

Transformer Remanufacturing

Reduces downtime and minimizes risk, which extends the life of your critical assets



Reducing Downtime

Transformers are critical assets in an electrical system. If a service plan of action is not in place before an unexpected failure occurs, production comes to a standstill causing revenues to be lost and repair costs to grow.

ABB understands that both utility and industrial companies strive to maintain the reliability of their transformers, but that failures do occur. Reducing system downtime becomes a critical factor.

ABB's transformer repair operations are equipped with the personnel, resources, and equipment to promptly get your unit back in service. The process starts with an assessment of the situation before the failed unit even leaves the site. As the owner of the most extensive OEM database in the transformer industry, ABB is capable of pulling the original design drawings on approximately 70% of the installed base in North America. Current and legacy manufacturers include:

- ABB
- Asea
- BBC
- General Electric
- Kuhlman
- Moloney
- National Industri
- Westinghouse

This means that cycle times can be reduced since engineering and fabrication of parts can begin before the unit physically arrives at the repair facility. New windings and components can be ready for installation shortly after the unit has been dismantled. Complete in-house diagnostics and testing further ensure that remanufactured units leave ready for installation.

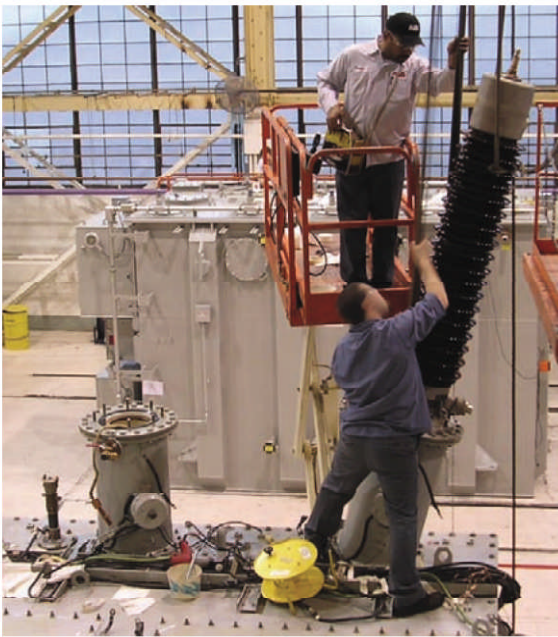


Minimizing Risk

Companies routinely operate with similar sized units throughout their system (including spares), whether located at a single site or spread across multiple locations. As a fleet continues to age, a structured replacement program may be a traditional approach, but a remanufacture program may prove more economical. Proactively remanufacturing 'at-risk' transformers avoids failures before they occur and extends the life of a fleet at reduced cost and time

Solutions

With top quality work backed by comprehensive OEM technology, years of repair experience, and the largest transformer design database in the world, ABB offers superior reliability, resulting in less time, money, and personnel that companies have to devote to maintenance.



Utilize Legacy Design Information to Offer Complete Turn-Key Solutions

Remanufacturing Capabilities

- Ratings from 5 to 1200 MVA
- Rated Voltages up to 800 kV
- BIL Max: 4000 kV
- Core-Form Power & Distribution Transformers
- Oil-filled & dry-type
- Industrial Transformers
- Specialty Transformers (including Shell Form)
- Traction Transformers
- EHV Transformer Designs
- Shunt Reactors

Transformer Remanufacturing Resources at a Glance

- Maintenance of the most extensive OEM design and drawing database in the industry
- Employment of design engineers with various OEM backgrounds
- Utilization of technology from numerous ABB transformer factories worldwide
- Development of engineering analysis and design studies
- Deployment of field engineers and technicians for customer field support
- Factories equipped with all equipment necessary, along with specialized equipment that allows ABB to remanufacture all known existing core-form designed transformers
- Highly trained and skilled factory technicians that ensure the transformer is safely remanufactured, and ultimately meets design specifications
- ABB transportation specialists are available to make all arrangements for the transport of the transformers from our customer's site to the ABB factory and return



Demonstrating the value of transformer remanufacturing: Case Study

TRES draws on ABB transformer history

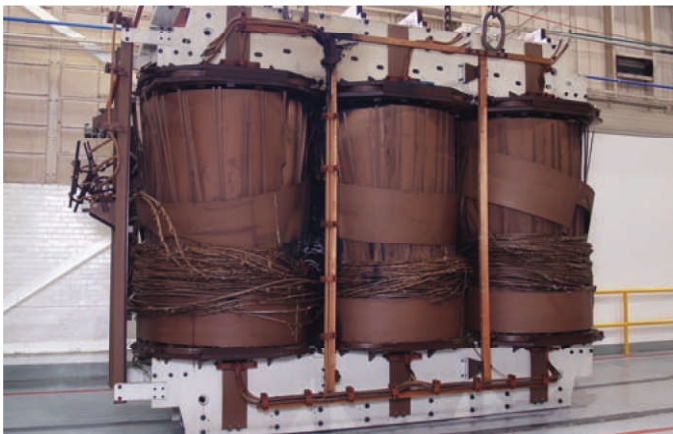
When it comes to servicing existing transformers, ABB has the unique advantage in that the company owns the technical drawings and design information for approximately 70% of the power transformers in the United States.

A catastrophic transformer failure occurred at a generating station on a vintage 1972, 250MVA, 345kV, ASEA transformer. The failure placed the entire station in jeopardy since output was contingent on continued operation of the remaining ASEA unit. Although these Asea transformers had little or no history of problems, major concerns rose throughout the customer's management team.

The customer scrambled for a feasible solution that would minimize the risk associated with the single point of failure. They needed to have a backup unit back in position as quickly as possible. After discussing the situation with ABB, ABB was able to retrieve the original design information and put together a solution that involved 'Remanufacturing' the failed unit using current technology and materials. ABB was able to parallel several processes simply by having specific design information in front of them. Engineering design work and material procurement could begin without even seeing the unit. In addition, a logistics plan to move the unit the nearest rail siding had begun, which was critical since the nearest rail-siding was 25 miles away.

Given this information, ABB was able to develop an offer that focused on the key elements of lead-time and technology. ABB offered a return date for shipment of 17 weeks. In the end, the customer's risk was minimized as the unit was remanufactured in less than 16 weeks, ahead of proposed schedule.

Before



After

