The Ako Works was established in 1973 by Mitsubishi Electric Corporation as a dedicated manufacturer of transformers. While utilizing the advantages of both shell-form transformers and core-form transformers, we have been manufacturing products satisfying many customers in many fields, including electric power, industry and traffic.

We will continue to pursue high quality and excellent performance in shell-form large-capacity transformers and core-form medium- and small-capacity transformers, with a continued commitment to environmental awareness with our compact, high-efficiency design, and contributes to the stable supply of the electric power that helps make people's lives more comfortable and contributes to an advanced information-oriented society through our economical products.

Features of the Transformer Department

- **Full environmental control**: All steps in the manufacture of the core windings and other internal portions are carried out in "clean plants" under constant temperature and humidity.
- **Prevention of dust-and salt-pollution**: Buildings are of windowless construction, with airchambers at main entrances and exits.
- **Facilities for ship loading**: A private pier accepts vessels of up to 3000 tons, and is equipped with self-propelled rail trucks with a capacity of 700 tons.

Historical Profile

- **1910**: Manufacturing of transformers began at Kobe Mitsubishi Shipbuilding.
- **1972**: Production of shell-form large power transformers started at a factory of the Kobe Works.
- **1977**: Ako factory upgraded to be independent as the Ako works.
- **1981**: "Ultra High Voltage Laboratory (UHVL)" completed.
- **1990**: Various core-form medium- and small-capacity Transformers added.
- **1997**: The total production of shell-form transformers reaches 500,000 kVA abroad.

工場現況 Area

<table>
<thead>
<tr>
<th>工場用地面積</th>
<th>Approx. 242,000㎡</th>
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</thead>
<tbody>
<tr>
<td>工場建築面積</td>
<td>Approx. 46,000㎡</td>
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Transformers Shine in Power Transmission Systems

- 750MVA-215/500kV, 3-phase, 50Hz
  Transformer for nuclear power station

- 1500MVA-275/115kV, 3-phase, 50Hz
  Transformer for hydroelectric power station

- 4100kVA-25kV, 1.5kA, 60Hz
  Track transformer for bullet train

- 15MVA-69/69kV, 3-phase, 50Hz
  Gas-immersed transformer for receiving station in building

- 15MVA-7.5/2/3/63kV, 1 phase, 50Hz
  Oil-immersed transformer for substation

- 4800kVA-220/33kV, 3-phase, 50Hz, liquid-cooled Type ES cast-resin transformer

- On-load tap changer

- 23400kVA-22/138kV, 3-phase, oil-immersed
  Transformer for silicon rectifier

- NTG-6C transformer oil leakage detection apparatus
  Automatic total combustible gas measurement apparatus (Model NTG-6C)

- Motor diagnostic vehicle
開発・研究
Superior Reliability and High Efficiency

New and Better Products with State-of-the-Art Technology.

The Transformer Departments is constantly researching and developing new technology for use by the improve need for larger and more efficient power transmission. These include a 1,000kV transformer, a 275kV oil-insulated transformer, and an amorphous transformer. These technologies are implemented fully in transformers for commercial use.

高信頼、高効率を支えるハイレベルな基礎研究
Superior Reliability and High Efficiency Supported by High-Level Research.

研究の重要性の向上と効率化の必要性を誇るためには、確かな基礎研究の裏打ちが不可欠である。特に、電気工学、電線、導体工学、熱工学などの基礎研究、実用工学および新しい研究課題を含む、その実用化を製品に反映しています。

A wide range of research and testing is conducted, encompassing basic research on materials' magnetic-field behavior, insulation, thermal and fluid problems, and vibration and noise, as well as verification tests. All results are implemented fully in our commercial products.

厳しい輸送条件を克服する新輸送システム
New Transportation System Overcomes Severe Obstacles.

コンパクトな輸送条件を克服するため、開発されて、輸送条件を克服するために輸送する新方式の変圧器、輸送重量を従来の1/7に削減しました。

The Coil Group Packed Assembly (CGPA)
The coil group core and covers are transported separately, reducing transportation weight to approximately 1/7 of that of the conventional design.