Calibration of high voltage transducers for power quality measurements

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Abstract: - Transmission and distribution networks are increasingly affected by sensitive loads, considering the increase of power electronics based equipment and devices. For keeping under control power quality parameters, for instance, harmonics, sags, swells, flicker, reliable measurements performed at high voltage level are necessary. This kind of measurement is performed using high voltage transducers. Considering present technical standards on this subject, for instance IEC 61000 series [1] and ANSI/IEEE Standards, one can find that calibration procedures for transducers, are not yet defined in those standards. This paper proposes calibration procedures and an experimental setup for generation of the required high voltage waveforms, and shows an example of calibration performed in a real high voltage transducer.

Key-Words: - high voltage transducers, capacitive voltage dividers, power quality measurements, harmonics, IEC 61000 series, high.