DEVELOPMENT OF THE PHYSICAL CONFIGURATION OF THE FIRE EXTINGUISHING SYSTEM WITH GELLING COMPOUNDS

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To implement remote binary supply of GC for a safe and appropriate distance, developed an autonomous extinguishing system with gel-forming compounds AUTGOS - M, the design of which is shown in Fig. 1 [1]. This installation contains a supporting frame (frame) 1, where two tanks 2 with increased capacity of the components of the GC solution and two cylinders with compressed air 3, which have indicators of visual control of pressure in the tanks 4 and are connected by a direct action reducer. Moreover, the components of the GC contained in the containers under the pressure of compressed air, due to the system of connecting flexible hoses 5 are in the spray nozzles 6, which have one tap for closing and opening, which is associated with separate or joint supply of components GC on the object of fire extinguishing. The proposed design differs in that it additionally implements a system of guidance of spray barrels 7 on the object of fire extinguishing with verification by angles of inclination to the horizon, angles of deflection, height and base width of symmetrical placement and fixation of spray barrels mounted on the supporting frame (on the frame) [1].

Fig. 1. Installation AUTGOS - M: a - frontal projection; b - profile projection

Accessories to the installation AUTGOS-M: 1 - installation trolley frame; 2 - tanks with aqueous solutions of GC components; 3 - cylinders with compressed
air; 4 - reducer with pressure indicators (manometers); 5 - system of connecting flexible hoses; 6 - two spray barrels; 7 - device for aiming barrels

From the known installations the new installation differs in the increased stock of components of EA, and due to the new offered trunks-sprays SR - 10, possibility to remotely (to 10 m) and aim to give on extinguishing of GC within 1 ÷ 2 minutes. Moreover, the supply of EA/GC can occur as one or both barrels together so that the components of GC already on the approaches to the fire begin to form a gel.

In fig. 2 shows a prefabricated diagram and photo of the spray barrel SR-10 with an open lid, which can be used when working at a distance of up to 10 m components of the GC compact and flat-radial jets. Its design features of production and the basic principle of work with it are also shown.

The barrel of the pistol type SR-10 contains a hollow body 5 with some internal sampling of material, which on the one hand has an inlet cylindrical hole 2. To the inlet through the adapter 3 threaded connection connected ball valve 4, which regulates the supply of aqueous solution EA/GC. On the opposite side there is an initial profile-regulated section, which is formed due to the replaceable covers 1 with "P" - a similar cut in them 7, thus realizing the supply of aqueous solutions by plane-radial jets into the atmosphere. The size of the outlet width is regulated by changing the lids 1 with a "P"-shaped cutout with different section widths, and the height - the thickness of the rigid plates 6 placed between the housing 5 and the lid 1.

References: