



Unia Europejska
Europejski Fundusz
Rozwoju Regionalnego



Title of the project:

R&D works on the development of mobile technology for the treatment of post-flotation waste, using mechanical and chemical means continuously and automatically as a base reclamation of degraded areas after coal mining.

Project objectives:

The project entitled "R&D works on the development of mobile technology for waste disposal" post-flotation, using mechanical and chemical means continuously and automatically as a basis for the rehabilitation of degraded areas after coal mining' shall aim at conducting R&D works in the area of mobile technology for waste disposal.

The system is designed for post-flotation applications waste generated as a by-product of processes the processing and enrichment of coal, which is a serious environmental problem due to inadequate protection of the storage areas.

It is estimated that the deposited waste in the flotation tailings ponds in Poland is accumulating in emissions to approximately 300 million tonnes. These tanks are not adequately protected and may therefore pose a threat to the natural environment, inter alia, may contaminate the ground water, or cause a general depreciation of the value of the property. As a result of the analyses, the company Cobant specified the needs of customers (owners of flotation tailings ponds) towards mobile post-flotation waste treatment service, such as:

- carrying out an effective inventory of the energy potential of real property degraded with the waste in question
- restoring the investment or recreational value of the land
- economic viability of the project from the social and economic point of view
- short disposal time of the flotation tailings ponds
- certainty of groundwater protection on the site
- respect for the local community and the ecological characteristics of the process during the proces each of its stages.

Planned effects:

The planned effect of the project, which is a novelty on the Polish market, is innovation process-driven mobile waste treatment technology to be used for the treatment of waste from flares implemented in the business activities of Cobant.

As a result of the innovation developed, it will be possible to provide an improved service - mobile recycling of post-flotation waste and production of secondary fuel briquettes sustainable, with improved properties and environmentally friendly. As a result of the conducted research and development works, improved mobile services will be created utilization of rinsed areas from hard coal mining. It will enable more efficient, effective and ecological recovery of combustible parts from settling tanks.

The system is designed for post-flotation applications. It will also make it easier for the owners of the settlers to carry out the reclamation, and restoring the usable value of the area, because it will be deprived even of the following grounds small fractions of combustible parts. In addition, it will reduce the time needed to complete formalities administrative, because the technology is not permanently linked to the ground due to what is not required for the permit to build the installation in the area of the settling tank.

The developed process innovation will also allow for the production of secondary solid fuel briquette of better quality than currently available on the market. Created briquette will be burned more quickly thanks to the addition of biomass, which will increase its porosity.

It will also have a lower impact on the environment, taking into account the whole life of the product as confirmed by the calculated CF and EROEI indices.

Value of the project:

PLN 10,810,038.95

Contribution from the European Funds:

PLN 7,854,334.49

Period of implementation:

2017-2018