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### **Pneumatic Separation Complex “Sepair”**

Slurry formed at dressing mills in the process of coal processing and gathered in mass in a great quantity in slurry tank is very dangerous. From one side, it characterizes low efficiency and nonretional usage of coal reserves, from another side, it is the reason of money penalty as it damages ecology (land pollution, weathering, etc).

Millions tons of coal in the form of finely dispersed and high-moisture powder were non-demanded until the present time. To use coal as a fuel it's required to take away dead-weight moisture from the slurry and make material transportable and free-flowing. Traditional (thermal) methods of drying used for this purpose requires more energy consumption than coal obtained with their help in the process of burning. That is why this approach is unprofitable.

Novosibirsk designers represented complex of pneumatic separation “Sepair” to specialists of mining and processing industry intending to dry finish and preliminary dressing of high-ash coal, ores of non-ferrous metals, gold and metallurgical slurry. Equipment can be installed on the bottom of the pit or directly at the mine not to hoist upward country rocks.

Complex consists of crushing and sorting installation, unit of pneumatic separation, conveyor system, complex of mineral-dressing product storage, systems of control and aspiration.

Due to new technology of separator finish coal dressing enables to separate components by dry method with efficiency up to 95 %.

Gravitation particle separation based on dependence of the speed of its lingering and falling within air flow on density and size is the basis of “Sepair” operation. Each separator (there are three of them) of this complex carries out material dressing which is divided into size class (5–15, 15–25 и 25–40/50 mm). The amount of dressing products can be from 2 till 5 and in some cases more depending on demands to process and construction of the unit.

This complex is 30% cheaper than equipment of wet separation. “Dry” separation offered by Novosibirsk developers is much more efficient than traditional technology used water environment. “Sepair” guarantees the highest efficiency of coal and other mineral raw material dry separation in the globe under minimal investment and process cost.