



**KOOPMANN MAINTAIN**  
COMPREHENSIVE MAINTENANCE  
**MV & LV EQUIPMENT**

**ENERGY IS OUR ELEMENT**

**ASSEMBLY** IS OUR BASIS

**MAINTENANCE** OUR PASSION

**REPAIR** OUR PROFESSION

# ENERGY IS OUR ELEMENT



**LOTHAR KOOPMANN**  
MANAGING DIRECTOR  
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MANAGING DIRECTOR  
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*“Objective state assessments can only be given by a product-independent service provider.”*

*“Repair and maintenance are carried out in accordance with the manufacturer’s specifications and are based on the operating conditions and requirements of the equipment.”*



# KOOPMANN

## SAFETY IN A **SERVICE** PACKAGE

Our passion for the maintenance of every single component in a power supply facility is of economic advantage to your business.

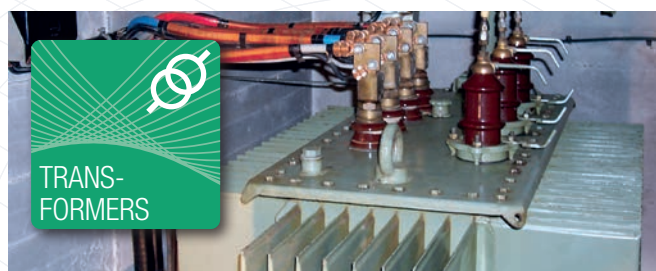
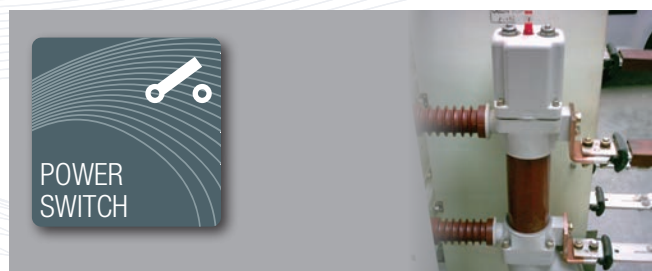
With over 30 years of experience in faults analysis, condition assessment and repair, we have in particular further developed the maintenance aspect of our business. And in this area we can offer you much more than you could previously expect from a service provider.

It is our conviction that the cost-efficient maintenance of an energy supply system is not only a question of service life, but also a question of the state of the system.

Operating experiences gained over the last decades have clearly demonstrated that the operation of an energy supply system with individual components, which on average are 25 years old or more, is not an incalculable business risk.

To secure against the risk of system failure, however, a maintenance scheme has been established, which is aligned to the manufacturer's specifications of the products, whereby the current state of the equipment and the economics of maintenance play a subordinate role in the assessment.

### Maintenance of your:



# OUR RESPONSIBILITY

We are convinced that an objective assessment of equipment condition can only be made by a manufacturer-independent service provider who has the necessary experience in the repair and maintenance of the products.

The principle that has more or less been established in the last 30 years maintaining that an objective and trend-setting condition assessment of equipment is best made by the manufacturer is, at the latest, a question that has to be put to the service organizations of the manufacturer when considering future performance expectations.

A high maintenance frequency does not automatically increase the reliability of equipment.

Sustainable maintenance is oriented to the manufacturer's instructions, but it takes into closer account the operating conditions and operating requirements in relation to the operating experience available.

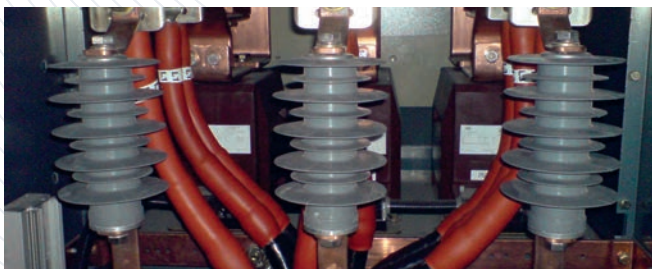
Given its development history, the equipment in use today is to be regarded as well established when compared to product development in other areas.



1968-1972 | Introduction of hermetic distribution transformers



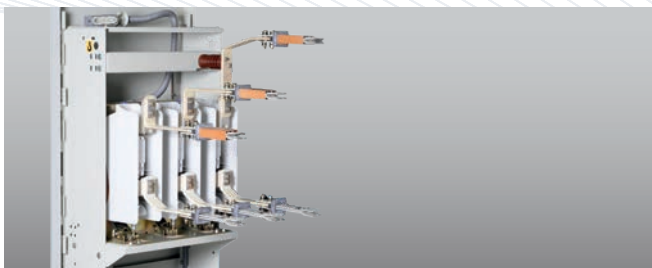
1986 | Introduction of SF6 switchgear technology in the medium voltage range



1975 | Introduction of the first generation of XLPE cables - in 1985, the second generation



1990 | Introduction of digital protection equipment technology



1986 | Introduction of the vacuum chamber power circuit-breaker technology

# CONTINUOUS TRAINING

The availability and failure rate of equipment derived from the operational service life, under consideration of the current state of the equipment and the maintenance strategy used in the past, allows an objective assessment of the current status and a repair or renewal strategy to be derived from this. The good longevity resulting from product quality and the operating load of the products, which in many deployment cases certainly lies clearly above plan and expectations at the time of investment decisions, often means that both operators and manufacturers are losing their know-how due to the ageing of experienced staff. Koopmann Energietechnik recognised this development more than ten years ago, took action and set up a continuous training campaign, in which the expertise of the manufacturer's specialists is transferred to our own technicians.

Within this time period, the majority of manufacturers began to reduce their staff numbers and focus on the sale of spare parts.

The training and continuous instruction of our employees is the basis of business activities for the future.

The selection of staff and the systematic training of employees in the use of modern diagnostic technology, also on products from past development decades, have meant that the company Koopmann now finds itself in the position that we can employ staff in all areas of energy supply technology who are known to be true experts in this field.



Offshore Training



Course in cable terminations



Offshore deployment



Course in joint installation

# WE NOT ONLY SUPPORT – WE ASSUME RESPONSIBILITY

## KOOPMANN scheme of maintenance for MV/LV equipment

- 1** The installed base of the corresponding supply area is recorded in an inventory file
- 2** Risk assessment and subsequent prioritisation of the individual systems in priority levels of 4 – 6
- 3** Classification of systems according to operating time, load and age:
  - Age
  - Operating time
  - Operating load
- 4** Evaluation of failures and malfunctions over the past 5 years by cause and effect:
  - Installation errors
  - Damage caused by aging
  - External influences
- 5** Preparation of an action plan for the recording of the actual condition by Koopmann
- 6** Carrying out the initial diagnosis for each equipment of the entire distribution grid included in the scope of supply
- 7** Evaluation of the measurement results and development of a maintenance plan
- 8** Coordination of further maintenance work to be carried out
- 9** Assumption of an availability warranty for the equipment for a clearly defined period of time – but at least for 10 years
- 10** Within the contract period, correction of all reported incidents, elimination of any ageing damage, testing of all assemblies after damage repair or modification of the system, maintenance of the inventory file, troubleshooting and provision of necessary replacement material in case of failures (optional)
- 11** Utilisation of the most advanced diagnostic techniques
- 12** Complete fault processing and fault detection, with development of an appropriate investment plan
- 13** 24 hours, 7 days a week call and standby with fixed priority-dependent response time



## OUR MOTIVATION

The positive feedback from our customers and the ever-increasing number of references encourage us each and every day to follow this strategic approach further and to further increase the number of our employees.

Given our experience, we do not think twice about performance comparison with product services of the manufacturer. That we stand out in such comparison and in the area of SCC certification goes without saying.

The pressure from the regulatory authorities for efficiency and reliability of the supply quality is increasingly presenting energy providers with the task of checking established maintenance strategies.

The approach chosen here, which directly correlates company efficiency and the reliability of supply quality with investment planning and with the approval of these resources in the company's economic analysis, creates a need for an action plan, which culminates not least in companies being compared, so that a level of quality becomes visible to the customers of the supply grid operator.

On the basis of this development and in light of our experience and deployment of motivated specialists, we have developed KOOPMANN MAINTAIN for the maintenance of energy supply facilities.





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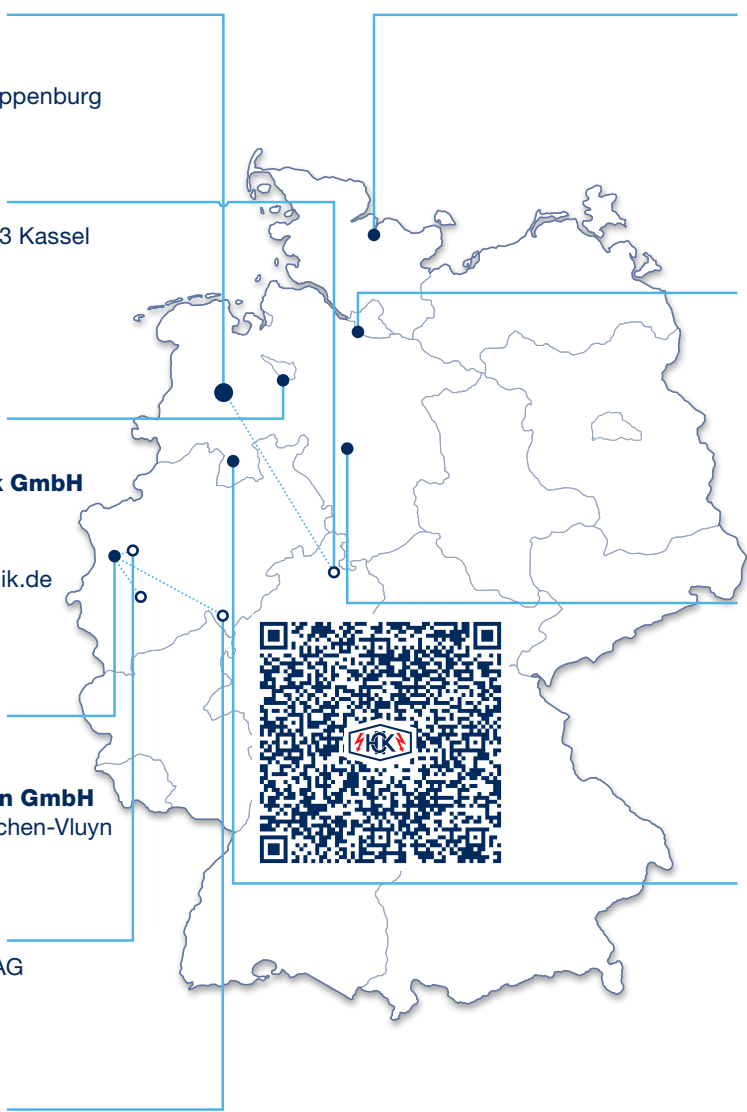


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