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   Sommario/riassunto Coal or rock electromagnetic emission analysis is a promising method for predicting coal or rock dynamic disasters. Hidden Markov Model (HMM) is applied to this problem in this paper. HMM model is a processing method of dynamic information based on probability, which can reflect both randomicity and potential structure of the object. Model selecting of HMM Bayes Information Criterion is combined with classical optimization algorithm. Moreover, k-means clustering algorithm and Gaussian mixture model are introduced to initial HMM model. Researches in this paper indicate that HMM is an outstanding probability learning model which can perfectly analyse coal or rock electromagnetic emission time series problems.