

Powering the Future with Innovation & Excellence!

Service Catalogue



Leading the way in sustainable energy solutions with world-class transformer technology and innovation.



Ageing assets, rising energy demand, and costly replacements challenge utilities and industries worldwide. Ensuring uninterrupted energy requires 100% transformer availability. Regular servicing, upgradation, and re-manufacturing can extend a transformer's life at a fraction of the replacement cost.

With 50 years of expertise, Technical Associates Transformers Ltd. (TATL) offers comprehensive transformer lifecycle services, from commissioning to re-manufacturing. TATL helps maximize asset reliability, reduce costs, and optimize performance across all brands, ratings, and applications.

Field Diagnostics & Condition Assessment for live transformer assets

Field Service and life enhancement including upgradation of critical components

Rating and Capacity Augmentation

Re Manufacturing

Shaping Tomorrow with Innovation & Expertise



“Redefining Energy with Smarter Transformer Solutions.”





Field Diagnostics & Condition Assessment for live transformer assets

Advanced diagnostics and condition assessment services to monitor transformer health, detect potential failures, and optimize maintenance strategies, ensuring uninterrupted performance, reduced downtime, and extended operational life.



On-Site Testing

Comprehensive electrical and thermal tests to assess transformer health, identifying issues early to prevent costly failures and improve reliability.



Oil Analysis

Detailed assessment of transformer oil quality to monitor insulation strength, moisture levels, and contamination, preventing internal faults and degradation.



Thermal Imaging

Infrared scanning to detect overheating, loose connections, and abnormal thermal patterns, ensuring efficient operation and minimizing safety risks.



Partial Discharge Testing

Non-intrusive testing to identify insulation defects, helping prevent sudden breakdowns and extend transformer lifespan through early intervention.

Minimized Downtime

Proactive issue detection reduces unexpected failures and costly operational disruptions.

Optimized Maintenance

Data-driven insights enable targeted, cost-effective maintenance for improved efficiency.

Extended Asset Life

Preventive care enhances transformer longevity, reducing the need for early replacements.

Enhanced Safety

Continuous monitoring mitigates operational risks, ensuring safer and more reliable transformer performance.



Field Service and life enhancement including upgradation

TATL offers a diverse range of Power and Extra High Voltage (EHV) Transformers, including Distribution, Power, Auto, Generator, and Special Application Transformers. Designed for efficiency, durability, and optimal performance, TATL's transformers cater to power utilities, industries, and infrastructure projects nationwide.



On-Site Repairs

Quick and efficient transformer repairs, minimizing downtime and ensuring optimal performance without costly replacements.



Upgradation & Retrofits

Enhancing transformer capacity and efficiency by upgrading components, insulation, and cooling systems to meet evolving operational demands.



Rewinding & Refurbishment

Extending transformer life with high-quality rewinding, core refurbishments, and insulation improvements for improved reliability.



Load Management Solutions

Advanced techniques to balance loads, reduce stress on transformers, and enhance overall system stability.

Extended Asset Life

Upgrades and refurbishments significantly increase transformer longevity and reliability.

Cost Savings

Enhancements improve efficiency and reduce the need for expensive replacements.

Performance Optimization

Upgraded transformers deliver higher efficiency, reduced losses, and improved load handling.

Minimal Downtime

On-site services ensure quick turnaround with minimal operational disruption.



Rating / Capacity Augmentation for energy efficiency and life extension

A lot of private industrial customers have an existing Transformer of 'X' rating. Over the years their load increases but buying a new Transformer after scrapping the existing one is an expensive proposition.

TATL Unique Solutions



Increase the radiators so that the thermal rating is within limits



Additionally, TATL will ensure the Short Circuit withstand capability of the higher rating transformer, by using internationally acclaimed and accredited design softwares, used by us



This privilege and facility of Short Circuit calculation for short circuit worthiness and validation in a repaired Transformer is available with only TATL, and not with any other repairer or re-manufacturer in India



Besides above, we can also improve the energy efficiency of existing transformers

Other regular solutions include

Cooling upgrade

Bushing upgrade to new technology for risks mitigation and safety improvement

Ratio and voltage regulation upgrade

Oil preservation system upgrade

Instrumentation upgrade from analog to digital

Introduction and upgrading to Digital Monitoring System for better upkeep

Thermally upgraded paper for winding insulation to increase rated power or life time

Increase of MVA rating in terms of power by suitable application and feasibility

Factory Repair vis a vis Re-Manufacturing

As critical assets, transformers are at risk without having a service plan in place. Repairing a transformer instead of replacing it can substantially reduce investment costs and provide a faster turnaround than buying a new transformer. Furthermore, a refurbishment or overhaul can be an intermediate action to maximise the asset's technical life when no failure has occurred and the ageing of the active part has reached a stage where the transformer's continued reliability is uncertain. An economical alternative to buying new transformer is Health Assessment, preventive care, factory repair and re-manufacturing solution. This will help to mitigate unexpected events of failures, that can interrupt production causing loss of revenue, and increased repair cost. TATL Transformer Service team can help increase reliability and performance by proper assessment of the transformer and propose a cost-effective repair and service plan.

Re-manufacturing vs. Repair



Repairing a transformer restores it to its original electrical, mechanical, and thermal design, ensuring performance within OEM-specified limits and efficiency.



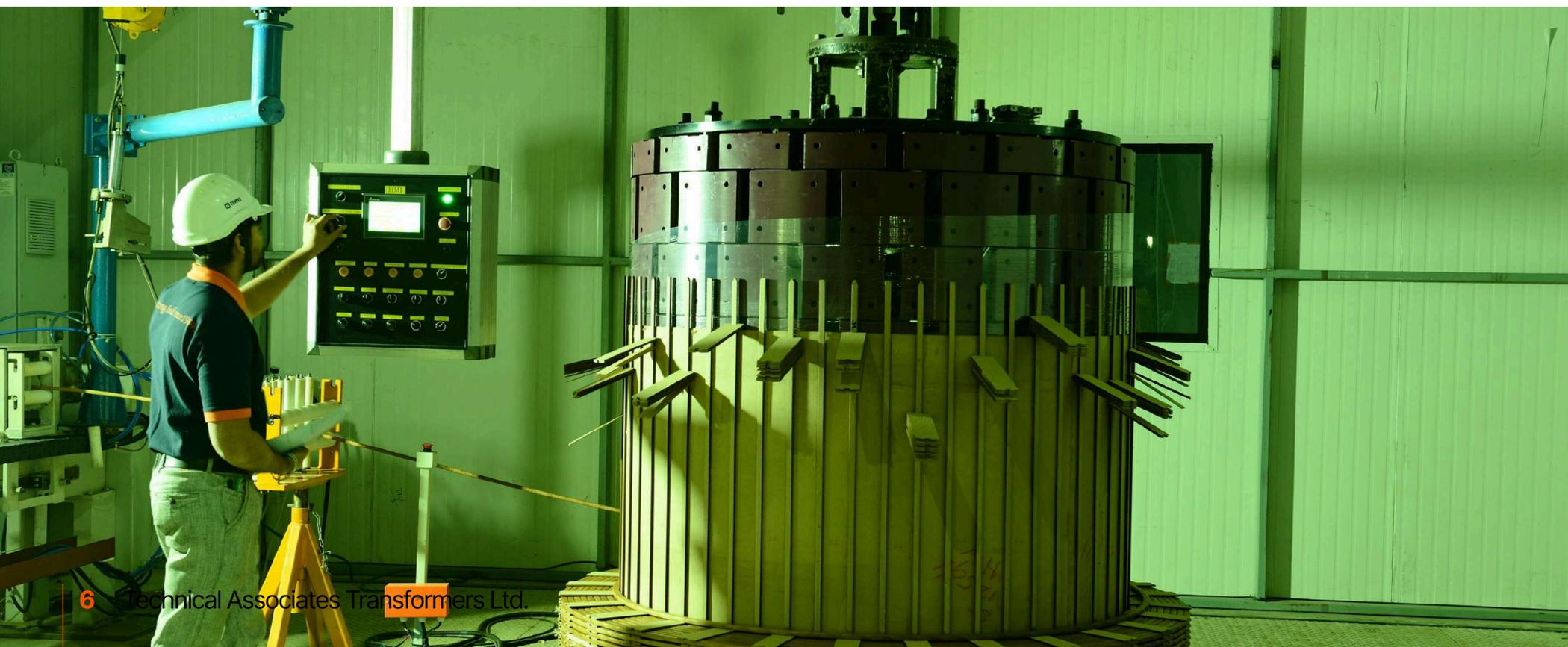
This process includes re-winding coils, re-insulating the core, tap changer work, bushing replacement, re-gasketing, cooler refurbishment, relay installation, and control upgrades.



Re-manufacturing involves upgrading electrical, mechanical, and thermal design, enhancing MVA, KV, short-circuit strength, and overall transformer efficiency for sustainability.



Key upgrades include coil re-design, core modifications, improved cooling, oil property enhancement, and tap changer retrofits for better performance.





Process of Repair / Refurbishment/ Re-Manufacturing

Each transformer undergoes thorough inspection, identifying necessary repairs, refurbishments, or upgrades. Our expert team ensures optimal performance through precise replacements, advanced redesigns, and rigorous quality checks.



Thorough Inspection

Joint visual and electrical assessment to identify faults, required repairs, and potential upgrades for improved transformer efficiency



Component Replacement

Critical parts, consumables, and accessories are refurbished or replaced to restore original design specifications or enhance performance.



Precision Upgrades

Engineering team evaluates redesign possibilities, improving MVA, KV ratings, cooling efficiency, and sustainability for extended transformer life.



Rigorous Testing

High-voltage and factory acceptance tests ensure the rehabilitated transformer meets industry standards before final delivery.

TATL Unique Solution

When a damaged transformer is received for repair, TATL engineers study the reasons for the failure by checking the Short Circuit and Impulse withstand capability of the original design. As and when required, TATL redesigns the same transformer, using its advanced internationally proven design software. In such a case the repaired Transformer is sturdier than the original design.

Why Choose TATL for Transformer Restoration

Unmatched expertise and cutting-edge technology for reliable transformer repair, refurbishment, and re-manufacturing with superior quality and efficiency.

With over 50 years of experience, TATL specializes in repairing, refurbishing, and re-manufacturing transformers ranging from 66 kV to 400 kV & 20 MVA to 315 MVA. Our dedicated, internationally accredited software ensures optimized, energy-efficient designs and short-circuit-proof solutions. We maintain strict quality control, using environmental controls for critical processes and implementing high workmanship standards.

- State-of-the-art repair facilities with dedicated bays for remanufacturing.
- Advanced drying methods using Low Frequency Heating (LFH) and Vapour Phase Drying Plants.
- Strict quality plans ensuring premium material control and durability.
- Strategic location serving North India, Nepal, Bhutan, and Bangladesh.

Precision Engineering

Innovative, high-efficiency designs ensure transformers meet rigorous performance standards.



Over 50 years of excellence in transformer repair, refurbishment, and re-manufacturing.



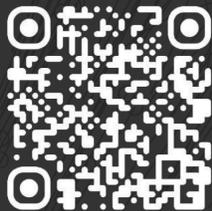
Servicing transformers up to 400 kV & 315 MVA with precision engineering.



Internationally accredited software ensures optimized designs and energy-efficient solutions.



The only dedicated EHV repair facility in North India, serving neighboring countries.



Legacy of Trust. Future of Power.



**TECHNICAL ASSOCIATES
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(formerly known as Technical Associates Limited)

An ISO 14001 : 2015 , ISO 45001 : 2018 & ISO 9001 : 2015 Company

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