





Borescopes Internal Visual Inspection Instruments

QUALITY OF IMAGE ONLY SURPASSED BY QUALITY OF PRODUCT

FireSight Boiler & Furnace Camera Systems



FOR NEARLY A CENTURY, LENOX INSTRUMENT COMPANY has been serving customers by solving their most challenging, and often hostile, remote image acquisition.

LENOX INSTRUMENT COMPANY'S founder, Dr. George Crampton, a renowned ophthalmologist, created the first industrial borescope to inspect for flaws inside steam turbines. During the 1930s, he supplied borescopes for inspecting hard to reach and often dark locations.

In the early '40s, Dr. Crampton joined with John Lang as they began designing and manufacturing borescopes and periscopes for the war effort. This included a new use for the borescope, inspection of gun barrels to identify flaws and wear. In 1942, Lenox began producing a borescope for the first nuclear application, The Manhattan Project. This new instrument was used to inspect tubes near the radioactive pile. It allowed the operator to inspect and photograph the interior of the tube remotely.

In the early 1950s, lenox initiated their production of OEM Boiler Cameras. Also during the '50s, Lenox designed and manufactured borescopes to detect flaws in the wings of the largest U.S. bomber fleet at the time, the B-47.

Throughout the 1960s and into the '80s, Lenox developed the custom Xenon Chamberscope for Pratt & Whitney to inspect the turbine blades of the JT9 engine, which insured the turbines were performing reliably.

During the 1980s, Lenox introduced the Autoscope, the first economical, small-scale, rigid borescope designed for automobile and small airplane engine inspections. In 1988, Lenox introduced the FireSight, the world's first boiler camera with a remotely-controlled iris, which eliminates blooming on the video monitors.

'40s - '50s

1920 - '40s

Lenox Instrument Co.

was founded in 1920 by

Dr. George S. Crampton, first manufacturing turbine

inspection borescopes for

Lenox machine shop, circa 1925

Westinghouse.

During this wartime period, Lenox devoted much of its energy to defense

orders, mostly for scopes to inspect the bores in the barrels of 37mm anti-aircraft guns.



Anti-aircraft gun plant, inspection of rifling & interior finish, 1942

Quality, Innovation, Testing, and Customer Service have been our focus through the years.

During this era, Lenox developed and manufactured many scopes for the nuclear age.

'50s - '60s



Lenox produces a borescope to inspect helicopter blades, which Boeing-Vertol and Sikorsky Aircraft used extensively during the Vietnam War.

'60s - '80s

LENOX: THE OBVIOUS CHOICE

- The widest selection of products
- Providing cost effective solutions
- Supported by qualified application expertise
- Guaranteed to be the right choice
- Industry leading two-year warranty
- Fully integrated manufacturing facility
- U.S. company since 1920
- Local Sales/Support

Metallurgy microscope, E.I. Dupont Co., Savannah River, 1957



Helicopter blade inspection, Boeing-Vertol, 1966

'80s - present

Lenox develops and refines FireSight as well as other scopes for high-temp applications, and begins to focus on videoscopes for the 21st century.



Pultz line of high-temperature cameras



Borescopes

Lenox Borescope Products

Over the course of our history, Lenox has earned a reputation for innovation in the development of industrial borescope technology that meets the most demanding requirements and for our ability to provide the highest quality optical images that technology will allow. Lenox borescopes are high-quality Remote Visual Inspection (RVI) instruments designed to view internal or difficult-to-reach places, where your eye cannot go, without having to destroy, disassemble or tear apart what you are inspecting. They are selfilluminating and deliver a brightly lit, magnified, high-resolution image of the inspected area to the eyepiece or color display/monitor.

Videoscope with single-hand, tip articulation controls and LCD display

Videoscopes

Affordable, easy-to-use, high-resolution, remote imaging systems featuring 4-way tip articulation and a control/display handpiece with a 6.4" LCD display and digital image capture and transfer to computer.

Fiberscopes

Steerable 2 or 4-way tip articulation that allows maximum flexibility, while ensuring bright, clear viewing of a full range of views. All scopes are sealed and waterproof.

Rigid Borescopes

Quality, high-performance products of all metal construction with computer-designed optical systems, which produce an abundance of near-100%-white light and the highest possible resolution.

Micro Borescope

Flexible and semi-rigid miniature borescopes, available with diameters as small as 0.5mm (.020").

Sectional Extendable Borescopes

Units are modular in design and allow the user to add extender sections to provide very long working lengths with exceptional image resolution.

Custom Assemblies

Custom solutions for demanding applications involving temperature extremes, corrosive environments, explosive or flammable atmospheres and radiation exposure.

Borescope Accessories

Light sources, including high-intensity, portable, explosion-proof and ultraviolet; light cables; still and video camera systems; digital recording devices; environmental protection, including protective shrouds and radiation-hardened lenses. Rigid Borescope with adjustable focus

Bright, high quality images (actual image through a Lenox Borescope)



Water-cooled, Lenox/Pultz camera for applications up to 500°F (260°C)





- Air and water-cooled models
- High-temperature quartz optics
- Exclusive light volume control
- Two-year warranty
- Preventive maintenance contracts
- 24/7 factory service



Water-cooled Lenox/Pultz camera for applications up to 4250°F (2345°C)

Remotely view, record and store real time images of high-temperature processes

High-Temperature Camera Systems

Lenox FireSight high-temperature, remote viewing, boiler and furnace camera systems provide clear, crisp, real-time images of combustion and other internal processes in boilers, furnaces, kilns, incinerators and a variety of hot area monitoring applications. Portable and fixed, air and water-cooled FireSight systems are available for service in high-temperature, hostile environments up to 4250°F (2345°C).

Lenox high-temperature camera systems perform reliably in hundreds of power, steel, glass, paper, cement, refinery, petrochemical and trash-to-steam installations. These systems are supported 24/7 and are backed by an industry leading two-year warranty.

FireSight

Lenox Instrument Company Client List

Alabama Power Southern California Edison Allentown Cement Southern Company Alstom Power Tennessee Eastman American Rel Fuel Texas Gen Co. Arizana Public Service Texas Utilities Babcock & Wilcox Wheelabrator Barlow Projects Wisconsin Power & Light Bechtel Westvaco China Light & Power City of Orrville Commonwealth Edison Con Ed Connecticut Light & Power Consumers Energy Covanta Dominion Power Daw Chemical Duke Power Eastman Kodak EER Entergy Exxon Research Florida Power & Light Foster Wheeler Georgia Pacific Georgia Power Gulf States Utilities Illinois Power International Paper Long Island Lighting Mississippi Power Marathon Oil Merck Mirant Corporation Nevada Power Northern Indiana Public Service NRG Energy Ohio Power ONYX Environmental PECO Pfizer PSE&G Reliant Shell Oil Company Siemens Westinghouse Power Sunoco Chemicals Southern California Edison AFG Pilkington PPG Cardinal Corning Guardian Saint-Gobain US Steel Ispat Inland International Steel Group Bethlehem Steel Nucor Argonne National Laboratories Caterpillar, Inc. Delta Air Lines Department of Atomic Energy Ford Motor Company General Dynamics Corporation General Electric Company General Motors Lockheed Mcdonnell Douglass Corporation NASA Newport News Shipbuilding Sikorsky Aircraft Division Tennessee Valley Authority Teledyne Continental Motors, Inc. Tayota Motor Distributors, Inc. U.S. Air Force U.S. Army U.S. Coast Guard U.S. Marine Corps U.S. Navy Volkswagen of America Westinghouse Electric Corporation Alabama Power Southern California Edison Allentown Cement Southern Company Alstom Power Tennessee Eastman American Ref-Fuel Texas Gen Co. Arizona Public Service Texas Utilities Babcock & Wilcox Wheelabrator Barlow Projects Wisconsin Power & Light Bechtel Westvaco China Light & Power City of Orrville Commonwealth Edison Con Ed Connecticut Light & Power Consumers Energy Covanta Dominion Power Dow Chemical Duke Power Eastman Kodak EER Entergy Exxon Research Florida Power & Light Foster Wheeler Georgia Pacific Georgia Power Gulf States Utilities Illinois Power International Paper Long Island Lighting Mississippi Power Marathon Oil Merck Mirant Corporation Nevada Power Northern Indiana Public Service NRG Energy Ohio Power ONYX Environmental PECO Pfizer PSE&G Reliant Shell Oil Company Siemens Westinghouse Power Sunoco Chemicals Southern California Edison AFG Pilkington PPG





265 Andrews Road Trevose, PA 19053 1-800-356-1104 Phone: 215-322-9990 Fax: 215-322-6126 www.lenoxinst.com

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