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Calibration of space charge measuring equipment based on the pulsed electro-acoustic (PEA) measurement principle

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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CALIBRATION OF SPACE CHARGE MEASURING EQUIPMENT BASED ON THE PULSED ELECTRO-ACOUSTIC (PEA) MEASUREMENT PRINCIPLE

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IEC 62758, which is a technical specification, has been prepared by technical committee 112: Evaluation and qualification of electrical insulating materials and systems.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
112/206/DTS	112/219/RVC

Full information on the voting for the approval of this technical specification can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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INTRODUCTION

The pulsed electro-acoustic (PEA) method has been used to measure space charge distribution in dielectric materials by many researchers, and it has been accepted, in general, as a useful method to understand the electrical properties of dielectric materials. However, since PEA measurement equipments have been developed/used independently by different researchers over the world, there has not yet been any standard way to evaluate whether a system works properly. The IEC has therefore established a project team to create a standard procedure to evaluate PEA measurement equipment. This technical specification is the result.

CALIBRATION OF SPACE CHARGE MEASURING EQUIPMENT BASED ON THE PULSED ELECTRO-ACOUSTIC (PEA) MEASUREMENT PRINCIPLE

1 Scope

IEC 62758, which is a technical specification, presents a standard method to estimate the performance of a pulsed electro-acoustic (PEA) measurement system. For this purpose, a systematic procedure is recommended for the calibration of the measurement system. Using the procedure, users can estimate whether the system works properly or not.

2 Normative references

None.