Numerical simulation on effect of coal pillar width on stability of retained roadway: A case study of Vietnam's coal basin

Original Submission
Tien Trung Vu Reviewer 1

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Recommendation: Minor Revision   **Overall Manuscript Rating (1 - 100):** 85

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The subject addressed in this article is worthy of investigation.	[1-3]	3
The information presented was new.	[1-5]	4
The conclusions were supported by the data.	[1-10]	8

Reviewer Comments to Author

Reducing losses in underground coal mining is an important and practical problem. In Quang Ninh coalfield, Vietnam, the problem of reducing coal loss in the mining process is also concerned by the mines. Therefore, it is very necessary to research and select mining methods to reduce coal loss. In this paper, the authors used numerical methods to simulate and calculate the width of coal pillars. This is a modern research method that has been widely applied in mining. The reviewer said that the authors could consider some of the following comments:

1. Title of the paper: The reviewer said that the title of the paper could be revised as "Numerical simulation on effect of coal pillar width on stability of retained roadway: A case study of Khe Cham Coal Mine, Vietnam"
2. The symbols σp (σ_p) and σs (σ_s) in the text should be consistent with this figure (Fig.5)
3. The results of numerical modelling and determining the influence of coal pillar width are shown in Fig. 5. However, it is necessary to clarify the position to define the cross-sections of the models (at what distance from the longwall face).
4. There are a few places in the manuscript that need clarification (e.g., The displacement of roadway of the coal pillar are 800 mm; The incidents of roadway deformation in this case were found at Khe Cham coal mine, as shown in Figure 6).
5. The manuscript's structure needs to be improved. For example, paragraph "The analysis of the simulation results showed that with a pillar width of 40 m, ... increase the coal recovery rate" need to be brought up before analyzing the convergence of the roadway (Fig. 7) to ensure logic.
6. Why is the width of coal pillar chosen to be 40m, what is its basis? please explain.

Reviewer Confidential Comments to Editor:

Is there a financial or other conflict of interest between your work and that of the authors?

NO _x_

Please give a frank account of the strengths and weaknesses of the article:

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