SF\textsubscript{6} Gas Purification Service

Impurity Basics

SF\textsubscript{6} is relied upon for its insulating and arc-quenching capabilities, however over time the gas can deteriorate, particularly if the equipment has experienced regular switching. Inferior gas quality can diminish the above mentioned capabilities, which compromises the performance and safety of the equipment. Checking the quality of the gas in equipment, as part of a preventative maintenance program, can extend the product life. It can sometimes be the case that some customers hold unwanted, nonconforming or contaminated SF\textsubscript{6} that is no longer required due to the cost, or lack, of removal options. As part of ABB’s commitment to helping customers reduce their environmental impact, the ABB recycling center will accept any quantity or quality of SF\textsubscript{6} for purifying and restoration to CIGRE WG 23.10 recycling standard. Removal of other nongaseous contaminants is done with absorbents. The solid waste products, now safely concentrated and contained, can be disposed of in a safe environmentally friendly process. ABB’s complete solution assists companies in reducing their environmental impact and lowers the costs associated with the administration and inventory management of SF\textsubscript{6} gas. The new service offering will see contaminated SF\textsubscript{6} gas recycled according to IEC 60480 for reuse. This allows the product life cycle of SF\textsubscript{6} to be extended and removes the need for energy-intensive incineration. It also provides a viable route for utilities to decrease their stored stockpiles of contaminated SF\textsubscript{6} gas.

When Does Purification Make Sense?

The following conditions require that the SF\textsubscript{6} in your equipment be checked for purity:

− Number of operations for the equipment exceeds manufacturer’s recommendations
− Testing shows impurities, such as: moisture, acids, and air.
− Desire to re-use gas in new equipment and gas does not meet minimum purity requirements as stated in the equipment’s instruction book as well as the reference standards, such as IEC and CIGRE.

What Are the Benefits of Purifying?

By converting non-usable SF\textsubscript{6} into usable gas, you dramatically reduce your costs associated with new purchases. Your entire system reliability can be improved, not only by the purification process, but by recognizing equipment that is in need of repair or maintenance. A circuit breaker with large amounts of SF\textsubscript{6} by-products often requires additional maintenance that may have gone unnoticed without testing of the SF\textsubscript{6} gas.

Why Choose ABB to Purify Your SF\textsubscript{6} Gas?

As the world-wide leader in SF\textsubscript{6}-filled equipment and technology, ABB is the first choice in SF\textsubscript{6} gas management. With modern, oil-less equipment to reclaim your SF\textsubscript{6} gas, it only makes sense to have this gas tested prior to its re-use. ABB will test for impurities such as air, CF\textsubscript{4}, SO\textsubscript{2}, moisture, and other contaminants. These contaminants will be removed to bring the gas up to the standards set for recycled gas (ref. IEC 60480, CIGRE SF\textsubscript{6} Recycling Guideline). With our on-site and off-site purification capabilities and nation-wide field support, ABB can provide you with an opportunity to lengthen the life of the SF\textsubscript{6} gas in your equipment and increase the life and reliability of your system. All work is performed by ABB’s service engineers who are factory trained in SF\textsubscript{6} gas purification, recycling services, along with GIS and circuit breaker maintenance...a claim our competition cannot make.

SF\textsubscript{6} gas, sulfur hexafluoride, known for its excellent dielectric strength, must be maintained to maximize the reliability of high voltage equipment.
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