

Ingeniería para un mejor futuro

Diseñamos, fabricamos, reparamos ó actualizamos cojinetes de turbinas hidráulicas | Contacte nuestros expertos, llene el formulario hoy.

Instalaciones en Guatemala

Equipo de Ingeniería y Servicios Técnicos

Resumen del selecto personal técnico disponible en Pioneer Motor Bearing para asistirle en el diseño, manufactura, reparación y mejoras de cojinetes hidrodinámicos e industriales.

We aim our engineering firepower on bearings and seals to improve the performance and reliability of our customers' turbomachinery.

Custom Engineering

Theoretical and technical expertise and almost 100 years of practical experience give us the insight to solve bearing performance issues. While others may offer only "reverse engineering" or application engineers supporting catalogued products, we provide unbiased professional engineering advice and custom-engineered, turn-key bearing solutions with a modern purpose-built plant to transform designs to new bearings or modifications to existing bearings.

Tribology

We start with tribology. Our engineers have a thorough understanding of materials, friction, lubrication and wear based on combining their advanced engineering education with field experience, and from their participation and contribution to professional societies.

Analysis

Our knowledge of and experience with radial and thrust bearing theory, materials, operations, and maintenance stand out in our industry.

Armed with sophisticated diagnostic software tools, we are ready on short notice to analyze rotor-dynamics, radial, and thrust bearings, bearing auxiliary components such as cooling and hydrostatic lift systems, and to determine the root cause of bearing damage.

Listening

Our finest ideas arise from listening to customers. The best and most enduring solutions begin with an understanding of the problem and the desired outcome. So we're not afraid to crawl around machinery and engage customers in a dialogue to think creatively. We integrate the customer into the design and problem-solving process, so our solution is indeed a result of teamwork and good communication.

Engineering Leadership

Our engineers serve as featured lead speakers at conferences of organizations such as:

- the Society of Tribologists and Lubrication Engineers (STLE);
- American Society of Mechanical Engineers (ASME); and
- the Electric Power Research Institute (EPRI), the "think tank" of the electric utility industry.

Our reputation extends beyond North America. In cooperation with France's national electric utility, Electricite de France (EdF), the Institut Pprime routinely invites Pioneer to attend and speak at its bi-annual conference on bearings in Poitiers, France. In Australia, we have led the workshop on bearings at an EPRI Turbine-Generator User's Group. We have provided training on rotordynamics and bearing theory to engineers with the Korean Electric Power Company and engineers at an OEM of small hydro turbines in Eastern Europe. On short notice, we've provided engineering, technical service, and training classes to power plants in such places as Brazil, Sweden, Korea, Guatemala, and Slovenia.

Closer to home, EPRI has recognized Pioneer as a subject matter expert in fluid film bearings. We regularly attend and often lecture on bearings at EPRI user group conferences in the United States. We have been developing bearing damage analysis software since 2015 in conjunction with EPRI.

For a description of lectures and published papers of Pioneer's engineers, see: <https://www.pioneer1.com/technical-papers>.



International Experience

We travel to help our customers solve problems. Some examples:

Manitoba Hydro

Multiple Pioneer engineers provided a three day training seminar to a large group of Canadian hydro engineers.

Jaguar Energy

Pioneer rendered on-site vibration and bearing troubleshooting services, leading to our redesign and manufacture of upgraded turbine bearings.

Zollern

Pioneer has provided advanced engineering support to help analyze radial and thrust bearing designs.

Angra 2

On site for a week for Eletronuclear's Angra 2 nuclear power plant, near Rio de Janeiro, we produced damage evaluation and root cause determination support for the upper guide bearings of reactor coolant pumps.

Vattenfall AB

Performed on-site technical services to Vattenfall AB, at Ringhals Nuclear Power Station, Väröbacka, Sweden.

ABB Stal

Pioneer delivered Fluid Pivot® Bearing Technology to ABB Stal in Finspång, Sweden

KEPCO

Performed technical services for KEPCO at Kori Nuclear Power Plant, Korea, and later taught a one-week course on rotordynamics to a KEPCO engineering team at our North Carolina plant.

Osaka Gas

After meetings on site in Japan and extensive destructive testing in North Carolina, Pioneer furnished Osaka Gas with a comprehensive bearing damage analysis.

Krško Nuclear Power Plant

Pioneer trained the maintenance engineers at Slovenia's nuclear power station.

Malakoff Corporation Berhad

Pioneer provided comprehensive bearing training for 35+ engineers, maintenance supervisors, and project managers—virtually, over a 3 week period.

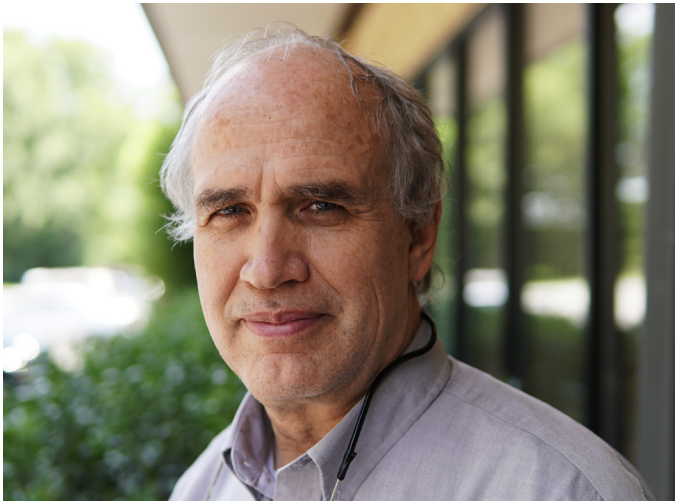
Benmore Hydro Plant

Pioneer produced an upgraded thrust bearing design for Meridian Energy, New Zealand.

“ Successful engineering
is all about understanding how things break or fail.

— Henry Petroski

Our Team



Lyle A. Branagan

Engineering Manager

P.E., B.S.M.E. (*with Honors*), M.S., Ph.D.,
The University of Virginia

After his undergraduate college years, Lyle began his career as a mechanical engineer with Pacific Gas & Electric (PG&E) in northern California, but after five years he took a leave of absence to obtain his Masters and Doctorate, based on his advanced research on temperature gradients in fixed geometry and tilting pad bearings. Returning to PG&E, Lyle excelled as a rotordynamics engineer, gaining solid design and hands-on operations experience with bearings and vibration in large turbomachinery. He was a hands-on member of the start-up team for PG&E's Helms Pump Storage Generating Station and the Diablo Canyon Nuclear Power Plant. Since joining Pioneer in 1996, Lyle has gained an industry-wide reputation not only for his intellectual strength and accomplishments, but for his modesty, good humor, and pleasant personality. When Lyle is not traveling the world on business for Pioneer, he enjoys going to exotic destinations with his family. Lyle is a registered Mechanical Engineer in North Carolina and California.



David ("Day") J. Griffin

Service & Rotordynamics Engineer

P.E., M.S.M.E.,
The University of Virginia

Day's introduction to Pioneer was a three-year stint as an engineering co-op student while earning his Bachelor of Science degree in Mechanical Engineering at Clemson University. Upon graduation, he began his full-time career with Pioneer and a few days later was on the job at Wells Dam on the Columbia River. After three years of practical service engineering work, he received a full scholarship to the University of Virginia to attain his Masters of Science in Mechanical Engineering while performing research at the University of Virginia's Rotating Machinery and Controls Laboratory ("ROMAC"). His graduate research focused on rotordynamics and the effects of circumferential scratching in fluid film bearings. After graduation in 2016, Day returned to Pioneer and, among other accomplishments, has since been central to the development of Pioneer's hydro spring-bed thrust bearing upgrades as well as other custom-designed bearing solutions. Day is a registered Professional Engineer in North Carolina. In his free time, Day enjoys casting and fabricating metal in his own home shop.



Michael Branagan

Service & Rotordynamics Engineer

Ph.D.

The University of Virginia

Similar to Day Griffin, Michael started his career at Pioneer as an engineering co-op student while earning his Bachelor of Science degree in Mechanical Engineering at Clemson University. After receiving his doctorate from UVA he rejoined Pioneer in 2018 full time. Michael is concentrating on the development and enhancement of predictive bearing analysis software codes and assists his father in performing work under Pioneer's ongoing consulting contractual responsibilities to support the Electric Power Research Institute ("EPRI"). In his free time, Michael enjoys long distance running, reading, and writing code.



David ("Dave") Saldo

Plant Manager

B.S.B.A (*with Honors*)

Western Carolina University

With almost 30 years of service at Pioneer, Dave was recently promoted to his current position to oversee all plant operations, which include production, drafting, estimating, procurement, and machine tool maintenance. He brings the practical experience of having started his career at Pioneer as a journeyman bearing machinist. Dave even provides technical services at power plants, occasionally assisting our engineers at customer sites to investigate bearing performance issues to help solve them, and leads or assists in root cause analyses. David has earned a reputation not only for his deep expertise in all aspects of manufacturing and repairing fluid film bearings and seals but also for his objective analysis and evaluation of issues in order to form non-biased judgments. His dedication to the principle of continuous improvement not only permeates his life at Pioneer but his personal life: he earned his college degree while working full time, married, with children.

Our Team



Robert ("Rob") Miller

Quality Assurance Manager
B.S.I.T.E., California University (PA)

Marine and land-based nuclear reactors, with all their critical quality requirements, have played a central role in Rob's life. His career embarked in the US Navy aboard the USS Dwight D. Eisenhower (CVN 69), where he managed both the machining and hydraulics departments. He later spent 17 years with Westinghouse, Nuclear Services Division where he held many different roles supporting engineering, project management, field services engineering and quality assurance. Rob has obtained numerous certifications, including ANSI, SNT-TC-1A, QA Manager, Project Manager certification and a Six Sigma/Lean Green Belt. He is also a State Certified Journeyman Machinist, accredited through the National Tooling and Machining Association. In support of jobs that entail Pioneer's engineering design work, Rob and his QA team are ultimately responsible for assuring that Pioneer's work-in-progress, finished products, services and accompanying required documentation are all in compliance with the requirements of customers, Pioneer's quality assurance program, and the designs and specifications of the engineering department.



Robert ("Bob") Swisher

Technical Sales Manager Emeritus & Consultant

A legend not only at Pioneer but at Siemens and (in their day) ABB and Alstom Power, Bob is nothing short of a walking encyclopedia of OEM technical specifications and part revision histories. He is the first full-time person hired in 1990 when Pioneer built and opened up its new North Carolina plant, an expansion of the company's California operations. Following some machining experience at Chrysler in Ohio, Bob and his wife, Deborah, sought new opportunities and a better climate by moving to the Southeast. After some time in the shop and ten years heading up Pioneer's Quality Assurance Department, in which he became a scholar of OEM specifications and the details of complex bearing assemblies and sub-components, Bob made the natural transition to the role of technical sales support. With a virtually photographic memory and three decades of experience, he is routinely called upon by not only end users but OEM field service engineers to provide technical information about OEM bearings and seals. Bob has experience with virtually every type of radial and thrust bearing designed for land-based power generation by Westinghouse, Siemens, ABB, and Alstom Power and significant comprehension of GE-designed bearings for steam and combustion turbines.



Ralph Martinez
Production Manager

When he was just 17 years old, Ralph started at Pioneer in our California plant as an apprentice machinist. Four years later, he earned his journeyman machinist certificate, issued by the state of California. Over more than 40 years, Ralph has held nearly every job on the shop floor. He has an unsurpassed knowledge of bearing manufacturing, repair, and service. As the production manager, he is responsible for every part of manufacturing and repair activity in the machine shop and in our non-ferrous foundry's casting operations, as well as all shop and foundry personnel. He leads many kaizen and lean continuous improvement programs. As a core member of our technical team, Ralph contributes to our engineers' focus on "value engineering", ensuring that whenever possible, designs are created that can be manufactured as efficiently as possible to reduce costs for our customers. In his free time, Ralph is an avid hunter as well as a competitive golfer and routinely plays in tournaments throughout the Southeast.



Lynn Boone
Procurement Agent

Lynn Boone is Pioneer's Procurement Agent but is our Emeritus Quality Assurance Manager we hold in reserve to contribute to the work of the Quality Assurance team during our busiest seasons. He led our QA department for almost two decades beginning in 1993, following service with the Quality Assurance Department of ABB Combustion Engineering's plant in North Carolina. Lynn has extensive experience performing ultrasonic testing of damaged journal bearings and thrust bearing shoes and verifying the "as is" dimensions and conditions of bearings in Pioneer's plant and at customers' sites. If necessary, Lynn can use Pioneer's portable Faro Gage and computer laptop (in essence, a portable coordinate measuring machine) to provide computer coordinate measuring and recording of dimensions either at Pioneer or customers' sites.

For More Information, Contact:



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Lyle A. Branagan

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Heather Garrison

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