



Magistrski študij Geo-Inženirstva in Sanacijskega-Rudarstva v kontekstu EU zakonodaje

ID 13 Master course Geo-Engineering and Post-Mining in the context of European laws

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POVZETEK

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ABSTRACT

In 2018 the subsided hard coal mining in Germany will end. Then the coordinated closing of the last coal mines in the Ruhr-District and Ibbenburen will start. Such a big mine site consists not only about expanded underground facilities and openings to the underground. It also consists about facilities at day ground like working areas, processing plants and mine waste dumps. Centuries of underground mining down to depths more than 1500 m below ground requires about a appropriate ground water management. This has to run until the last underground workings are running. Not before 2022 the rising of the mining water table can be started. The extraction of more than twenty meters of coal about an expanded area caused subsidence of more than 20 meters at day ground. Such a subsidence in a dense populated plain area with a groundwater table tight below surface and some waters in that area demand an empoldering of areas, which are business for eternity. Because of wandering north of hard coal mining from near surface mining to extreme deep underground mining there are more than 25000 openings in the dense populated Ruhr District and surface near rooms in the south of the Ruhr District. A part of these properties left is still unknown. To solve all these tasks well educated engineers will be needed. In agreement with the mine authority of North Rhine Westphalia, the district government Arnsberg, and the RAG the master course "Geo-Engineering and Post-Mining" was established. This part time course started in summer semester 2013 as a job companying

course. The RAG Foundation sponsored a professorship to support in the first five years. In this article the philosophy and the direction of this course will be shown.

According to the European regulations, Euro Codes (EC) are very important. Especially for all kinds of geotechnology, EC7 is regulating all tasks. Inside this EC7 every country is allowed to define three categories of difficulty: GK1 to GK3 (Geotechnische Kategorie). Nearly all geotechnical tasks in abandoned mining are located in GK3, the category with the highest level. EU wants to implement an expert system inside the Euro Codes. This means for universities that only a master degree leads to GK3. Bachelor only will be allowed to work in GK1 and GK2. Inside the Bachelor and Master Courses the students have to learn special contents.

Key words: Euro Code 7 (EC7), master course, post-mining, Geo-Engineering, Geotechnical category 3, European expert system.