



SAFETY & TRAINING FOR THE MINING SECTOR

Sustainability in Resource Management



The instructors from train@mine recently worked with miners from Vinacom in Vietnam.

A consortium of leading German companies in mining and environmental issues—Mitteldeutsche Braunkohlengesellschaft mbH (MIBRAG), RAG Mining Solutions GmbH, Emscher Wassertechnik GmbH and the University of Leipzig—recently established a vocational training program for project management. In addition to mining and environmental issues, the train@mine project management program offers instruction related to cost control, occupational safety and human resources. The group specializes in state-of-the-art training and consulting methods, holding customized workshops and seminars at the mine sites.

Worldwide, there is a high demand for know-how in efficient resource management. Vietnam is a prime example. Each year, about 1 million young people enter the labor market in Vietnam. Despite the large number of workforce available, there is a shortage of skilled labor, which is attributed to the fact that very few young professionals obtain secondary training. To meet the ambitious target of becoming an industrialized nation by 2020, Vietnam needs to train its workforce to cope with the challenges in terms of efficient resource management, environmental management, safety standards, etc. Using the Vietnamese mining sector as an example, a commercially viable internationalization model of education and training in mining (train@mine) will be developed within three years.

The train@mine project is funded by the German Federal Ministry of Education and Research (BMBF). The three industrial partners possess long standing experience in the fields of open-pit and underground coal mining, water and environmental management. MIBRAG is a modern high-tech opencast mining company headquartered in Zeitz. Located in Herne, RAG specializes in underground coal mining and occupational health and safety.

Essen-based Emscher Wassertechnik has valuable experience with water and environmental issues. The University of Leipzig provides scientific expertise in the field of services management and supports the industrial partners with management-related topics such as business model development.

Train@mine stands for "training made in Germany" and thus state-of-the-art mining and mining-related knowledge as well as modern learner-oriented methods. Based on a comprehensive analysis of the frame conditions in 2013 (economic, social and education policy condi-

tions) in Vietnam, the consortium developed four profound up-to-date training products (water and environmental management, occupational safety, mine management and project management for the mining sector) as well as management consulting programs (change management, human resource management and training center management) and technical consulting in cooperation with the Vietnamese partners (VINACOMIN and VINACOMIN Business School, Hanoi). Apart from the developed courses and consulting, the consortium developed an e-learning module concerning occupational safety.

The train@mine trainings, all prepared in conjunction with all partners, were carried out in June and October 2014 in Hanoi and are characterized by a high degree of practical relevance and are carried out usually by two competent trainers with long-term experience in the mining sector. The courses were limited to a maximum of 10 to 15 for middle management experts of different subsidiaries of VINACOMIN to enable the professional exchange within the course. All courses were interpreted into Vietnamese and German.

The unique constellation of the German consortium enables handling all mining issues along the value chain. The experience the consortium gained during the two years of the project will be used for other potential markets as well. The three-year project began in October 2012 and will end in August 2015.

Control-room Based Logistics and Ventilation Services

Mining machinery and mine operating systems generate a large volume of information on a continuous basis. Operating interlinked equipment of this kind in the proper manner calls for broad-based professional expertise on the part of underground workers and surface staff alike.

But how does a company like RAG do this in an industry whose workforce is steadily declining in number? According to Hans Simon, head of software development at RAG Mining Solutions, this can be achieved by preserving expert know-how and key data in modern, high-performance software systems and databases, systems whose operation can be guaranteed for the remaining lifetime of the industry. And, during this realization, RAG Mining Solutions has switched from being a software consumer to a software manufacturer.

"At the beginning of the process, it was necessary to establish, in collaboration with the development team from our sister company RAG Deutsche Steinkohle AG, exactly what the software would have to deliver," Simon said. "Working with experts from RAG, the developers were able to define and achieve their aims. The result was a software system containing information obtained from many different machines."



A ventilation control room combines data input with a visual display.