MIE-D 1.2

MEASUREMENT OF MINIMUM IGNITION ENERGY OF DUST DISPERSIONS

The MIE-D 1.2™ is an apparatus for measurement of minimum ignition energy of dust dispersions according to EN 13821.

The minimum ignition energy (MIE) of a combustible substance is the lowest value of the electrical energy stored in a capacitor, which upon discharge just suffices to ignite the most readily ignitable fuel/air mixture of the tested material (fuel) at the atmospheric pressure and room temperature.

APPLICATIONS

The minimum ignition energy of dust dispersions is one of the key parameters for an assessment of the hazard situation in process plants. The MIE test determines the amount of energy required for an electric spark to cause ignition of dispersed dust sample. This testing method is an essential part of a standard set of tests used by certified bodies, Universities and other research organizations to characterize the dust explosibility.

MIE-D experiment after ignition of a sample

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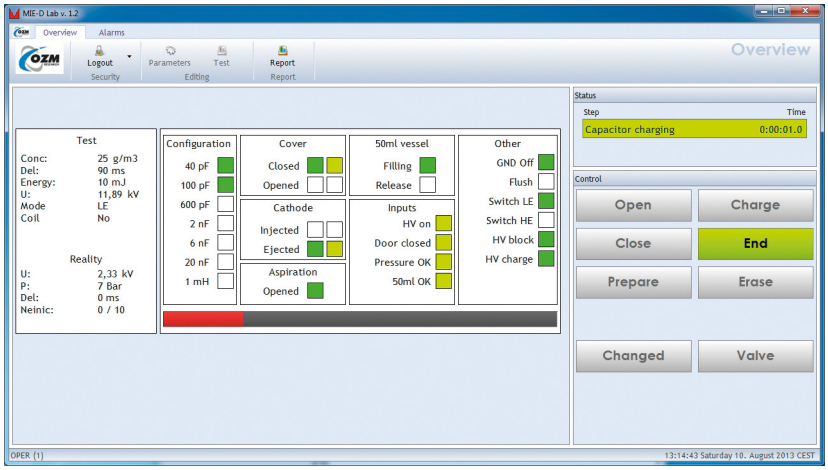
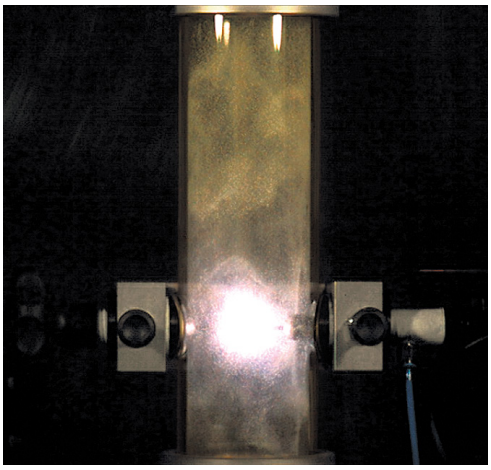
VER.1.0

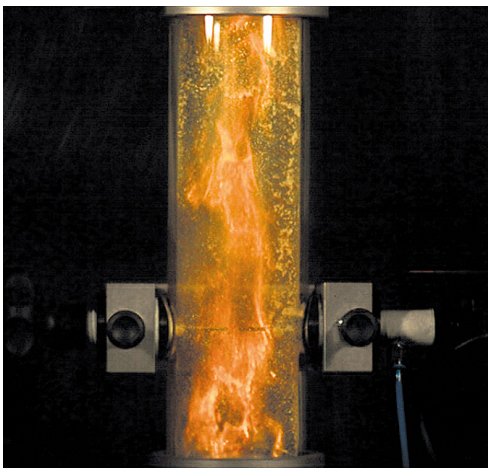
ADVANTAGES & FEATURES

- Standard measurement on seven pre-set energy levels up to 1 J, but optionally also on any user specified levels in the range of 1 mJ to 10 J with 1 mJ step
- Optional measurement of energy balance throughout the spark generating circuit and spark gap
- Three modes of spark triggering: high-voltage switch, moving electrode or triggering by dust cloud itself
- Automatic operation – pneumatically driven opening of the tube and withdrawal of the electrodes
- Automatically controlled and pneumatically operated instrument
- User interface with TFT panel
- Resistant stainless-steel case
- Optionally, the instrument can be equipped for Lower Explosive Concentration (LEC) measurement
- Optionally, stainless-steel version for explosion pressure determination suitable for non-standard measurements with small sample amounts can be delivered



Screenshot of the control window


Spark ignition of dried milk


Burning of dried milk

COMPLIANCE

- **EN 13821**
- **ASTM E 2019**
- **IEC 61241-2-3** - replaced by ISO/IEC 80079-20-2:2016
- **ISO/IEC 80079-20-2**:2016

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