













www.silverlineelectricals.com



## **About Us...**

Silverline Electricals is a 25 year old industrial infrastructure company and in 2012 ventured into manufacturing transformers and allied electrical equipments.

Silverline Electricals manufactures Oil-filled and Dry type transformers up to 5 MVA Capacity & 33 kV voltage class. Also, we manufacture HT/LT electrical panels needed in electrical network & infrastructure.

Today Silverline Electricals is considered a leading electrical infrastructure equipment manufacturing company with proven expertise in providing quality & innovative products at optimum cost.



## Our Philosophy...

At Silverline Electricals, we understand that reimagining possibilities is the key to finding new ways to meet new challenges, which allows us to find the best solutions for our clients. Every single day our engineers & consultants strive to provide best products and solutions to the clients.

It is our desire to excel in the infrastructure industry allowing us to provide innovative and best products, services, solutions and consulting to our clients.

All the Silverline Electricals team-members share the same values - Commitment, Dedication and Competitive spirits. These values have shaped our organization and created shared set of common goals with passion to excel.

## Our Vision...

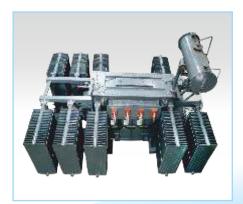
Our vision is to be the benchmark of electrical infrastructure industry and to be considered trusted partner by our customers for creating value by providing innovative & quality products, solutions and services.





## **Distribution & Power Transformer:**

- 16 kVA to 5000 KVA Oil Filled Distribution
   & Power Transformer Upto 33 kV Class.
- Sealed and non-sealed Type Transformers.
- Capability to Manufacture transformers for various application like - Lightning / Isolation / Earthing, Transformers, Multi Winding Transformers



## **Export & Special Application Transformer:**

- Exported 5 MVA 6.6/0.433 kV Distribution Transformer to West Africa.
- Supplied Special Application
  Transformers Arc / Induction Furnace
  Transformers, Rectifier/Converter
  /Inverter Transformers, Solar/Wind Mill
  Transformers



## **Natural Ester Oil Filled Transformer:**

- · Eco-Friendly i.e. Bio Degradable Oil.
- Fire safety as Flash point above 300°C (Less flammable oil)
- Continuous overloading upto 20% of rated capacity.
- Temperature rise limit is high as per IS which makes transformer compact.
- Low maintenance to oil and subsequently to transformer.
- Life enhancement of transformer.

## **Compact Substations (CSS/PSS):**

- CSS with Oil type, Dry type and with OLTC transformer.
- Manufacturing as per customer requirement & site condition.
- CSS for Solar/Wind/Special requirement.



## Dry Type Transformers: Cast Resin Type / VPI Type

- Cast Resin Transformers up to 1600 kVA & 33 kV Class.
- VPI type Transformers up to 1000 kVA & 22 kV Class.
- Manufacturing as per customer requirement & site condition.



# Feeder Pillar / Distribution & LT Panels:

- LT panels for residential/commercial/industri al application.
- APFC panels
- DG set panel / Common load panel / Metering Panels.
- MSEDCL Approved Feeder Pillar & LT Distribution Box.
- Synchronising Panels.



## Design

- Silverline Electricals has experienced and dedicated design team that helps us deliver quality products with best design & optimum efficiency that complies with all the applicable specifications, customer requirements and the field conditions.
- The company can cater to any special design product or specific requirement within the prescribed range.



## **Research and Development**

- Our products are type-tested at recognized institutes such as CPRI / ERDA and are approved by the respective regulatory boards.
- Our technical team constantly works on innovating the products as per the change in the field conditions and technological advances.

## **Quality Control**

- All the required material is sourced from qualified manufacturers who comply with BIS norms.
- Team of experienced people oversee the end-to-end manufacturing process.
- Material during each step undergoes stringent quality check and stage inspection.
- Each job is fully tested and inspected before dispatch.



## **Testing**

Silverline Electricals has modern testing facility to conduct all routine tests as per the applicable specifications and customer requirements. All the equipment in the testing facility are annually calibrated by NABL accredited laboratory.

- Ratio Test (Ratio Meter)
- Induced High Voltage Test (up to 100 KV)
- Double Voltage Double Frequency Test (50 KVA)
- Impedance Voltage Test Panel
- Heat Run Test for up to 5 MVA
- Winding Resistance Test (Micro Ohm Meter)
- Power Analyser (Yokogawa, Japan make)
- Dielectric Constant Tan Delta & Resistivity Test
- Oil B D V Tester 100KV capacity
- Capacitor Load Bank 600 KVAR capacity

## Tested & Certified by - NABL Accredited Lab





## **Approvals By:**

- MSEDCL INFRA II. IPDS, DDUGJY
- MSETCL Station Transformers
- Pune Municipal Corporation (PMC)
- MIDC & CIDCO
- PWD & MHADA
- Nagpur & Pune Metro
- MES & Railways
- GOA
- JUIDCO
- UPPCL
- GWSSB



## Green Transformers for a Greener future...

## What is Ester Oil?

Natural ester dielectric fluids are an innovative alternative to the mineral oil coolant commonly used in distribution and power transformers. They have far superior environmental properties compared to mineral oil, biodegrade in 28 days as per Organisation for Economic Co-operation and Development.

In late 90's innovation in ester technologies had taken breakthrough step by adding natural Ester in "K" Class Category. As per IEC 61039 standard Ester Oil is classified in the less-flammable dielectric coolant category (K Class) as fire resistant Fluid Having fire point above 300 °C. The most commonly used Oil is Natural Ester FR3. Over 1.5 million transformers are running globally at all climatic conditions. It has been also well proven in Retro-Fill of mineral oil designed transformers & over 100 thousands retro-Filling Transformers are running globally. We are Manufacturing Power & Distribution Transformer Filled with Natural Ester oil as per IS 2026 (Part 14): 2018.

# Advantages of Ester Oil filled Transformer Over Mineral Oil filled Transformer:

- Higher flash point of above 300°C & burning point exceeds 330°C. (Less flammable liquid)
- Enhance insulation performance & life expectancy of Transformer
- Non Toxic for life under water & on soil
- Biodegradable Oil makes Transformer Ecofriendly
- Reduction in maintenance cost, since FR3 fluid does not form sludge like mineral oil
- Keeps winding dryer due to Hydrolysis Characteristics of FR3 Ester oil
- Higher limits for continuous loading and dynamic overloading - optimization of rating, size and cost
- Enhances Transformer performance





## Application of ester oil filled Transformers:

- Cost effective alternate to Dry type / VPI Dry type Transformer for indoor / basements installations Ester oil transformer can be used with less foot print area. E.g. Mall, Commercial Building, Office Basements etc...
- Wherever there is space constraint for installation of transformer, ester oil filled transformer can be effective solution
- It can be used for Oil & Gas off-shore installation, Petrol Pumps, Steel Plants, EV Charging Station, etc...
- For Solar & Wind Farm Applications
- Parks, Metro Stations, Locomotive Stations, Public Places as it offers best in class fire safety

# Approvals/Guidelines for Natural Ester Oil filled Transformer:

- Central Electricity Authority (CEA) Guidelines. Dated 26<sup>th</sup> May 2017.
- BIS 1180 (Part 1): 2014 (4<sup>th</sup> rev. Dated 4 <sup>th</sup> March 2021.)
- Chief Electrical Inspector (PWD), Mumbai.
   Order No. CEI/TECH/847/2018 Dated 29<sup>th</sup>
   August 2018
- Maharashtra State Electricity Dist. Co. Ltd. Circular No. CE/Testing/N. Ester - C.C. -FPI/33471 Dated. 04<sup>th</sup> December 2019.

# Silverline EPC Division...

Our capabilities allows us to provide efficient cost effective design and services for end-to-end execution of the projects and consulting services.

Various types of turn-key woks executed by Silverline Electricals are-

- HT/LT Installations, HV switching stations and substations
- Electrical infrastructure and internal/external electrification work of residential, commercial and industrial complexes.
- Consultation and coordination with various authorities to get necessary approvals.

# **Our Strength...**

Separate dedicated project management team ensures quality and on-time delivery is maintained.

Over the years company has created extensive network of business relations and partnerships, allowing it to grow consistently.

Silverline Electricals has team of dedicated experienced technical consultants to provide customers with best systems and is regarded as expert in electrical network field.

Extensive consulting and regulatory experience built over the years allows Silverline to get necessary approvals from all government authorities efficiently.



# Silverline ... Solar **EPC Division** INST/



- 'A' Rated MNRE Channel Partners for Grid Connected Rooftop Projects
- MEDA Empaneled Solar EPC Contractors















# Our esteemed Customers...

























































































































# SILVERLINE ELECTRICALS PVT. LTD.

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