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THE EXPLOSION PROTECTION OF THE ENTERPRISES OF STORAGE AND PROCESSING OF GRAIN

Introduction. Analysis of the causes of accidents and emergency situations involving dusty explosions, indicating that the original explosion or outbreak was occurred mainly in the technological equipment or bunkers and only in a few cases the initial outbreak was occurred directly in the volume of the production facilities.

Materials and methods. To prevent explosive situations and minimize their possible consequences in advance is proposed to design and install the accident protection devices for production equipment and structural elements of the production facilities: the devices of explosion discharge; the speed latches or other types of firestops and alarms or indicators of explosion.

Results and discussion. In the design and reconstruction of existing enterprises for storage and processing of grain should be used devices of explosion discharge that intended to prevent the growth explosion pressure in the volume of manufacturing equipment above the permissible level to protect it from destruction and prevent the spread of the flame and products of explosive combustion of dust-air mixtures in facilities. Thus preventing the growth of explosion pressure above the acceptable level was performed by abduction of the flame and combustion products of the explosive of dust-air mixture from volume of the process equipment in a safe area outside of building. The structure of devices of explosion discharge type PS/R and PS/C are: preventive membrane or folding valve, outlet piping and fire-preventive device. The technological equipment of enterprises that specialize in working with grain was classified by the conditions of dust, allowing justified determines the site of the devices of explosion discharge. By devices of explosion discharge equipped the bucket elevators, the crushers, the filters-cyclones and recirculation or mine dryers etc.

Conclusions. Installation of devices of explosion discharge for technological equipment of grain processing enterprises makes it possible to minimize the possible effects of explosive situations.

KEYWORDS: *explosion protection, dust-air mixture, devices of explosion discharge*