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PREVENTION OF ACCIDENTAL POLLUTION WITH COMBUSTION GASES AFTER THE OCCURRENCE OF EXPLOSIONS

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Abstract

This paper aims to study the behavior of air-gas explosion systems, in terms of propagation speed of pressure wave and flame front, based on experimental measurements in a shock tube, in order to prevent accidental pollution with the combustion gases. The characteristic parameters of the explosion process determined using the shock tube, the velocity of propagation of the flame front, the speed of propagation of the wave of pressure, explosion pressure at various distances from the source of initiation, can be used in the preparation of explosion risk assessment studies for technological processes carried out in potentially explosive atmospheres. Taking the developed technical measures would make possible ensure both the explosion protection and the prevention of accidental pollution with combustion gases.

Keywords: explosion, flame, pollution, pressure, velocity

Received: May, 2016; Revised final: May, 2017; Accepted: May, 2017

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