

Nuclear Qualified Electrical Drives and Motors

Low and medium voltage drives and motors for NPPs

Framatomes' low and medium voltage drives and motors enable customers to get nuclear-qualified low and medium voltage drives and motors through our know-how and long-term experience providing a perfectly designed motor-pump combination with our patented contact-free torque monitoring.

Challenge

In NPP safety-related applications, correctly designed motor-pump combinations are crucial. Many original motors, and their design information; are no longer available on the market and need to be substituted. Safe and reliable operation becomes increasingly tricky.

The design must also consider critical environmental risks, such as seismic events, to avoid serious accidents that, in turn can lead to loss of systems and equipment in the plant.

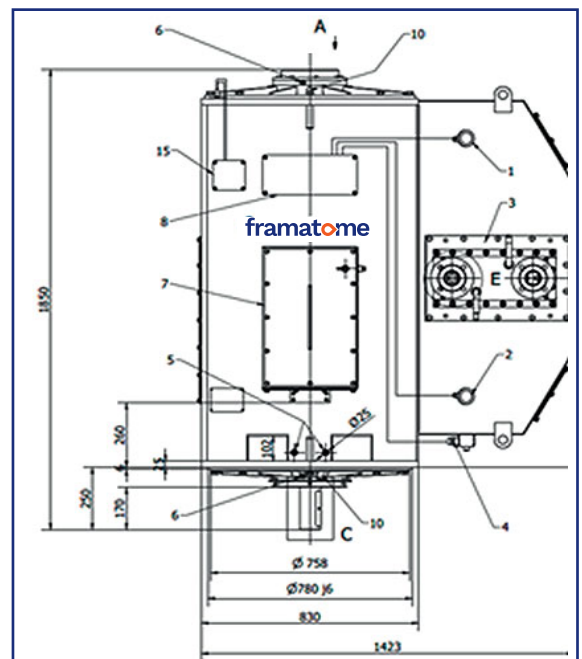
Spare parts for older motors are often no longer available from the manufacturer, or product updates over an extended operating period have led to incompatibilities (e.g., the design of oil level sensors).

Solution

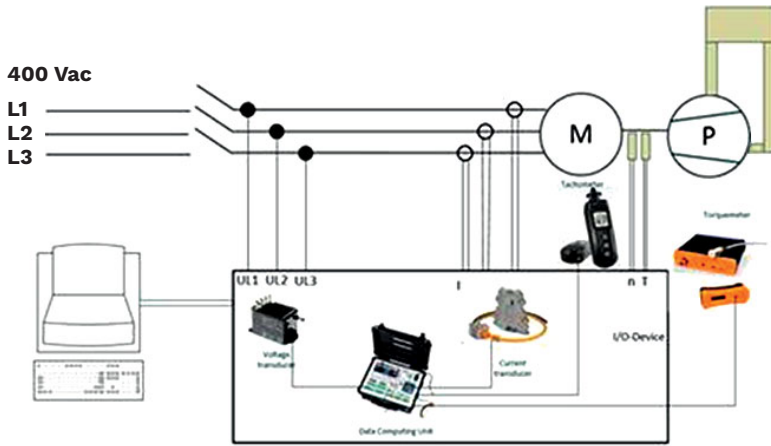
- Our nuclear electrical motor solution combines a robust technical design and highly efficient motor-pump combination on the one hand with a qualification for the required harsh environmental conditions on the other hand.
- In the absence of technical information, we can provide this with our patented contactless torque monitoring sensor without any modifications, dismantling, and adaption in your system.
- Qualified solution for all required harsh environmental conditions
 - Induced vibration and radiation
 - LOCA accidents
 - Flooding
 - Seismic
- 3D Scan for sustainable integration planning
- 3D Scan for retrofitting the motor

Customer benefits

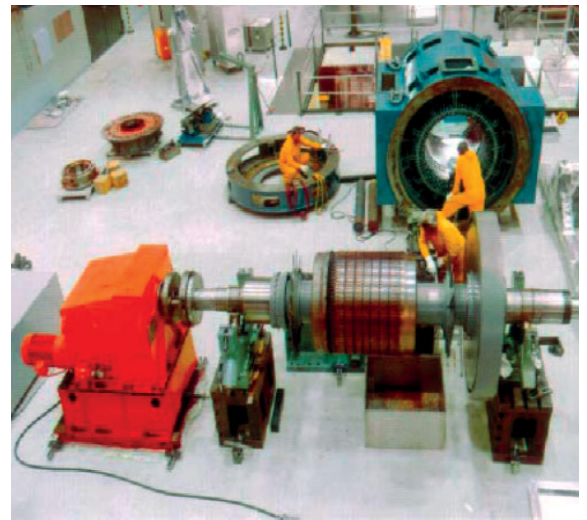
- All-in-one service from design to retrofit, including commissioning and maintenance
- Customized, optimized, and reliable design of motors to the system requirements
- Reduced maintenance effort and cost due to patented contact free Torque monitoring
- Comprehensive knowledge of rotating machines (fans, pumps)
- Long-term experience / reliable partnerships with NPPs worldwide
- Qualified aging management
- Product Lifecycle Management



Exemplary main cooling pump by Framatome



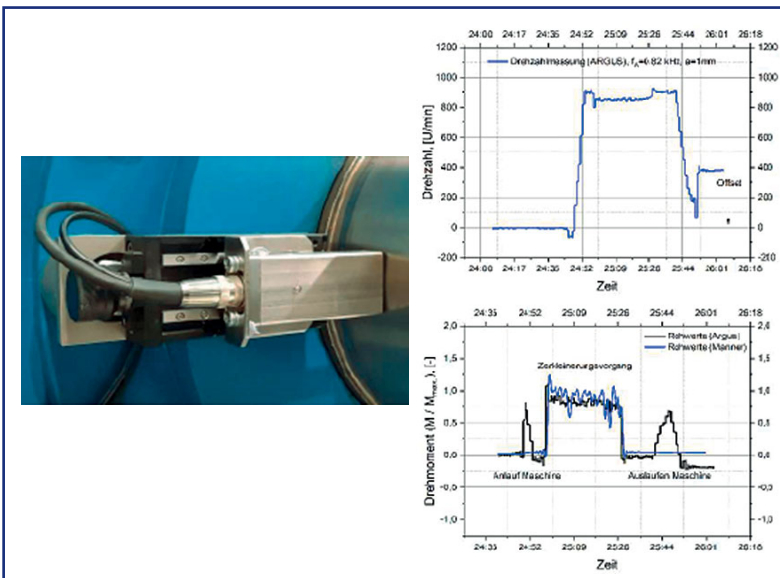
Contact-free torque monitoring by Framatome



MCP Motor Maintenance (up to overhauling)

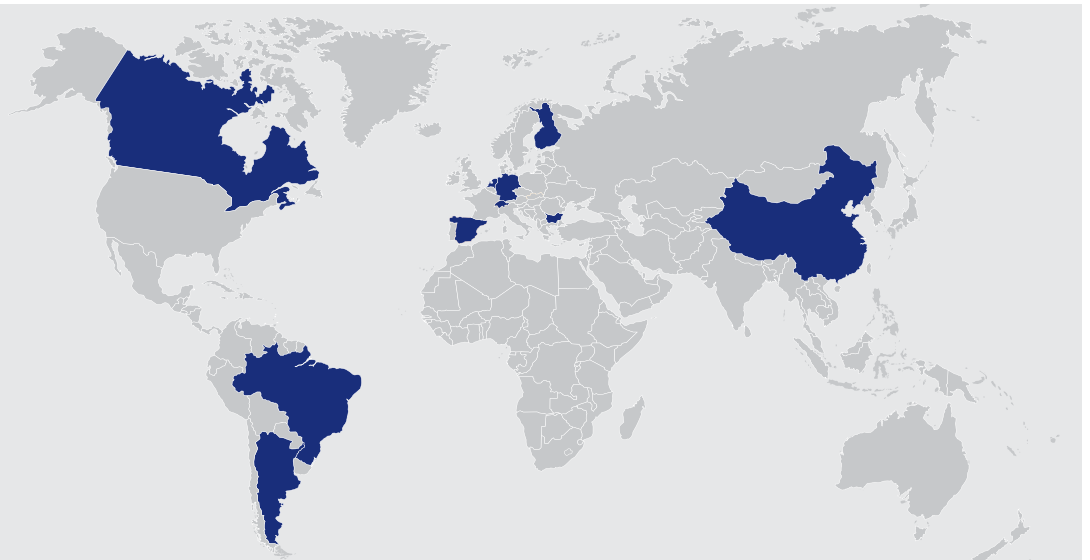
Key figures

- Covering all kinds of LV and MV power ranges
- More than 100 qualified electrical motor replacement/ Inspection in NPP worldwide
- Perfect motor-pump system based on torque monitoring
- Customized manufacture of equipment through 3D scans of the equipment that should be replaced
- In-service contract in over 25 NPPs worldwide



Measuring elements and related graphic diagram

References



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