

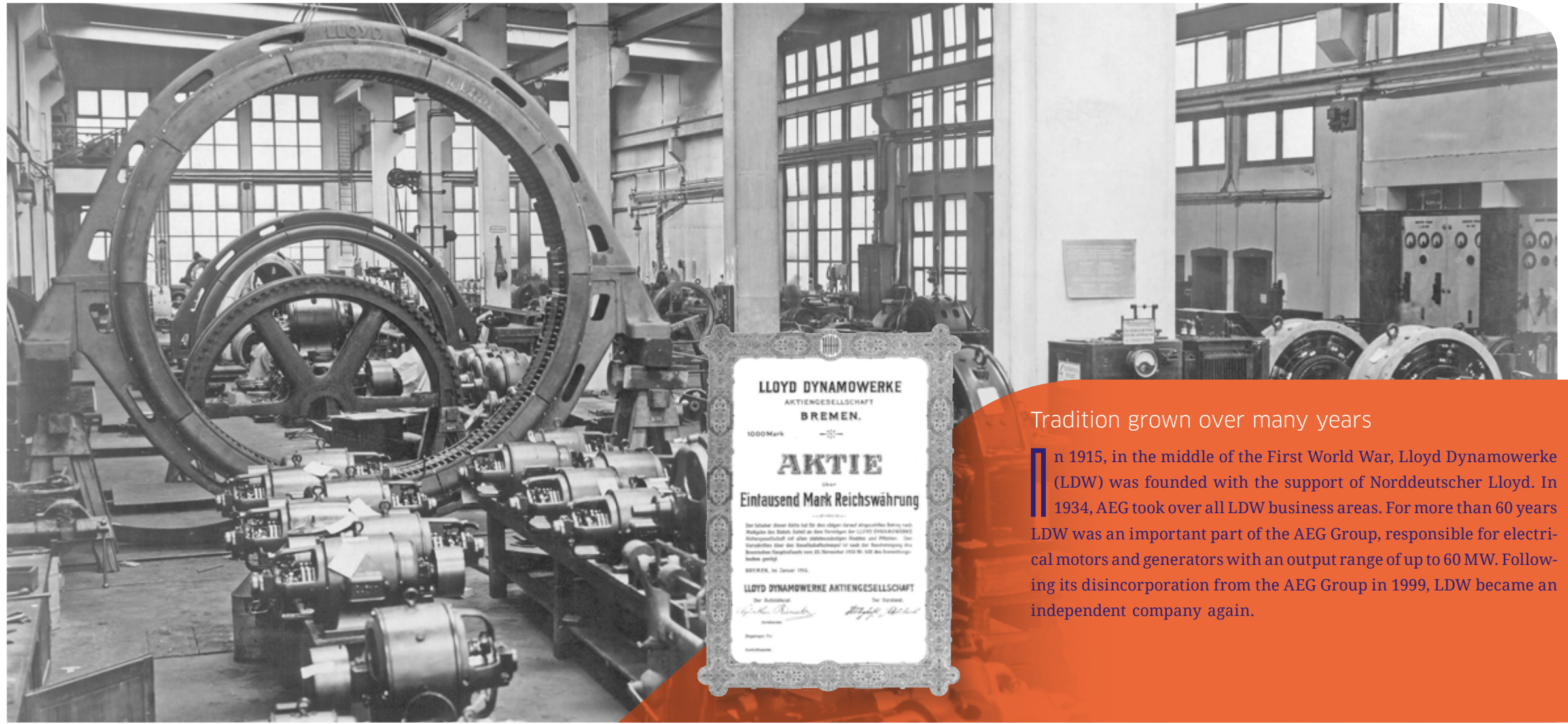
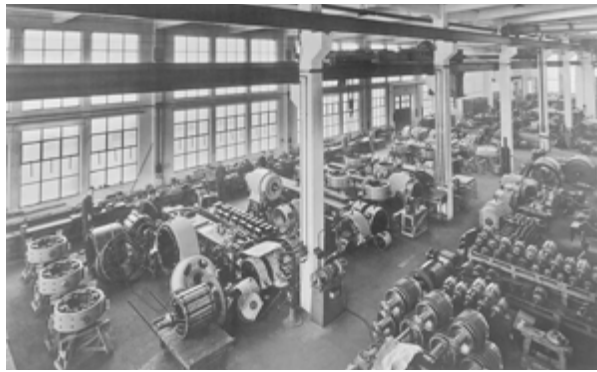
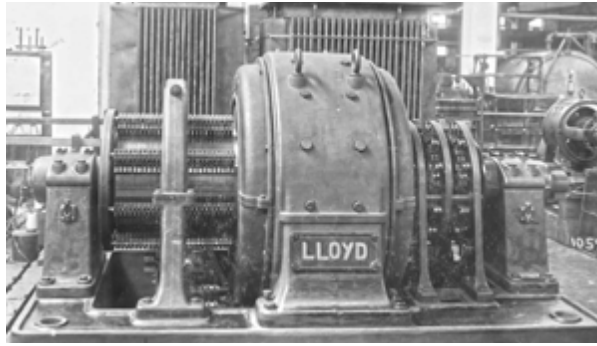
LDW

Starke Maschinen.



Passionate, competent and safe –
that's how we build starke Maschinen.

www.LDW.de



Tradition grown over many years

In 1915, in the middle of the First World War, Lloyd Dynamowerke (LDW) was founded with the support of Norddeutscher Lloyd. In 1934, AEG took over all LDW business areas. For more than 60 years LDW was an important part of the AEG Group, responsible for electrical motors and generators with an output range of up to 60 MW. Following its disincorporation from the AEG Group in 1999, LDW became an independent company again.

BY TRADITION EXPERIENCED.





Our company today

Over 100 years of experience and passion, combined in a manufacturing company that uses the most up-to-date engineering craftsmanship and innovation – that's LDW. We supply reliable machines to meet your individual requirements. Only reliable technologies and proven materials are used in all our machines. We supply products for the highest of requirements. Our machines offer impressively high operational safety, long service life and reliability – simply premium quality “Made in Germany”.

COMMITTED TO THE FUTURE.





Our current scope of supply

The LDW product range is broad, universal and adapted to your specifications.

LDW represents custom-made machines using the best technology, from which you will benefit for many years.



Three-phase motors

- Asynchronous motors from 1,000 up to 35,000 kW
- Synchronous motors from 4,000 up to 50,000 kW
- Voltages up to 15 kV, up to 35,000 kW with constant speed
- Voltages up to 10 kV, up to 50,000 kW with variable speed
- All prevalent types of construction, cooling and protection
- Fluid jacket cooling up to outputs of 10,000 kW
- Explosion-proof design according to Ex "px", Ex "pz", Ex "e" and Ex "nA"



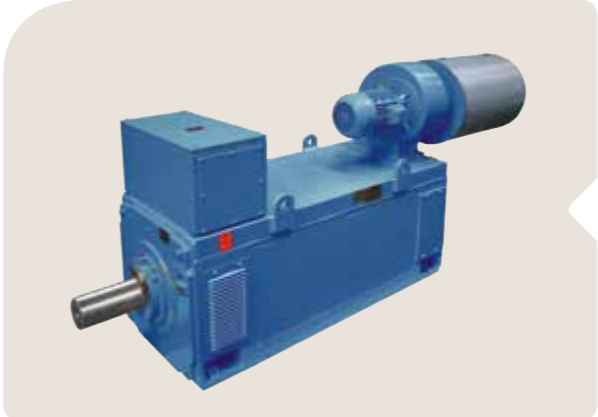
Synchronous generators

- Synchronous generators from 4,000 kVA up to 60,000 kVA at 1,500 rpm
- Synchronous generators from 4,000 kVA up to 25,000 kVA at 150 rpm
- Voltages up to 15 kV
- Compound excitation or PMG-excitation, analog and digital
- High efficiency even under the most difficult environmental conditions
- All prevalent types of construction, cooling and protection
- Explosion-proof design according to Ex "px", Ex "pz", Ex "e" and Ex "nA"



Direct-current machines

- Direct-current motors and generators from 10 up to 8,000 kW
- Shaft heights: 132 up to 1,000 mm in angular designs, beyond in round designs
- Torque range: 20 up to approx. 900,000 Nm
- Rotational speeds up to 10,000 rpm
- High control dynamics
- All prevalent types of construction, cooling and protection
- Explosion-proof design according to Ex "px" and Ex "pz"



Compact-Asynchronous motors

- Compact AC motors from 150 up to approx. 2,500 kW at 1,500 rpm
- Shaft heights: 200, 250, 315, 400, 450 mm
- As variable speed drives and for frequency converter supply
- Rotational speeds up to 9,000 rpm
- High torque in combination with a small frame size
- High overload capacity
- All prevalent types of construction, cooling and protection

Overview on selected applications:



Mining industry

DC-motor for a mine winder

Application:
DC-motor as drive for a mine winder in a copper mine. The new adapted motor replaced a 70 year old British DC-motor.

Power: 1,640 kW
Speed: 20 – 285 rpm
Weight: 22,140 kg



Oil & Gas

Asynchronous motors as driver in a refinery

Application:
Motors as driver used for a reciprocating compressor for gas compression in a refinery process.

Power: 7,200 kW
Speed: 323 rpm
Weight: 51,000 kg



Energy & Environment

Synchronous generators for hydro power turbines

Application:
Generators for power generation in a cavern power plant with pelton turbines.

Power: 15,000 kVA
Speed: 1,000 rpm
Weight: 43,000 kg
Runaway speed: 1,800 rpm



Test benches

Synchronous motors for nacelle test bench

Application:
Motors as driver for wind power nacelles.

Power: 2 x 5,000 kW
Speed: 11 rpm
Weight: 532,000 kg



Cranes

Compact asynchronous motors for ship to shore cranes

Application:
Compact asynchronous motors as hoist motors in various designs with an output range from 300 up to 650 kW with different rotational speeds.



Steel & Rolling Mills

DC motor for a rolling mill

Application:
DC motor as main driver replaced the old tandem motor from 1908.

Power: 3,800 kW
Speed: 0 – 52/120 rpm
Weight: 110,000 kg

Photograph sources applications:

15,000 kVA synchronous generators for hydro power turbines:
ZeK

Compact asynchronous motors for ship to shore cranes:
Liebherr Container Cranes Ltd.

7,200 kW asynchronous motors as drive for a refinery:
Howden Thomassen Compressors BV

2 x 5,000 kW synchronous motors for nacelle test bench:
Fraunhofer-Institut für Windenergie und Energiesystemtechnik IWES



1,000,000,000 Ω

In practice insulation values in high giga-ohm range are not uncommon.

Comprehensive services

personal and competent

For us, service means the full support of our customers. Our services are based on the following pillars:

- Product care and after-sales service
- Repairs
- Spare parts
- Diagnostics
- Test bay use

With us, you and your machines are in technologically competent and experienced hands.

Life-Cycle-Management

professional and sustainable

From the project planning stage through the end of their operational life we offer a range of concepts for economical and fault-free operation of your machines:

- Operation orientated maintenance concepts
- Trend measurements relating to wear behavior of the machine components
- Revisions of machines at LDW or at site
- Stocking spare parts for shorter downtimes
- 24 hour service
- Retrofitting of old machines



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