Press Release

ABB breaks new ground with environment friendly high-voltage circuit breaker

First commercial 72.5 kV CO_2 circuit breaker in the world replacing SF_6 gas to reduce environmental impact

Zurich, Switzerland, Aug. 27, 2012 – ABB, the leading power and automation technology group, announced the launch of its next generation LTA carbon dioxide (CO_2) live tank high-voltage circuit breaker platform, starting from 72.5 kilovolt (kV), at the Cigré technical exhibition being held in Paris form 27-31 August 2012.

Sulfur hexafluoride (SF_6) gas has higher global warming potential (GWP) than CO_2. By substituting it with CO_2 as the insulating and arc extinguishing medium, each new 72.5 kV LTA breaker has the potential to reduce CO_2 emissions by 10 tons through the product life cycle – which is 18 percent less than its predecessor.

The LTA circuit breaker technology is based on the same principles and components as its SF_6 based predecessor with excellent switching performance. The new product will be offered as a conventional circuit breaker and as a disconnecting circuit breaker (DCB). The DCB concept pioneered by ABB a decade ago, integrates the disconnecting function with the breaker, eliminating the need for a separate disconnector. This results in increased equipment availability and reliability with lower environment impact.

“This is yet another ABB innovation milestone and reaffirms our ongoing commitment to minimizing environmental impact,” said Giandomenico Rivetti, head of ABB’s High Voltage Products business, a part of the company’s Power Products division. “This CO_2 breaker is part of our strategic thrust to develop eco-efficient high-voltage products with increased reliability.”

SF_6 gas is extensively used in the electrical industry for dielectric insulation and current interruption due to its physical properties. Pressurized SF_6 gas is used for the safe and reliable operation of gas-insulated switchgear as it has a much higher dielectric strength than other insulation media, making it possible to significantly reduce product footprint and enable installation in constrained spaces. However its lifecycle management is a challenge for utility and industrial users and the cost of handling it in a compliant manner can also be substantial, particularly when decommissioning aging substations.

ABB’s high-voltage circuit breakers are based on decades of technology development and experience, addressing the entire product life cycle. This includes aspects such as less material usage, lower resistive losses in the high conductivity copper current paths and reduced auxiliary power requirement. The LTA platform is an innovation that takes this commitment a step further by offering a viable alternative to SF_6 circuit breakers.

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 145,000 people.

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