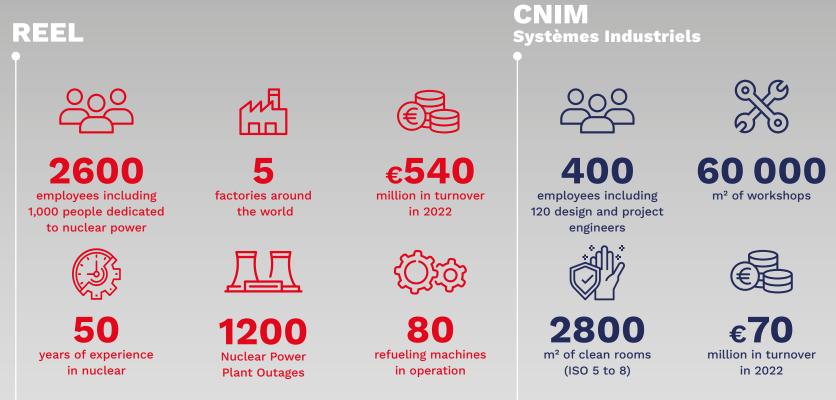




Design, Manufacturing & Services for High Safety Handling & Process Systems







REEL & CNIM Systèmes Industriels are **ISO 19443** certified.



# **IN NUCLEAR INDUSTRY**

**REEL is a global leader** in lifting & handling systems and critical mechanical systems for industries where safety and reliability are imperative.

Our teams design, manufacture, assemble, commission and maintain high-performance solutions according to our customers' requirements.

With nearly 80 years of experience under the sign of excellence, our 2,600 employees are committed on a daily basis and make us a partner of choice in the fields of energy, aeronautics, defence, metallurgy and the environment.

The acquisition of CNIM Systèmes Industriels in September 2022 strengthens our position as a strategic supplier to our customers around the world.

#### **Our nuclear expertise**

With more than 50 years of experience in the design, manufacturing and maintenance of special equipment and machines for nuclear power plants and fuel cycle facilities, the REEL group is involved in all key stages of the cycle with more than 1,200 professionals involved around the world.

With the acquisition of CSI, the group acquires large-scale technological and industrial capabilities enabling it to respond to the strong growth in the needs of the sector.

Our teams ensure overall project control and guarantee the quality and performance of our highly specialized products such as our highly secure handling equipment, our fuel storage equipment and our cold water intake equipment.



# REEL: NUCLEAR & OPERATIONAL SAFETY FIRST!

Historic supplier to major nuclear players, the REEL group makes the health and safety of its employees and partners a priority and a shared culture.

# One goal: zero incident, anytime and anywhere

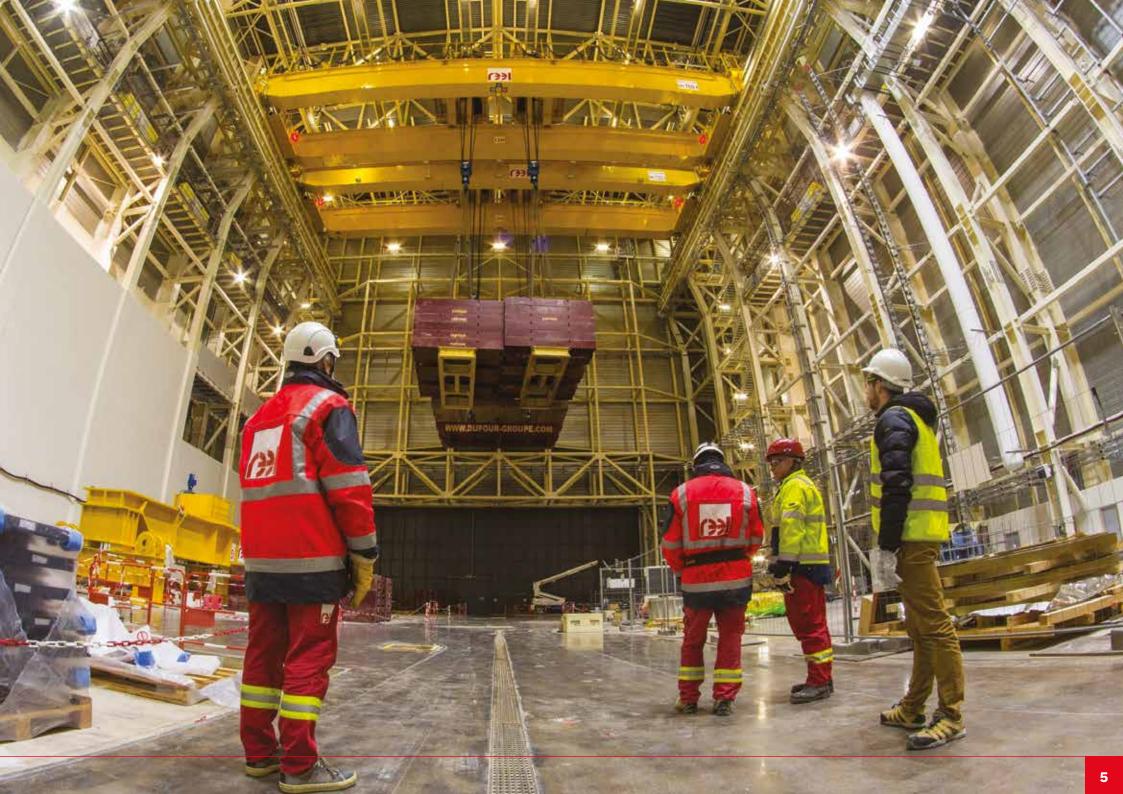
A dedicated safety team supervises each activity carried out in each of our premises and on each of our clients' sites.

50 advisors permanently deploy our safety culture

program on site to 600 managers and their teams. **We operate worlwide** at the heart of nuclear installations, as a constructor or maintainer.

To ensure maximum security of the facilities where we operate, we have developed **a nuclear safety policy** to coordinates the training and the commitment to safety of each stakeholder within the organization.

Knowledge and respect for procedures, transparency and questioning attitude are the pillars we transmit to our employees.





# **OUR CUSTOMER COMMITMENT**

The success of our projects is based on five main pillars:



Radial plates for the ITER Tokamak being machined in the CNIM Systèmes Industriels workshops

**1**/ **The satisfaction of our customers** through the analysis of their needs and the delivery of equipment and services meeting requirements at the best cost

2/ The quality of services from order intake to project acceptance

3/An extensive management our employees' skills, regularly assessed and trained within the REEL Academy

A nuclear safety and quality management system periodically audited by our customers on our various sites certified notably ISO 9001, KTA1401, MASE and ISO 19443

5/ A complete integration of all skills in the company: product design in our design offices, manufacturing in our factories, commissioning on customer site by our specialists, maintenance by our teams.

## A COMPLETE LOOP TO SERVE CUSTOMER

#### DESIGN

#### **Dedicated design office**

- Systems & Process engineering
- Mechanical design & calculation, I&C
- Reliability, availability and maintenability

#### SERVICES

- Maintenance Engineering
- Preventive & corrective maintenance
- Technical assistance
- Spare parts & obsolescence management
- Modernization & reinforcement
- Regulatory compliance
- Training
- Instrumentation and equipment 4.0 monitoring

CUSTOMER SATISFACTION PLACED AT THE CENTER OF OUR GLOBAL APPROACH

**Experience sharing** 



### COMMISSIONING ON SITE

#### Erection

Commissioning

#### MANUFACTURING

#### **5 factories worldwide**

- Machining
- Welding
- Mechanical and I&C assembly
- Factory acceptance tests
- Quality control
- 2 deep pits & 1 pool for factory tests
- 1 quayside site dedicated to large-scale and heavy load manufacturing



Refueling Machine for Boiling Water Reactor



265t/32t Trolley for Polar Crane for NPP Loviisa

Refueling Machine for Pressurized Water Reactor

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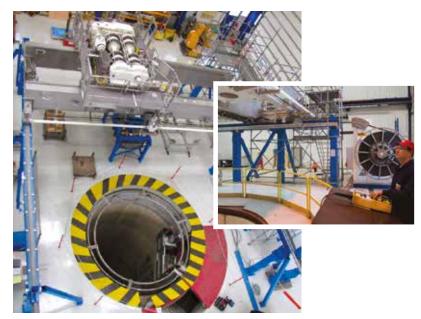
## FUEL HANDLING SYSTEMS & SECURE HANDLING EQUIPMENTS



**RPVI Lifting Device (OMI)** 

- Refueling Machine
- Spent Fuel Mast Bridge
- Secured Gantry
- Fuel Elevator
- Fuel Transfer Facility between Reactor Building and Fuel Building
- Auxiliary Crane
- Reactor Building Crane
- Reactor Pressure Vessel Lifting Device
- Spent Fuel Unloading System (DMK)

## FUEL HANDLING SYSTEMS & SECURE HANDLING EQUIPMENTS



Hot Cell Handling Equipment



Spent Fuel Unloading System (DMK)

Fuel Handling and Transfer Machine for Nuclear Waste Disposal Facility at Olkiluoto



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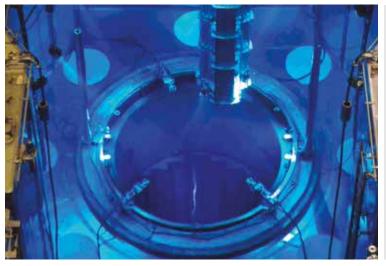
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### NUCLEAR ISLAND COMPONENTS



Pool Lighting



Reactor Vessel Video Tool



## COLD WATER INTAKE EQUIPMENT

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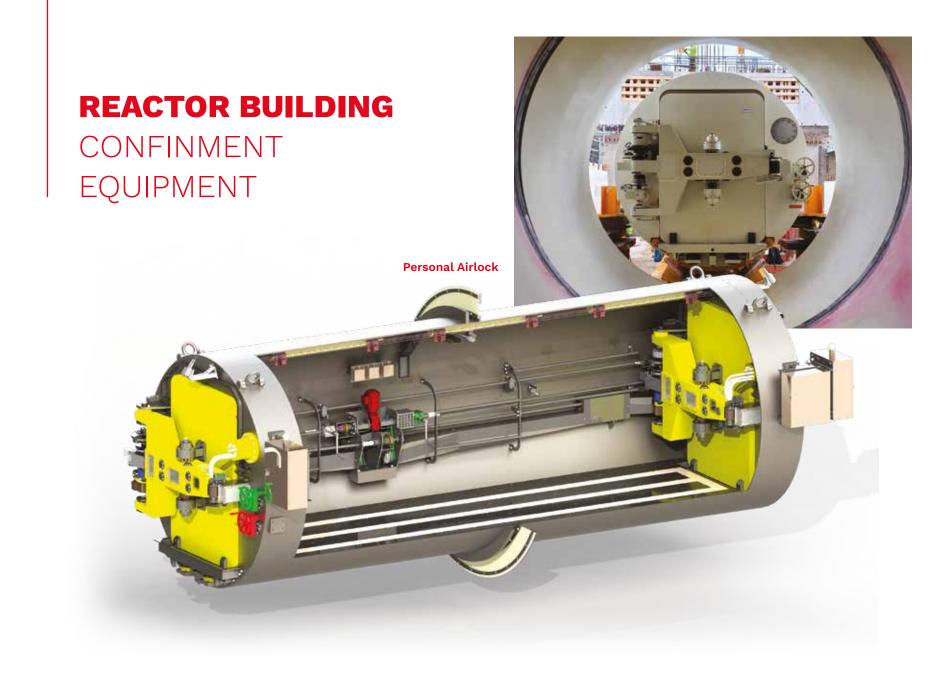
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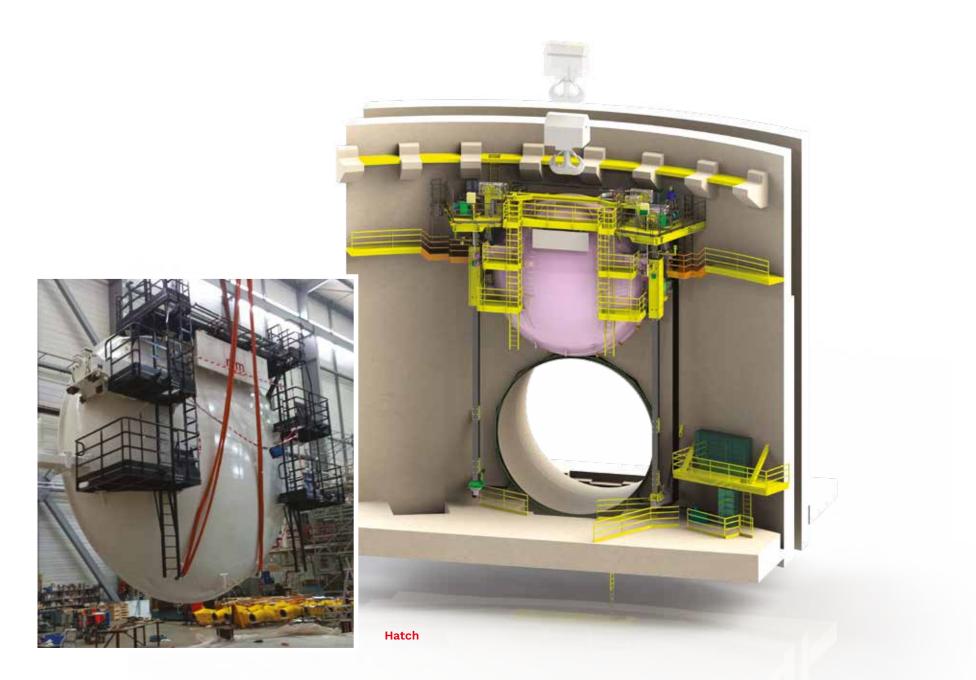
Mobile or fix trash racks

Filtration Equipment: screen drums

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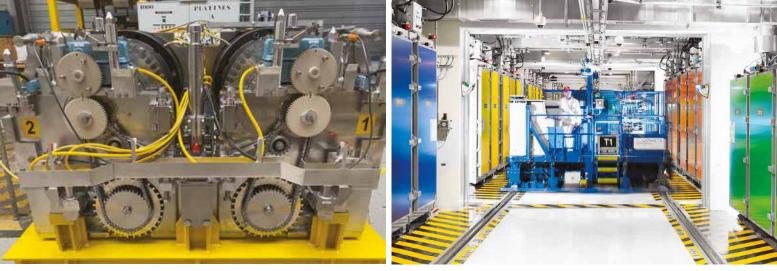




# BACK END FUEL CYCLE EQUIPMENT

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**GB2 Gantry** 



50kN Safety Lifting Unit in Hot Cell for La Hague Facility

UF6 Cooling Stations for GB2



Spent Fuel Crane in La Hague

**Glove Box** 

# SPECIAL MACHINES

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Multi Stud Tensioning Machine (MSTM)

LEVAGE DE CHARGE

### COMBUSTIBLE STORAGE & TRANSPORT



TN 24 Casks

Underwater Spent Fuel Storage Rack



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# NUCLEAR PRESSURE EQUIPMENT (ESPN)

Jules Horowitz Reactor Battery Block

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### **COMPLEX MANUFACTURING**



Core internals: Control Rod Guide Tubes (CRGT)

Core internals: CRGA Columns



Divertor Cassettes Tokamak ITER



Beam Tube for High Flux Reactor of the Laue-Langevin Institute

## **SERVICE** ACTIVITIES



### Maintenance engineering: the REEL group service approach

- Unique feedback in the world (1,200 nuclear power plant outages carried out)
- Skills and professionalism of our staff trained by our internal REEL Academy school
- Responsiveness, proximity (network of local agencies), availability
- Quick implementation of integrated technical solutions by our design offices and dedicated industrial sites
- Effective management of spare parts, standardization and long-term obsolescence management





#### Adapted services for each need:

- Preventive, predictive and curative maintenance
- Technical assistance for regulatory controls
- Improvement, modernization and refurbishment works
- Installation and commissioning
- Risk analysis
- Nuclear safety studies
- Consulting services and feasibility studies
- Technical assistance for operation, supervision, on-call assistance
- Training of customer's operators, lesson learned support and continuous improvement
- Technological developments follow-up
- Spare parts and obsolescence management
- Instrumentation and equipment monitoring
- 4.0 platform for equipment data analysis



# REEL service activities participate also in the

upstream/downstream fuel cycle and in nuclear power plants on fuel handling systems, spent fuel evacuation, visual inspection, MSTN and on handling equipment, cold water intake equipment...





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