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

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.