

Radio Location Method in the Whole Working Face of Coal Mine Successful Application of Large-Scale Roof Water Detection



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Abstract: Radio Location Method of detecting mine Old Empty Water and Roof Water in the measurement baseline length is less than 200 m cases of successful application of pre-existing multiple instances (Sanhejian Coal Mine, Gaozhuang Coal Mine, Zhoguan Iron Mine, etc.), the paper provides the measurement baseline length is more than 1800 m whole working face successful application cases of first example: Shandong Energy Zaozhuang Mining Business Group Co., Ltd. Seventy-five Coal Mine 3 up 217 working face Roof Water measurement. In this paper, when the length of a single roadway of the whole working face is nearly 1000m, the Roof Water of the whole working face is measured by using the "Radio Location Method of long baseline multi-base point pitching and horizontal multi-azimuth of water measurement of the upper and lower roadway". The basic principle of radio radiation detection for underground water and small structure of coal mine is described. In addition, the drilling data in the water-rich area obtained from the data processing results after the measurement were used for water exploration and drainage verification, and the verification

accuracy was nearly 100%. Finally, the results of borehole verification are compared with that of the Transient Electromagnetic Method which can measure Roof Water almost simultaneously at the same working face.

Keywords: Radio Location Method, coal mine roof water, whole working face detecting water instances, drilling verification, compared with the Transient Electromagnetic Method

Author's brief introduction

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