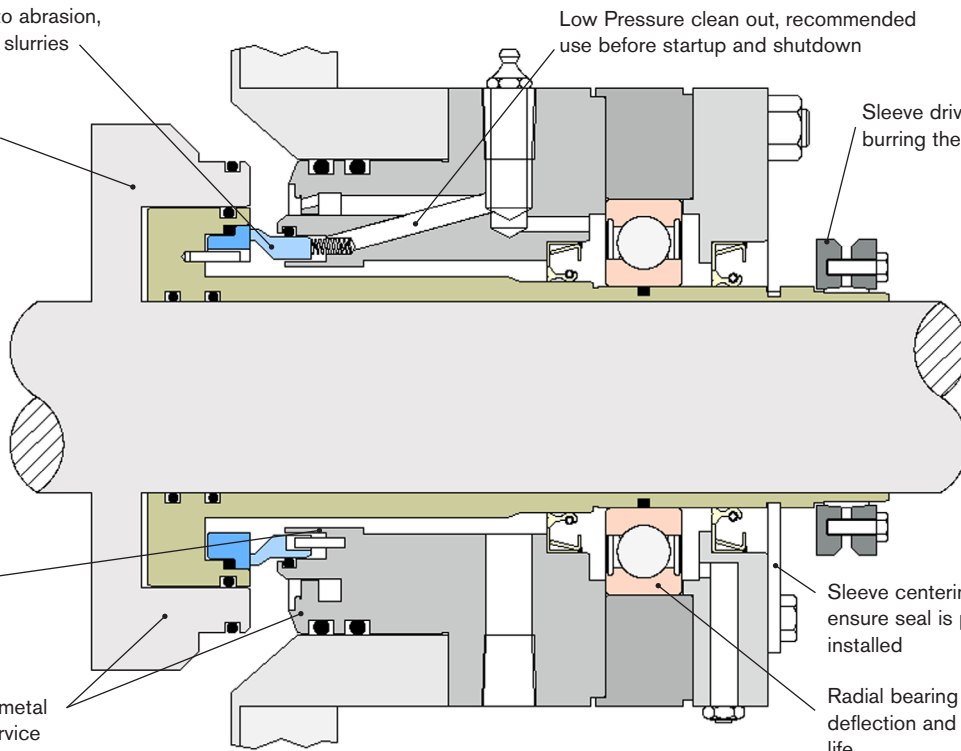
Duplex Stainless wetted metal for high chloride FGD service

Low Pressure clean out, recommended use before startup and shutdown

Sleeve drive attaches without burring the agitator shaft

Sleeve centering tabs to ensure seal is properly installed

Radial bearing to minimize deflection and increase seal life



## A-312 Impeller

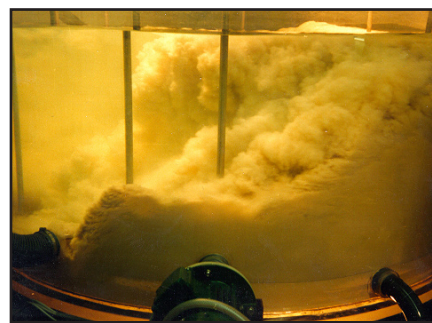
This hydrofoil impeller is specifically designed for the requirements of flue gas desulfurization. This impeller generates a strong, focused discharge across the swept diameter that ensures good solid suspension and gas dispersion.



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 desulfurization. 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](http://www.spxpe.com). Or call 1-888-MIX-BEST (U.S. and Canada)

# SPX®

## PROCESS EQUIPMENT

Your local contact:



SPX Process Equipment, LIGHTNIN Operation  
135 Mt. Read Blvd., Rochester, NY 14611  
Phone: (888) 649-2378 (MIX-BEST), (U.S. and Canada) or +1 (585) 436-5550  
E-mail: [LIGHTNIN@spx.com](mailto:LIGHTNIN@spx.com)

For more information about our worldwide locations, approvals, certifications, and local representatives, please visit [www.spxpe.com](http://www.spxpe.com).

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