

Nissin Electric Launches Sales of 170 kV-class ECO Gas Voltage Transformer (VT) — Achieving reduction of global warming potential by about 98% through the use of ECO gas —

Nissin Electric Co., Ltd. will start sales of a 170 kV-class voltage transformer (“VT”) using a mixture of fluoronitrile, a fluorine-based gas, and CO₂ (“ECO gas”), as the insulation gas, instead of sulfur hexafluoride (SF₆) gas, in October 2020. Nissin Electric will become the first manufacturer in Japan to sell a VT using ECO gas.

A gas VT is a device for transformation of high voltage into low voltage and to measure the high voltage of an alternating current circuit. It is used in gas insulated switchgear (GIS). At present, SF₆ gas is mainly used as the insulation gas for GIS. While SF₆ gas has a high insulation performance, it is characterized by a high global warming potential and is considered to have a significant environmental impact in the event of leakage of the SF₆ gas into the atmosphere due to mishandling of the gas or unlikely damage to the device.

Against this backdrop, environmentally friendly GIS free from SF₆ gas have attracted much public attention recently. In Europe and South Korea, GIS using a new insulation gas have been increasingly developed and operated. Notably, South Korea has been accelerating the development of GIS free from SF₆ gas on a national level.

Nissin Electric has monitored developments in South Korea and found that most GIS manufacturers in South Korea used a mixture of fluoronitrile and CO₂ as the new insulation gas for 170 kV-class GIS. Thus, the Company embarked on the development of a 170 kV-class ECO gas VT for GIS. The ECO gas VT has met the electrical performance required of existing SF₆ gas insulated VTs. In addition, the use of ECO gas has reduced the global warming potential by about 98% compared to that of SF₆ gas. The first product will be delivered to a GIS manufacturer in South Korea in October 2020.

Nissin Electric remains committed to focusing on the development of environmentally friendly products, striving to disseminate such products, and promoting the reduction of environmental load to help prevent global warming.



170 kV-class ECO gas VT