Gas Insulated Transformer (GIT)

Safety Transformer

1. Non-flammable and non-explosive
2. Flexible arrangement

Non-Flammable and Non-Explosive

Comparison of Oil-Immersed Transformers (OIT) and GIT

OIT

- OITs are an explosion risk
- OITs require a firefighting system

GIT

- The tank of the MITSUBISHI GIT is insulated with non-flammable SF₆ gas
- Lower total system volume

Features

- SF₆ gas is non-flammable
- Non-flammable and non-explosive

Advantages

- No firefighting system required
- Lower total volume

Flexible Arrangement

Flexible Radiator Arrangement

SF₆ gas has an extremely low density, making the flexible arrangement of radiators possible.

Features

- Top-mounted cooler
- Cooler can only be mounted outdoors

Advantages

- Reduced cooler maintenance costs
- Easy to replace coolers in under-ground S/S
Easy Maintenance

Maintenance Comparison with OITs

Maintenance Points

OIT Main Body
- Oil oxidation (DGA test)
- Replacing conservator cells
- Check breather
- Check oil temp
- Check oil level
- Check oil pump

GIT Main Body
- SF6 gas (basically requires no maintenance)
- Check gas temp
- Check gas pressure
- Check gas blower

Less Maintenance

On-Load Tap Changer (Oil)
- Oil contamination
- Average lifetime: electrical components = 200,000 hours, mechanical components = 800,000 hours

On-Load Tap Changer (Vacuum Switch)
- No contamination
- Average lifetime: electrical components = 500,000 hours, mechanical components = 800,000 hours

Long Maintenance Interval

Reduced Installation Times and High Reliability

Comparison of Installation Schedules and Transportation Volumes

Installation Schedules
- Installation schedule for a GIT is approximately 25% shorter than for an OIT

Transportation Volume
- Transportation volume of the GIT is approximately 25% less than the OIT.

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