

LUNDBERG

OUR COMPANY

Lundberg has nearly a century of practical experience helping customers meet requirements for process improvement, energy reduction, and environmental compliance across a wide range of industrial processes. We offer complete engineering, project management, and construction services, as well as comprehensive aftermarket service and spare parts supply.

We have the experience and expertise to offer comprehensive, costeffective solutions to help your company reach its goals.

OUR STORY

The history of Lundberg dates back to the 1920s, when Alerick Halvar Lundberg started working for a sulfite pulp manufacturer, eventually becoming known as "Mr. Sulfite" all along the West Coast of the U.S. Since that time, the Lundberg organization has grown and changed, but we've always maintained the same focus: striving to improve both the industries that we serve and the environment in which we live.

Our engineers have proudly carried the Lundberg name for nearly a century, analytically applying technologies to industry and helping our clients adapt to changing technologies and requirements with innovative designs and processes. Today, we continue that tradition, serving clients at hundreds of facilities around the world, with Lundberg offices in the U.S. and Spain, as well as manufacturer representatives worldwide.

The Lundberg legacy is a source of pride, but it's also a challenge-to add to our history in a way that lives up to our past accomplishments, and to keep solving new problems with fresh thinking and a spirit of service.



DOUG GIARDE President

- Started at Lundberg in 1984
- Doug is focused on maintaining the culture that has made Lundberg successful in the past, while leading the organization into the future.

• BSChE, University of Washington

• MBA, Seattle University

• "Say what you're going to do and do it. Communication and execution are key to our success."

ENVIRONMENTAL

Lundberg is one of the world's leading suppliers of customized air pollution control systems. We design and build systems for the control of non-condensable gases, VOCs, HAPs, and particulate matter, and we offer a range of project options—from studies and process engineering to complete EPC projects.

- Non-Condensable Gas (NCG) Treatment Systems
- Thermal Oxidizers, Geotherm RTOs and GeoCat RCOs •
- Geoenergy[®] E-Tube[®] Wet Electrostatic Precipitators (Wet ESP)
- Condensate Stripping
- Black Liquor Oxidation

Lundberg delivers practical, cost-effective solutions that emissions, driving down operational costs, and eliminating costly maintenance issues.



STEVE JAASUND

Manager, Geoenergy Products

- Started at Lundberg in 2002
- Steve oversees the overall direction of the Geoenergy[®] Wet ESP and RTO/RCO technology, including design and marketing.
- BSChE, Lafayette College
- MS Engineering (Air Resources), University of Washington
- "I believe that the public's demand for cleaner and cleaner air will propel our business for many years to come."





CHEMICAL PROCESSING

We offer a variety of chemical processing solutions to handle both byproduct recovery and chemical production requirements for many different processes. We know that byproduct recovery is an important revenue source for many facilities, and our wide range of equipment optimizes recovery of valuable materials such as tall oil soap and turpentine.

- Sulfur Burners
- Tall Oil Soap Recovery
- Turpentine Recovery and Processing Technology
- White Liquor Oxidation
- Ash Treatment Systems

EVAPORATORS

Lundberg is a leading supplier of evaporation technology, with applications that include full sets with integrated condensate strippers and high solids concentrators, reconfigurations of existing evaporators, blow heat pre-evaporation systems, and flash evaporators. Available technologies include falling film, longtube vertical, REX enhanced flooded forced circulation, and mechanical vapor recompression. We match our technology to the specific requirements of each application.

- Multiple Effect Evaporators
- Crystallizers
- Pre-Evaporators
- Falling Film Technology



DAN BLOOM Vice President, Technical

- Started at Lundberg in 1978
- Dan is responsible for general management, technical sales, and process design, but he's worked on almost everything at Lundberg at some point.
- BSChE, University of Washington
- BS, Pulp and Paper Technology, University of Washington
- "Process knowledge is the backbone of Lundberg."

JIM STRAKA

Manager, Evaporation Products

- Started at Lundberg in 1987
- Jim specializes in evaporator and concentrator design, as well as condensate treatment and heat recovery.
- BSChE, Washington State University
- "The modern evaporation plant is an energy-efficient, continuous process. Downtime is not an option."



WET ELECTROSTATIC PRECIPITATORS (WET ESP)



Collection of fine particulate emissions is one of the most difficult problems in environmental control. These sub-micron particles are one of the leading causes of visibility degradation, and they present a significant threat to human health.

A Lundberg Geoenergy® Wet Electrostatic Precipitator can be a cost-effective way to control these emissions. Our E-Tube® Wet ESP features:

- High-frequency transformer-rectifier sets to maximize the total electric field and reduce energy consumption
- External tube cooling to reduce water consumption and keep collection tube walls cleaner
- Star II electrode designs, which have a unique shape that improves efficiency and helps reduce unit size and cost
- Sphere adjustment hardware and its one-bolt design, which simplifies maintenance and electrode adjustment

SERVICE & AFTERMARKET

RTO/RCO AND WET ESP SERVICE, **REPAIR, UPGRADES, AND SPARE PARTS**

We have one of the most experienced field service groups in the industry, capable of servicing and repairing all makes of thermal oxidizers and wet ESPs. We are the Geoenergy OEM, with sole ownership of all Geoenergy drawings, designs, and technical files.

Our service team provides:

- Emergency service, with regional technicians that can get you back into operation quickly and safely
- Inspection, service, and tune-up of environmental equipment
- RTO/RCO ceramic media replacement, structural repairs, insulation repairs, and upgrades
- RTO/RCO energy audits to identify wasted energy and reduce gas bills
- Wet ESP system upgrades to include new transformer technology for improved collection capabilities
- Wet ESP and RTO/RCO spare parts, including in-house inventory of Kraft high-voltage transformer parts
- Training for safety, performance, and reduced downtime
- Relocation/commissioning of used equipment



ISO 9001 Certification and Quality management

Quality is fundamental to our ongoing success at Lundberg. That's especially true in the areas of continuous improvement, performance orientation, and customer-focused solutions—and it's the key to building long-term relationships with our customers.

Lundberg has been an ISO 9001–certified company since 1996. ISO 9001 certification assures that we provide a superior product on every project and that our design and quality-control procedures meet our customers' needs and expectations.

• Design control

We ensure that all designs are properly established, any design changes are documented, and only updated designs are used.

• Equipment inspection

We inspect equipment throughout construction, and we document those inspections. Anything that doesn't conform to the design drawings is identified and corrected by inspectors trained and certified to Lundberg's standards.

• Design validation

We ensure that all equipment meets customer requirements.





For complete engineering, project management, and construction services, as well as comprehensive aftermarket service and spare parts supply, contact Lundberg today.