Abstract
Selecting the best mining method among many alternatives is a multicriteria decision making problem. The aim of this paper is to demonstrate the implementation of an integrated approach that employs AHP and PROMETHEE together for selecting the most suitable mining method for the "Coka Marin" underground mine in Serbia. The related problem includes five possible mining methods and eleven criteria to evaluate them. Criteria are accurately chosen in order to cover the most important parameters that impact on the mining method selection, such as geological and geotechnical properties, economic parameters and geographical factors. The AHP is used to analyze the structure of the mining method selection problem and to determine weights of the criteria, and PROMETHEE method is used to obtain the final ranking and to make a sensitivity analysis by changing the weights. The results have shown that the proposed integrated method can be successfully used in solving mining engineering problems.

Keywords
AHP, mining, multicriteria decision making, PROMETHEE.