

The Application of SF₆ in Transmission and Distribution Networks



SF₆ is essential for the transmission and distribution equipment and switchgear, because of its excellent dielectric, arc quenching, heat transfer and chemical recombination properties.

Download the Paper

Documents	Type	Weight
 the Application of SF₆ in Transmission and Distribution Networks	PDF	430kB

POSITION PAPER CIGRE Position Paper on the Application of SF₆ in Transmission and Distribution Networks Peter Okavitch, Shih-Sheng Chen, Juan-Pablo Basso, Fabio Pappi, Patricia Delaf, Paulo Probst, Ronald Furt, Toshiaki Saito, Yasuaki Uehara, Pascale Piron, H. Xu, E. Houtart, A. Janssen, V. Serey, D. Siffert	
March 2014	Introduction
Contents	This paper is for the transmission and distribution equipment and switchgear because of its excellent dielectric, arc quenching, heat transfer and chemical recombination properties. This has been successfully proven since the 1960s for high-voltage equipment and since the 1970s for medium-voltage equipment. The use of equipment and switchgear has been significantly reduced since the beginning of the 21st century. However, SF₆ technology is more than relevant in high-voltage and high-voltage load-carrying in the common in the range. However, compared to other technologies, SF₆ technology has a different profile in terms of power transmission when small size and high voltage are required. In spite of all the technical advantages of the SF₆ technology, it is a proven greenhouse gas which is currently the most abundant in the atmosphere. The use of equipment and switchgear has been significantly reduced since the beginning of the 21st century. However, SF₆ technology is more than relevant in high-voltage and high-voltage load-carrying in the common in the range. However, compared to other technologies, SF₆ technology has a different profile in terms of power transmission when small size and high voltage are required. In spite of all the technical advantages of the SF₆ technology, it is a proven greenhouse gas which is currently the most abundant in the atmosphere. The use of equipment and switchgear has been significantly reduced since the beginning of the 21st century. However, SF₆ technology is more than relevant in high-voltage and high-voltage load-carrying in the common in the range.
1. Introduction 34	Properties of SF ₆ 34
2. Properties of SF ₆ 34	Advantages of SF ₆ technology 34
3. Advantages of SF ₆ technology 34	Environmental impact 35
4. Environmental impact 35	Health and safety 36
5. Health and safety 36	The closed cycle concept and its implementation 36
6. The closed cycle concept and its implementation 36	Standards 36
7. Standards 36	Regulations 36
8. Regulations 36	Alternatives to SF ₆ technology 37
9. Alternatives to SF ₆ technology 37	Interrupting performance of high voltage circuit breakers 38
10. Interrupting performance of high voltage circuit breakers 38	Conclusions 39
11. Conclusions 39	References 39
12. References 39	