Sealing solutions for the Nuclear Industry
DESIGNER OF INDUSTRIAL SEALING SOLUTIONS SINCE 1920.

A standard-setter in the industrial sealing sector, GROUPE LATTY® owes its leadership to its willingness to invest in Research & Development of specific products for your equipment. GROUPE LATTY® designs and manufactures products that comply with the highest industrial standards.

GROUPE LATTY® is present in the following sectors:

• Petrochemicals
• Energy
• Chemicals
• Pharmaceuticals
• Cryogenics
• Food processing

And provides:

• Complete solutions suitable for each type of materials
• Complete ranges of industry-standard or customer specific products
• A research and test laboratory
• Type approval of your equipment
• Training adapted to your needs
• A French product and a guarantee of quality

GROUPE LATTY SERVICES

GROUPE LATTY’s reputation is based on adherence to very strict quality rules that guarantee the reproducibility and security of its products. Our products are essential to ensuring the sealing efficiency of complicated industrial processes and the quality of their raw materials used and their longevity mean that our customers can:

• extend the life of their production systems,
• reduce their maintenance costs,
• ensure safety and protect the environment.

Made in France
And provides:

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• Complete ranges of industry-standard or customer specific products
• A research and test laboratory
• Type approval of your equipment
• Training adapted to your needs
• A French product and a guarantee of quality

After evaluating the mechanical seals and providing an estimate of costs, we carry out any necessary repairs, reconditioning and improvement of seals. Once repaired, the seals are inspected on our test benches.

Our technicians are available for the assembly of our sealing products. Our technical assistance advises you on good practices in the assembly and in the preventive maintenance of the seals in place.

Depending on the customer’s requirements, the products we manufacture are inspected and tested to validate both the design and the materials. In this way, we constantly improve our products and guarantee that they meet as closely as possible the standards set by the nuclear industry. These tests ensure that the products we supply to our customers match their expectations.

Our technicians and engineers collaborate with customers in the early stages of a project in order to define the specifications. Where necessary, on-site visits are carried out in order to better understand and take into account the project’s specificities and to consider all possible options.

In the design phase, our mechanical seals are systematically modelled using CAD/CAM software in order to simulate their behaviour when in operation.

Based on the specifications defined and any specific requirements the customer may have, GROUPE LATTY studies and designs a tailored sealing solution.

The nuclear industry’s reliability and safety standards require technical validation by means of intrinsic qualifications and product approvals (such as PMUC). GROUPE LATTY works jointly with EDF’s engineering teams within the framework of these mechanical, thermal, corrosion- and irradiation-related validation tests.

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Our training modules are dedicated to the selection of sealing solutions, with a focus on implementation and best practice in assembly. They guarantee the safety of your personnel and the reliability of your equipment. Training sessions take place at our production site or on the customer’s premises. GROUPE LATTY is an approved training organisation.

A well-trained employee is a more skillful and efficient one.

培训模块专注于密封解决方案的选择，重点是实施和最佳实践在组装。它们保证了人员的安全和设备的可靠性。培训课程在我们的生产现场或客户处进行。GROUPE LATTY是一个批准的培训组织。
SEALING SOLUTIONS FOR ROTARY UNITS

MECHANICAL SEALS

Our mechanical seals meet EDF’s requirements and qualifications as well as the safety and security standards set by the nuclear industry. They also contribute to the cleanliness of installations (leak reduction, OEEI / MEEI, etc.).

STANDARD MECHANICAL SEALS

Our mechanical seals are designed to be installed on secondary and cooling circuits such as: Conventional Island Closed Cooling Water System (SRI), Raw Water System (SBE), Condenser Tube Cleaning System (CTA), Raw Water Filtering System (SFI), Demineralized Water Production System (SDP), Administration Building Chilled and Hot Water System (DEB), Hot Water system (SES), Demineralized Water Production System (SDA), Steam Transformer System (STR), etc.

CARTseal B 14810 & CARTseal B 24810

- Stationary mechanical seal,
- For high-rotation-speed applications,
- Allows for angular shaft offset,
- Ready for use: no setting required during installation, reduced maintenance time,
- Suitable for any type of equipment.

MECHANICAL SEALS QUALIFIED FOR ACCIDENT CONDITIONS

LATTYseal B 11200 - Friction faces without antimony

- Balanced mechanical seal cartridge,
- With the latest generation of friction faces without antimony and abrasion resistance
- For high pressure applications, high temperature with thermal shock, high speed and charged fluids,
- Qualified mechanical seals MQCA for EDF, circuits: Auxiliary Feedwater System (ASG), Chemical and Volume Control System (RCV), Safety injection system (RIS), Containment Spray System (EAS)

LATTYseal B 10610 - Diamond faces

- Mechanical seal cartridge with diamond faces,
- Elastomer seals, PMUC-qualified for 1,700 kGy,
- For high temperature applications with thermal shock and without cooling, high pressure, high speed and loaded fluids,
- Qualified Mechanical Seals MQCA for EDF: Ultimate Pumps EAS U (Containment Spray System).

LATTYseal B 11610 - Welded pipes up to RCC-M

- Balanced mechanical seal cartridge,
- With built-in pumping screw,
- Cover with welded pipes up to RCC-M,
- Cooling according to API plan 23, with exchanger,
- For high-pressure, high-temperature and high-speed applications,
- EDF circuits: APP all bearings 900MW / 1300 MW / 1450 MW.

Heat Exchanger RCC-M

- Calculated and manufactured according to RCC-M, for our mechanical seals with cooling according to API 23 plan.
- Circuits Containment Spray System (EAS), Safety injection system (RIS) and Moisture separator reheaters system (GSS)...

LATTY E 48Z11 LY 1700 - EPDM gasket

- Elastomer seals based on EPDM qualified up to EDF programme with a resistance of materials to radiation up to 1,700 kGy
- Suitable for dynamic or static sealing
- Different forms of seals feasible, consult us
- PMUC approval n° 17-0389
SEALING SOLUTIONS FOR ROTARY UNITS

PACKINGS

Our packings meet the requirements of cooling circuits with an impact on the safety of equipment installed in the reactor building.

They are designed to be installed on secondary and cooling circuits such as: Circulating Water System (CRF), Fire-fighting Water Production System (JPP), Low Pressure Feed Water Heater System (ABP), Auxiliary Feedwater System (ASG), Essential Service Water System (SEC), etc.

LATTYflon 4788 & LATTYflon 4789
- Mechanical resistance suitable for slurries
- Leak reduction
- Ready-for-use kit
- Maintenance savings

LATTYflon 7188 & LATTYcore 7189 G
- Reduced frictions
- Leak reduction
- Reduced wear of your equipment
- High elastic recovery

SERVICE PARAMETERS (NOT ASSOCIATED)

LATTYflon 4788
- Pressure: 0 to 200 bar
- Temperature: -200°C to 300°C
- Speed: < 25 m/s
- pH: 2-13

LATTYflon 4789
- Pressure: 0 to 100 bar
- Temperature: -200°C to 275°C
- Speed: < 20 m/s
- pH: 2-12

LATTYflon 7188
- Pressure: 0 to 200 bar
- Temperature: -220°C to 300°C
- Speed: < 20 m/s
- pH: 1-13

LATTYcore 7189 G
- Pressure: 0 to 200 bar
- Temperature: -220°C to 260°C
- Speed: < 20 m/s
- pH: 1-13
SEALING SOLUTIONS
FOR VALVES AND FITTINGS

PACKINGS, RINGS AND GASKETS
For many years, we have devoted a portion of our Research & Development to improving sealing solutions that meet the requirements of nuclear industries in the area of industrial valves and fittings. As specialists in sealing solutions for valves and fittings, our products ensure the security of your installations and the safety of your personnel and external staff.

ADVANTAGES
Packings for stuffing boxes consisting of compressed rings and anti-extrusion rings specially developed to meet the nuclear industry’s technical and safety requirements:
• Resistance to radiation up to 4000 kGy
• Provides outstanding sealing efficiency under low clamping force.
• Very low friction coefficient and very good elastic recovery,
• Ready-for-use packings for reduced maintenance time.

Our products ensure:
• Optimum operating sealing efficiency for a safe and efficient installation,
• Reduction in the stem operation torque required to optimise opening/closing time of motor valves as a result of reduced friction.
• Increased safety as a result of more reliable sealing solutions,
• Very good resistance in the event of drastic variations in temperatures or pressures,
• Contains a passive, unlimited corrosion inhibitor.

SERVICE PARAMETERS (NOT ASSOCIATED)

PACKINGS & RING FOR STUFFING BOXES
• Resistance to radiation up to 4000 kGy
• PTFE: 310°C / 185 bar
• Graphite: 450°C / 420 bar

RINGS FOR STATIC SEALING
• From -196°C to 650°C
• From vacuum to 650 bar for gas applications or 0 to 700 bar for liquid applications.
SEALING SOLUTIONS FOR BOLTED FLANGE CONNECTIONS

RINGS AND GASKETS

Our static sealing solutions meet the requirements of different types of assembly and circuits in the nuclear industry, e.g. piping, pressure equipment, rotary units as well as valves and fittings. Whatever the configuration of equipment and processes, our static sealing solutions are made to suit high-pressure and high-temperature operating and qualification circuits.

STATIC SEALING WITH HIGH PressURES AND TEMPERATURES

Graphite rings
- Optimised intervention time,
- Contain a corrosion inhibitor and may be subjected to pressures ranging from vacuum to 1,000 bars and temperature variations from -200°C to +650 °C.
- Tailor-made from 2 to 900 mm,
- Installation including on damaged or distorted flanges,
- Forms and dimensions adapted to your needs for your static sealing applications: valve bodies/bonnets, etc.
- Approval: PMUC n°17-0106

LATTYgraf REFLEX
- Consists of three components: an active component made of expanded graphite LATTYgraf EBS (PMUC) to provide sealing efficiency, a precision-machined stainless steel outer ring used as a compression limiter and anti-extrusion ring, an inner steel reinforcement ring,
- Designed to operate with metal-to-metal contact,
- Outstanding elastic recovery of the compressed expanded graphite, approx. 10% of the thickness of the compression limiter,
- Approval: PMUC n°17-0185

STATIC GASKETS FOR GENERAL USE

LATTY E 48Z11 LY 1700
- Elastomer gasket based on EPDM qualified up to EDF programme with a resistance of materials to radiation up to 1,700 KGy. It meets the chemical specifications of PMUC with values of halogen and sulphur content below 200 ppm,
- Suitable for dynamic or static sealing,
- Different forms of seals feasible, consult us,
- PMUC approval n° 17-0389

LATTYgold 92
- Aramid gasket sheet made of synthetic fibres bonded together with a mix of NBR-SBR elastomers and compressed to obtain sheet material,
- Very good resistance to mechanical, thermal and chemical stresses,
- Anti-adhesive treatment on both faces,
- Flexible, easy to cut,
- Approval: PMUC n°17-053

LATTYflon 94 L
- Modified filled PTFE gasket sheet,
- Isotropic structure that provides high resistance to creep,
- Excellent elastic recovery which guarantees high sealing performance,
- The total chemical inertness of its components ensures high-performance applications over a very wide range of aggressive chemicals (except for alkaline and fluorinated products), bases and strong acids, solvents and hydrocarbons,
- Approval: PMUC n°17-0188

LATTYgraf EFMC BS
- Multilayer gasket made of pure expanded graphite with anti-corrosion treatment, combined with extremely fine, tanged stainless steel inserts,
- Sheets specially designed to promote adherence of the graphite without gluing, thus avoiding creep resulting from a product loss when used at high temperatures.
- Bonding method that allows the product to retain the intrinsic properties of soft graphite, thereby simplifying sheet handling and gasket production,
- Approval: PMUC n°17-0184
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*Lattys with workshop for mechanical seals repair and repackaging

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