



SERVICE ACTIVITIES



Your Engineering Company of Electric Motors



About us:

FELM® has been operating in the electric motor sector since 1960 and has a well-consolidated background in the market of electrical machines. Thanks to the considerable experience of its staff, it can guarantee a technical back-up capable of responding to the most sophisticated technical requirements, both installations and maintenance, ensuring an International Service to its clientele. Thanks to the large stock of electric motors (our offices and warehouse cover over 10,000 m²) from 0.12 to 800 kW in the various polarities and a widespread distribution service, FELM® guarantees good product availability and rapid delivery in Italy and across Europe.

Special attention is dedicated to the production process in the factory, from the careful selection of the materials, copper, insulation, the execution of the windings, to the control of the impregnation and polymerization processes (VPI Vacuum Pressure Impregnation).

The high levels of quality offered by FELM® are proven by the ISO 9001 ICIM Certificate 2508/2:

Production of standard electric motors and special motors made to customer specifications. Commercialization of electric motors and relative electrical or electronic accessories for the construction and distribution of electric motors.

Bearings are specially selected to guarantee best performance and product quality and a working life above the average.

Range of electric motors:

Low Voltage standards IC 411, IC 611, IC 86W

EFF 1 New international classes of motor performance- IE codes

new norm IEC 60034-30:2008 that defines the classes of performance

IE1 = standard performance (comparable to EFF2)

IE2 = high performance (comparable to EFF1)

IE3 = Premium Efficiency

Medium voltage 3, 6, 11 kV. IC 411, IC 611, IC 86W

Suitable for use with inverter (400 V, 690 V, 3,6,10 kV)

Ring motors with wound rotor

Explosion proof: Ex d, n

NEMA, UL, CSA, EPACT

IEC(GOST), Marine Classifying authority (RINA, Lloyd Register, DNV, ABS, BV, etc)



Our Certification



**Certified company UNI EN ISO 9001:2000
CISQ / ICIM CERT. IT – 27970**



Production of standard and special electric motors on customer's specifications.
Trade of electric motors and related electric or electronic accessories.



Certificate Russian Market

Our activities at Your service

One of our great elements is our method of working.

Thanks to our organization and the acknowledgment of our technical staff, FELM is able to follow the customer in each phase of the Order from the Proposal up to end of Guaranty:

- **Engineering and consulting**
- **Replacements, Maintenance, Repairs**
- **Inspection of the plant and application**
- **Assistance during the process of the order**
- **Training to selected engineers**
- **Test in the factory**
- **Installation and Commissioning on site**
- **Assistance Onsite with authorized local citizens and workshops**
- **Spares and Consumables**



FELM® offer a 24/7 assistance to perform repairs, rewinding and modifications of any type of electric motor.

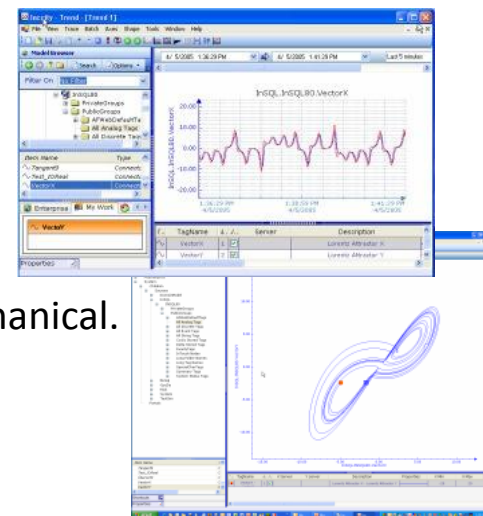
Technical department

Composed by persons with various experiences matured in manufacturing prestigious companies of electric motors.

We can design any motors with personalized customization, electrical and mechanical.

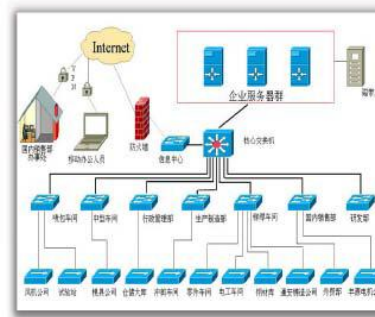
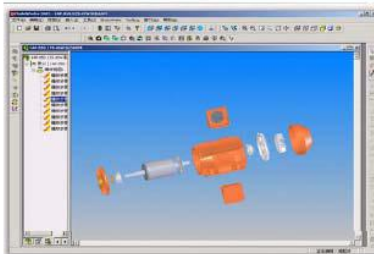
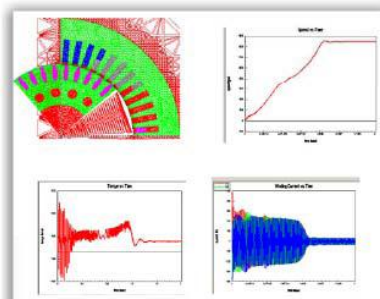
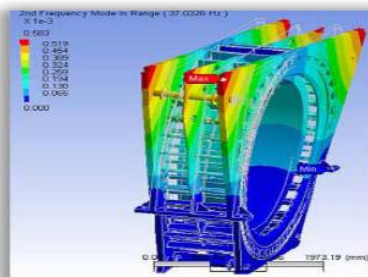
We can help you in all your projects, following the step by step in the offer.

Software Programs: PDF, CAD, CAD 3D, DWG and motors program calculation.

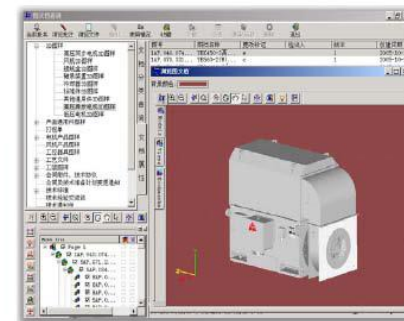


FEA/CAD/CAE

- 3-D CAD (Solidworks)
- Electromagnetic design (Ansoft)
- Mechanical Design (Ansys)



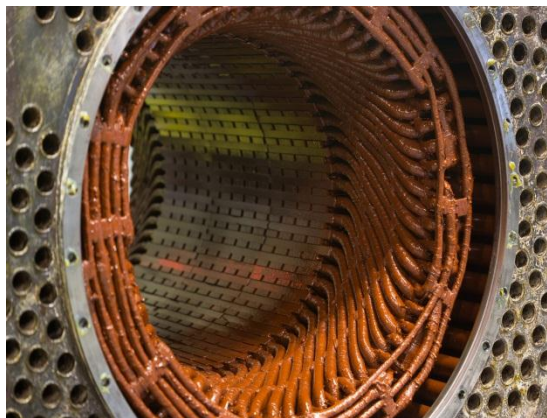
Network Topogram



PDM

Winding department

- High Voltage Motors Windings from 300 to 3 MW.

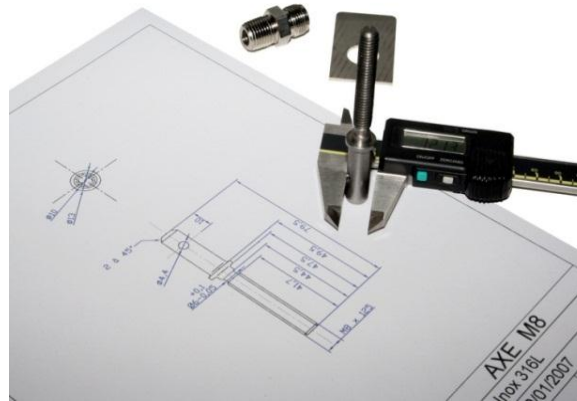


- Low Voltage Motors Winding from 1 to 1500 kW; and brake motors up to 55 kW.
- Motors Winding for D.C. and Sleeve Ring Motors

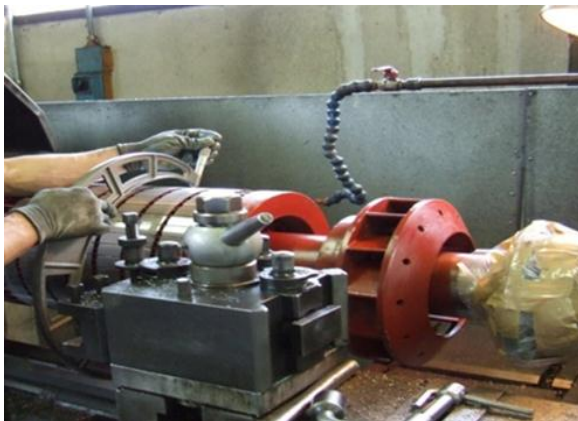


Mechanical department

- Specialize on workmanship of special shafts
- Specialize in the Lathe-turner's work and press for steel sheets work processing

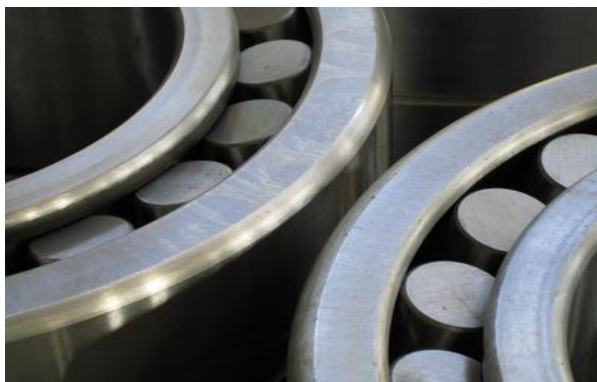


- Specialize in materials and welding analysis



Customisation department

- Special painting
- Special cables connection
- Selection of material for heavy environmental conditions
- Bearings arrangement
- Forced ventilation (standard and special)
- Special customer request
- Accessories



Analysis on site

- Preliminary analysis.
- Predictive monitoring.
- Vibration frequency analysis.
- Sound pressure measurement.
- Sound pressure octave band analysis.
- Check of alignment motor - driven machine.
- Wave shape analysis.
- Check of dielectric strength.
- Insulation resistance measurement.
- Polarization index measurement.
- Diagnostic functionally to confirm unbalance.
- Balancing - built-in ISO balancing grades.
- Balancing in Velocity, Acceleration or Displacement.
- Different types of balancing corrections:
degrees, fixed mass or location, tape measure, "negative mass"



Instruments



Power analyzer



Megger 5 kV diagnostic insulation resistance tester



***Micro-ohmmeter C.A 6250
tests (resolution of 0.1 $\mu\Omega$)***



Portable Oscilloscopes Fluke



Portable multimeters



Vibrations analysis
Multifunction Maintenance Instrument

Instruments



Shaft alignment systems



Pulley alignment with laser



Belt Tension Tester



Laser Thermometers

Worldwide Service



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