

# The application of reciprocating mining technology

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## Abstract

The article introduced the characteristics and advantages of reciprocating mining technology and the application of reciprocating mining technology in the mine of KangCheng in Handan Mining Group Co., Ltd. Through the successful application of reciprocating mining technology in the mine of KangCheng, put forward that reciprocating mining technology should be applied to non-pillar mining and achieved continuous mining, the application of it is wide, and is of great significance to increase the resource utilization and improve the technical and economic efficiency of the mine.

**Key words:** *Reciprocating mining, Along goaf, Anchor reinforcement, Light caving*

## 1. Introduction

The so-called "reciprocating mining method" is that undirected subsequent working of advancing and retreating reciprocation is carried out along up and down sections in a district. Up section is advancing, down section is retreating and the following sections is also subsequent mining of advancing and retreating (Figure. 1). Reciprocating mining can be achieved continuous mining and reduced the quantity of moving work in face. Reusing of middle roadway exists in process of the reciprocating mining, so reserved gate along gob edge is most used to raise extraction efficiency of the reciprocating mining.

At present, most fully mechanized coal face were used in the roof and floor conditions are better and in the gently inclined or near the level of thick coal seam in China, if roadway adjacent mining area have been exhumed or production can be achieve reciprocating

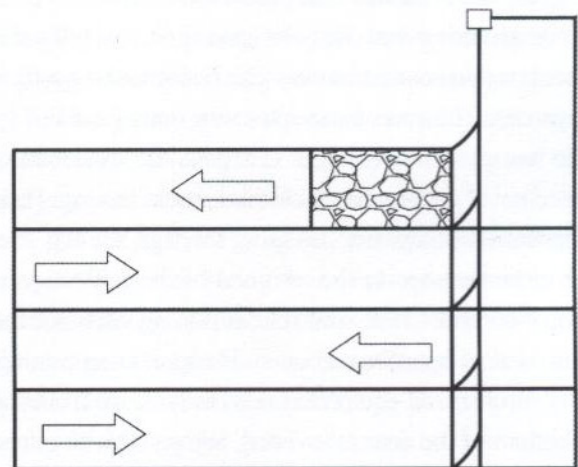


Fig. 1. Schematic diagram of reciprocating mining.

mining interval or region as long as a little of the roadway improvements. From abroad shows that the United States, the Soviet Union and West Germany were used to reduce reciprocating fully mechanized mining equipment relocation. West Germany's successes of the test of the