

USE OF VENTILATION IN THE ENGINEERING INDUSTRY

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Occupational diseases are becoming an increasing problem in the modern world, which indicates the combined impact of harmful factors of the production environment and the labor process on workers in mechanical engineering, shortcomings in the work of health care institutions that conduct periodic medical examinations [1].

The mechanical engineering industry is accompanied by the release of heat, dust and gas, mineral oils, and emulsions of combustion products into the air. Mechanical ventilation systems are used to contain and remove harmful impurities directly from the places of their formation.

The industrial mechanical ventilation system is divided into types: general, zonal, local, emergency.

General ventilation removes contaminated exhaust air and supplies clean air throughout the entire volume of the room. Zonal systems provide extraction of contaminated air in a specific zone, and local exhaust fans are installed where the greatest amount of pollution occurs. Emergency ventilation is used in production facilities with a high risk of smoke [2].

Machine-building enterprises should not have a significant man-made impact on atmospheric air. Exhaust air is cleaned by industrial filtration, which involves the removal of solid particles, pollutants and other undesirable components from the exhaust air in an industrial environment. According to the method of cleaning polluted air, dry and wet filtration systems are distinguished. The type of air cleaning used depends on the production process and the type of air pollution sources.

There are a large number of regulatory acts to regulate air quality in industry, which differ depending on the country and industry. The main quality standard in the European Union countries is the ISO 8573 standard.

The absence or poor-quality ventilation system leads to a violation of air quality standards, exposure of workers to harmful substances and corrosion of devices at the installation, as well as potential damage to equipment and products and a decrease in efficiency, for example, of a production line.

Air ventilation is one of the key processes in the engineering industry to ensure air quality and worker safety.

Література:

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