

AURIGA CORPORATION TRANSFORMER DESIGN ENGINEERING SERVICES



For the past 25 years, Auriga Corporation has developed an industry-wide reputation for high quality and value-added engineering services. Auriga is recognized as a premier provider of professional engineering services in electric power industry. Auriga has highly qualified and experienced team of transformer design and electric utility professionals with a unique combination of in-depth knowledge and experience in Utility Operations; Engineering, Procurement, Commissioning, Maintenance and Construction (EPCM) and Manufacturing. This enables us to facilitate development of technical specifications, technical assistance in bid/tender evaluations, design reviews, factory inspections, test witnessing, technical support with installation and commissioning of transformers. At Auriga we are proud of our ability to provide a team of experts to quickly define client needs and develop technical specifications.

Auriga provides technical assistance and guidance to end users such as utility agencies, OEM's, EPCM companies, consultants and manufacturers to design and manufacture transformers. We share our experience in how to write technical specification, insight into transformer design, manufacturing process and fundamentals of special transformers such as auto transformer, phase shifting transformer and what to choose as the best design suited for each application.



REPRESENTATIVE TRANSFORMER DESIGN AND ENGINEERING PROJECTS:

- Sacramento Municipal Utility District - Transformer Design Training
- Sacramento Municipal Utility District - Transformer Design Review of 230KV/69KV - 224MVA Power Transformer for Franklin Substation
- Sacramento Municipal Utility District - Electrical Design Review of Auto Transformer
- Sacramento Municipal Utility District - Design Change Notice (DCN) for Upgrade Relay Protection for 230/69kV Transformer for Carmichael Substations and Orangevale Substations.
- Modesto Irrigation District - Transformer Design Specification Review



Sacramento Municipal Utility District - Transformer Design Specification Review - Franklin Substation

Scope of Services:

- Transformer Design Specification Standards
- Transformer Bid Evaluation
- Transformer Field Inspection Test
- Witnessing Acceptance Testing
- Review Transformer Design Specification from ILJIN
- Technical support for transformer drawing approval process
- Document specific deficiencies, in the ILJIN transformer design, calculations and associated submittal
- Propose transformer design modifications /recommendations to finalize transformer design

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Auriga's team of transformer design specialists and consulting engineers provide third-party analysis to interpret diagnostics tests results and identify follow up actions and remediation to solve the problems revealed by the diagnostic tests. Our engineers have extensive knowledge and experience, especially important when considering new off-shore transformer suppliers from Asia and South America. We provide training and transfer knowledge and experience on latest transformer technology to engineers for transformer design and manufacturing. Our courses are designed keeping in mind the specific requirements of individual client. The transformer design course covers following topics.

- Design of High Power Transformers
- Transformer Manufacturing Process
- Transformer Electrical Design Process
- Stray Loss Control
- Electrical Field Plot for High Voltage Insulation Design
- Different type of Transformers
- On load Tap Changer (OLTC)
- Transformer Cooling
- Transformer Testing
- Transformer Protection
- Transformer Maintenance
- IEEE Standard C57

TYPICAL TRANSFORMER DESIGN SERVICES:

Typical transformer design and engineering services we provide include the following:

- Transformer Failure Analysis
- Transformer design specifications and standards.
- Transformer Design Review
- Transformer Supplier Audit for Design, Engineering and Fabrication
- Transformer manufacturing oversight services for Quality Assurance/Quality Control, Transportation, Installation and Commissioning
- Transformer field problem analysis, investigation, rectification and correction
- Transformer factory acceptance test and inspection
- Transformer Design Training

For additional information and inquiries, contact:

Auriga Corporation
Attn: Director, Business Development
890 Hillview Court, Suite 130
Milpitas, CA 95035-4573
www.aurigacorp.com
Tel: (408) 946-5400
Fax: (408) 942-9625
Email: marketing@aurigacorp.com



Modesto Irrigation District - Transformer Design Specification Review

Scope of Services:

- Gather MID's transformer technical specifications and other requirements.
- Review MID's Transformer Engineering Standards.
- The transformer electrical design review including the following:
 - Technical Specifications
 - Review of the Core Material, Design and Construction
 - Review of Winding Arrangements
 - Review Volts Per Turn, Insulation Design
 - Review Tap Changer, Tap Winding
 - Review Thermal Data, Losses and Impedance Calculations
 - Review Impulse Calculations, Short Circuit Calculations