ACETube®

ACE Geosynthetics

Case Study

High Permeable ACETube® Solution for Mine Slurry Dewatering

◆ Background

According to the statistics from Ministry of Energy and Mineral Resources of Republic of Indonesia, its coal reserves are highly up to 13.4 billion tons and could be extracted for 67 years. Moreover, its proven reserves are 5.3 billion tons. Most of coal mines in Indonesia are open-pit mines and this provides the beneficial condition to extract coals easily. The coal-mining areas are mainly distributed in Sumatra and Kalimantan. With the features of low-ash, low-sulfur and high-volatile, the coal in Indonesia is suitable for coal-fired power plant. Due to the advantage, Indonesia becomes the biggest country to export coal fuel for coal-fired power in the world. As the data shows, the mining volume of this coal-mining area is 312 million tons and the layer depth is 5 to 60 meter for this case.

◆ Problem

This mining area is adopted open-pit mining. In order to remove the overburden and obtain coal mines, heavy machines and equipment are needed for this extraction. The slurry waste will usually be transported and stacked at settling pond accordingly. After the moisture content of slurry waste decreases, it will be moved to mud cell and be buried. However, it takes at least six years to wait the moisture content dewatered naturally. Besides, as the extraction volumes increase, the slurry wastes subsequently increase as well which caused the problem of space shortage. Thus, the problem that is urgently to be solved for this coal-mining area is how to shorten the time of handling slurry wastes in order to improve the problem of space shortage.

◆ Solution

ACETube® is applied in this coal-mining area to proceed the test of dewatering slurry waste. Excellent permeability of ACETube® makes the time of dewatering distinctly decreased and provides more spaces to be utilized. Based on the result, it only took around one week for ACETube® PP70-I to efficiently decrease the moisture content to 40%.

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