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The Transgressive Events and Mechanism of Coal Formation in Epicontinental Sea Basin

Coal formed in the marine regression or in land facies is a popular point of view in coal geology. In recent years, studies show that coal formed during marine transigression is also important in coal accumulation basin. The authors have studied the sedimentary series of transgression events in the coal-bearing strata and the characteristics of transgression sediments coming into immediate contact with coal seams in the epicontinental sea basin of late paleozoic period in North China, summed up the points of transgression events and coal formation with the events, studied the mechanism of coal forming with transgression events, and put forward the theory of coal formation with transgression events in North China epicontinental sea coal aggregational basin. It is believed that the transgression events controlled the aggregation of coal in epicontinental sea basin, the rising of the datum plane provided favorable condition for the growth of peat swamp, and makes it impossible for very thick coal seams to be formed in such a short-lasting period of peat swamp. The essential difference of coal formed under transgression events from that under transgression process is the isochronism. The latter is not breadthwise isochronous. There is no such continuous sedimentary series between sea facies layers and coal seams in this transgressive event coal-forming model as in ordinary transgression series, and the the sea level change in epicontinental sea basin is characterized by influence of transgressive events. In the coal-forming model, the accidental event property is emphasized by the authors. Furthermore, discussed in the paper, is the significance and function of coal seams formed under transgression events in the recognition of sequence interface and division of different sequence units.