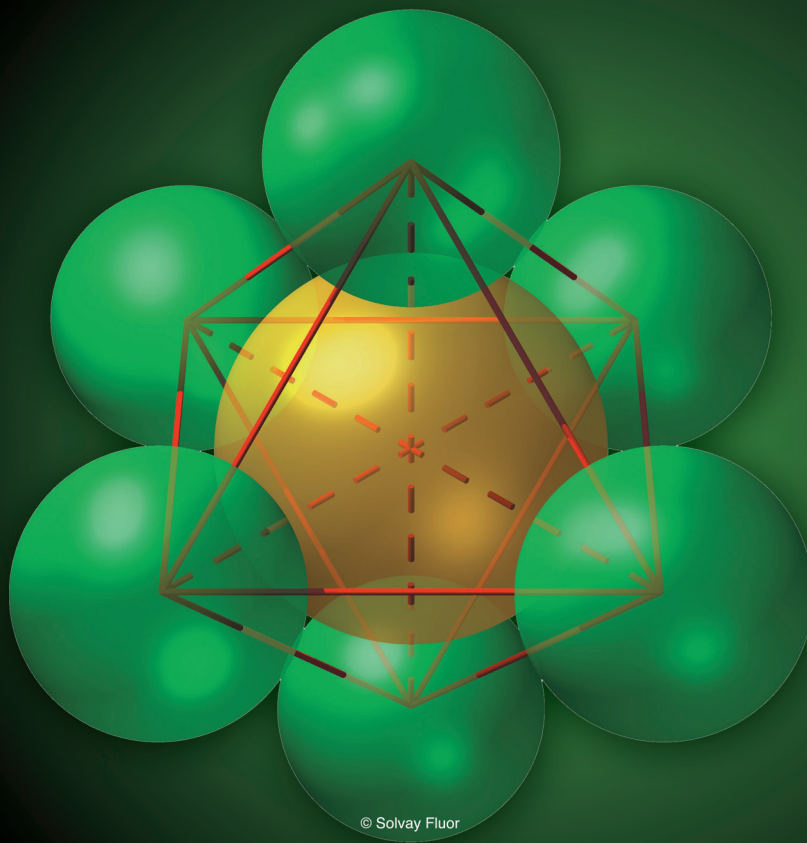




Medium voltage service

SF₆ gas life cycle services For a greener environment

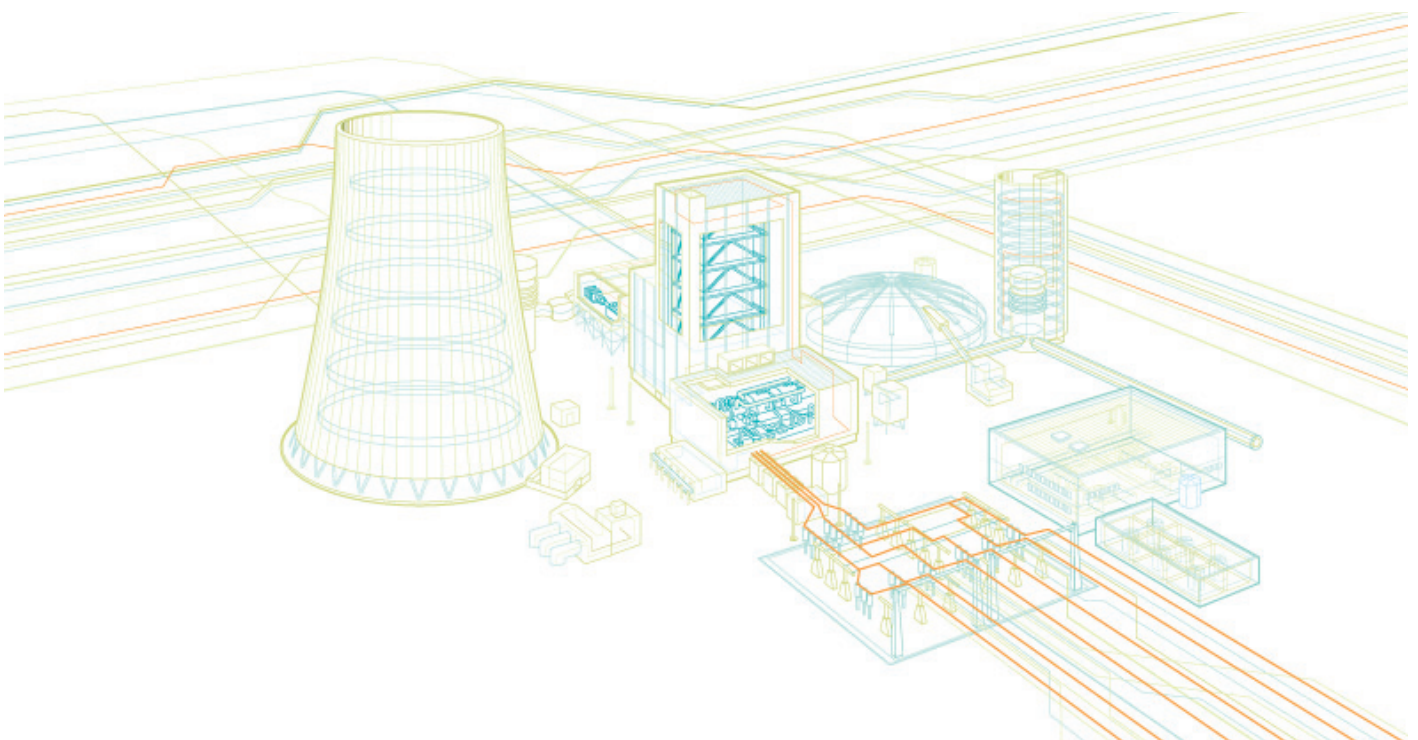
Power and productivity
for a better world™



What is SF₆ ?

Sulphur hexafluoride is a gas that has been used since the 1960s in electric power transmission and distribution equipment with voltages exceeding 1000 V. Its special physical characteristics make it ideal for use in various switching and insulation applications.

In its pure form SF₆ gas is colourless, odourless, tasteless and non toxic. The only danger in breathing pure SF₆ gas is that it displaces oxygen and therefore can cause suffocation. SF₆ gas is chemically inert and non-flammable. The gas has a high dielectric strength and thermal properties conducive for withstanding high voltages and quenching electrical arcs.



The regulation



SF₆ gas has potential greenhouse warming affects if not properly handled and therefore some international protocols define target levels for greenhouse gas emissions which are viewed as the primary cause of global warming.

As a reference, the European legislation calls according to (EG) Nr. 305/2008, that the qualification of employees in the area of SF₆ gas recovery is certified by training programs and tests for operators and manufactures of electrical SF₆ high voltage equipment higher than 1 kV.

Target of this legislation is

- Training and certification of personnel who carry out the activities provided for the regulation
- Reduction of emissions during the use of fluorinated gases (F-Gases)
- Recovery, recycling, re-construction and destruction of F-gases
- Classification and disposal of products and equipment that contain F-gases
- Reporting of these gases (monitoring/detection of SF₆ quantities for import and export) into the EU or out of the EU, as well as the production
- Monitoring of uses and trading of products and equipment with the relevant gases

ABB offering

- Commissioning of new products
- Inspection, maintenance and upgrade of existing assets
- SF₆ recycling and inventory management
- Decommissioning and recovery of SF₆

SF₆ gas management solutions offering

ABB's SF₆ gas management solution reduces the burden of managing SF₆ for all situations where the gas is used or handled. ABB can address the following needs:

Commissioning

- Top up gas for new equipment installation
- Safety check on installed gas purity
- Buy back any unwanted or unused new gas (where ABB completes commissioning work)

Decommissioning

- Reclaiming gas from decommissioned equipment
- Recycle of unwanted gas
- Environmentally compliant management of hazardous SF₆ decomposition by-products

Maintenance of existing equipment

- Inspection and assessment of gas quality in equipment
- gas leakage detection and repair
- Refilling equipment with new gas
- Reclaiming used or contaminated gas from equipment

Inventory management

- Safety check of existing gas inventory
- Assessment of gas purity for reuse in equipment where quality is unknown
- Consolidation of partially filled gas cylinders
- Purify contaminated gas to new gas standard (IEC 60376)
- Choice of rent or buy cylinders
- Return empty cylinders
- Removal and destruction of non-compliant cylinders
- Audit gas inventory for carbon emission accounting
- Pooling of gas stock for end-users

Disposal of gas

- ABB will accept unwanted gas, no matter the level of contamination

Benefit of qualified service technicians

The likelihood of damage to equipment is high if contaminated gas is inadvertently used in the maintenance or installation of medium voltage equipment (primary switchgear, RMUs, circuit breakers, switches etc.). Even new gas can easily be compromised due to mishandling or from the introduction of impurities from cylinders, reclaimers or other gas handling equipment. This can lead to time wasted and increased asset cost. ABB's service technicians are continuously trained and certified to handle SF₆ and follow correct gas handling procedures according to the legislation (EG) Nr. 842/2006.



Note:

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