

Mine-rescue service of Ukraine (PMRS)

(Report of Mr. Smolanov S. N.)

State Para-military Mine Rescue Service for coal-mining industry Of Ukraine at 11th of December 2002 marked by celebration the Anniversary – 100 years from day of foundation. The basic principles of the service are as follows:

- 1. Implementation of preventive arrangements on allocated mine-enterprises for the purpose to improve fire-prevention and anti-accident protection measures for coalmines.**
- 2. Rescuing people trapped by accident and liquidation of accidents.**

The subdivisions of Mine-Rescue Service serving 203 coal mines and 60 refinery plants belong to Department of Energy Resources of Ukraine.

The structure of MMRS of Ukraine is consist of 260 mine-rescue brigades (38 sections-stations), combined into eleven mine-rescue battalions (including training division)

The total amount of a service members are 5029 people, from which 3871 are permanently employed members regarded as personnel.

In present time, most of the mines carry out mining operations on depth between 600m to 1300m on seams, which consider as extremely dangerous regarding by sudden throws declinable to spontaneous ignition with methane yield over 50m³ per mined ton of coal. For 11-years of independency of Ukraine the MR Service liquidates 1200 accidents, 400 of them -technological accidents as stoppages of main ventilation fan, power disconnection on the lifting gear of vertical mine shafts.

The bench marks for mine-rescue team always based on time (duration) of accident liquidation.

The desired result mostly achieves by implementation of newest technical methods and application of modern effective technologies such as:

- Control of ventilation rates based on computer programs.
- Application of new technology for neutralizing (inert) atmosphere.
- Reduction of extinguishing time due to the fire fumes recirculation.
- Advanced facilities utilization for extinguishing, detection and localization of spontaneous ignitions.

A short while ago rated time for accident liquidation on the coalmines was from 6 to 9 months. Using advanced technology; serious accident is liquidated in a few days to couple of weeks.

Because of that, the coal-mining industry benefit economically and financially, as follows:

-At “Krasnolimanskaya” mine 430mil. Grn. (81mil. \$), saved 2.2mil. Tons prepared reserves of coal deposits prepared for mining.

-At “Bazhanova mines” 120 mil. Grn. (22.6 mil. \$), saved 1.8 mil. Tons prepared reserves of coal for deposits prepared for mining.

-At “Zasydko mines” 116 mil. Grn. (21.9 mil. \$), saved 1.4 mil. Tons prepared reserves of coal deposits prepared for mining.

Every year 21 brigades (crews) of stand-by doctors of the Mine-Rescue service gives emergency medical help to about 6 thousand suffered mine workers on the surface and underground at workings.

For 11-years of independence of Ukraine, 84 mine-rescuers were rewarded with medals of honor for courage and heroism, saving people’s lives and liquidations of mine-accidents.

1146 people have been honored with special department medals.

There are more then 200 different types of technical equipment in use for liquidation of different accidental situations and to rescue people.

Many types of technical equipment manufactured by Donesk Plant of Mine-Rescue Equipment (DZGA) such as:

Oxygen insulating respirators with 2 and 4 hours duration time

Self contain self-rescuers

Oxygen booster compressors

Chemical gas detectors

Universal control equipments and so on.

However, the Donesk Plant has not only presently busy to improve existing equipment. It is also developing new fundamental types of respirators based on chemically contained oxygen instead of compressed.

At the moment there are not so many companies in the world that design and produce regenerative respirators. The OAO “ Donesk Plant of Mine –Rescue Equipment” (DZGA) presently and successfully working it’s way to the world market for more than 50 years in close relationship with situated at Donesk the Specialized Design organization Scientific Research Institute for mine-rescue work (NIIGD) and presently with Joint hand with CSIR SA

Because of the joint relationship between the scientists and producers, the plant which has already produce up to date 7 mil. Insulating self-rescuers, more than 65000 main and 16000 sub main respirators, more than 3000 oxygen booster compressors and many more of other types of equipment to provide safety of labors. The equipment produced at the Plant practically does not have reclamations on quality of products.

Quality control of the OAO DZGA (Donesk Plant of Mining-Rescue Equipment) certified by TNO Holland, Standard Bureau of Ukraine in conformity with ISO 9002. The whole production of the plant has conformity of Ukrainian SEPRO, as well it was certified in European countries in conformity to European standards EN 401:1993 and EM 145: 1997.

We will be glad to co-operate with mine-rescuers of different countries to exchange the experience and ready to give you necessary information to choose adequate to protect breathing organs, according to your safety demands.