EUR24_17 – Arc-Flash Calculations: IEEE 1584 and DGUV-I 203-07

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Abstract:

It is widely recognized that IEEE Std. 1584™-2018 is used globally to calculate the prospective incident energy for the selection of arc rated clothing and personal protective equipment. In addition, this standard is used for calculating the arcing fault current and arc flash boundary. The information brochure DGUV-I 203-077 describes an alternative calculation method to IEEE 1584. The DGUV-I 203-077 Guide was developed in Germany for the selection of Arc Rated PPE. DGUV is the German Social Accident Insurance Institution which is the national, compulsory program that insures workers for injuries or illness incurred through their employment. Several countries use this document as a preferred alternative to IEEE Std. 1584™-2018. This paper explores the history of DGUV-I 203-077, why there are two incompatible arc-flash calculation methods and a detailed comparison of DGUV-I 203-077 and IEEE Std. 1584™-2018.