

Interactive comment on “A Continuous Dynamic Prediction Model of Gas Pressure Based on Gas Emission at Excavation Face and its Engineering Application” by Chen Liang and Wang Enyuan

Anonymous Referee #1

Received and published: 14 March 2016

The continuous and dynamic gas emission process is relate with the excavation rate of coal, whether this factor can be considered in the model.

2.As the author said the gas flow is a complex fluid-structure coupling process, however, coupling hydro-mechanical relationship has not been reflected in the model.

3.Although the author emphasizes the correctness of the model, I thick the simulation results of the model is not consistent with the actual because of big error range(5.88~13.3%). Especially when the model is applied to the prediction of gas and coal outburst prediction, even if there is one successful prediction cannot illustrate the the effectiveness of the model.

C1

4.I understand that the authors want to obtain the dynamic pressure distribution of coal by hydro-mechanical numerical simulation. But as far as I know, as long as know the boundary of the roadway and the dynamic evolution of permeability under excavation, the changes of pressure of roadway will be able to predict. Thus, I want to kown why you introduce experience equation of gas release rate.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., doi:10.5194/nhess-2015-322, 2016.

C2