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The urgency to act on climate change has never been greater, and, in the absence of global regulation, companies are voluntarily stepping up to fill the gap. In the power cables industry, high focus is currently on the accessories, because of their extensive use of SF6 gas, as part of the equipment to carry out routine tests of joints and cable drums, and through their interface to the gas-insulated electrical equipment. For many years, indeed, SF6 has been the preferred dielectric medium in electrical power applications, particularly in high voltage gas-insulated equipment. However, with the recognition that SF6 has an extremely long atmospheric lifetime and very high global warming potential, governments have pursued emission reductions from gas-filled equipment. The electrical power industry has responded to this environmental challenge applying SF6-free technologies to an expanding range of applications which have traditionally used SF6, including gas-insulated switchgear, gas-insulated circuit breakers and gas-insulated lines or bus bars. Some of these SF6-free solutions include gas mixtures containing fluorinated compounds that have low climate impact, among them, a fluoroni-trile and a fluoroketone developed as 3M™ Novec™ 4710 Insulating Gas and 3M™ Novec™ 5110. However, the replacement of SF6 with alternative gases introduces several technical challenges on the GIS cable terminations design, since the operating pressure becomes higher, and the partitions shall maintain the same mechanical safety factor. Moreover, potential compatibility issues between the alternative gases and the cable termination itself shall be assessed and mitigated.

Other strategic initiative, focused on the cable accessories industry, is the progressive range extension of fully dry-type products, which don't require at all gases to operate, with the aim of covering all voltage classes and cable cross sections.