

Development and Demonstration of Coal Utilization Byproducts-Based Artificial Supports For Underground Mine Use

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ABSTRACT

This paper presents the development of a pilot scale facility for the fabrication of coal utilization byproducts (CUBs) based artificial supports (cribs and posts) for use in underground mines. The engineered supports utilize 40-85% of CUBs, have similar weight with considerably better performance as compared to wooden counterparts. The characteristics of engineered supports, their fabrication, and their field demonstration are also included in the paper. Successful commercial implementation of these engineered supports in US coal and non-coal mines can utilize over 4 million tons of CUBs annually.