

The Exploding Wire: A novel ignition source for the determination of safety characteristics

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Abstract:

For the determination of safety characteristics of dusts there are mainly chemical igniters in use. Especially for the maximum explosion pressure and the maximum rate of pressure rise there is no standard with another ignition source. The chemical igniters have the disadvantage of being very hard to obtain in most countries. This leads to the fact, that those countries are not able to investigate the safety characteristics or only with a high effort by sending dust samples to facilities outside the country. This article presents a novel fully electrical ignition source and describes how to build it. It is also the first step to place this ignition source into the dust standards in the future.

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