Coal Mine Safety in China: Can the Accident Rate be Reduced?

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Statement of

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Safety in Coal Mines - the UK Experience

The question of safety in coal mines is very important to me both as a person and as someone who has been at the forefront of mines safety for the greatest part of my life. From working as a miner, to supervising miners, to representing miners at the UK, European, and world level.

I was employed as a safety official to ensure the good practices introduced years before were maintained and improved upon.

It seems important that lessons learned in mining from years of mistakes need not be repeated, that such lessons could be passed on, and used by others to everyone's advantage. Producing such a process of assimilation has not always proved successful.

In the UK, each mine disaster was the subject considered by an inquiry, Parliamentary select committee, or Royal Commission. The findings of these hearings produced reports with recommendations culminating in changes to regulations and avoiding repetition of past errors.

Historically, there was no magic formula to avoid mining accidents or disasters. Once they occurred, it was not immediately apparent to those involved at the time what actions could have prevented them.

The UK had more than its share of mine disasters, involving explosions, flooding, gas outbursts, fires, and roof falls.

Explosions do identify as the most violent form of coal mine disaster and usually they are the cause of the greatest loss of life. In the UK some 144 methane/coal dust explosions caused major losses in life. These had reduced to 6 in the 1960s and 1 in the 1970s in which 5 lives were lost.

In hindsight, we can recognize how each of those explosions were caused (in some, doubts remain) and how the authorities acted to remove or reduce the cause. One disturbing point has to be the time taken from identifying a cause to introducing the solution. From a UK position many of these solutions now exist; so how do we encourage a transfer of that knowledge?

From 1935 to 1938, a Royal Commission took evidence from witnesses, considered many reports and eventually arrived at a conclusion. Unfortunately the war years intervened, and it was not until some time later that the UK Parliament passed the 1954 Mines and Quarries Act.

This Act and accompanying Regulations led to a dramatic reduction in the fatal accident rate from 0.24 in 1955 to the lowest rate of 0.03 in 1987/88 (per 100,000 man shifts). The two main elements that were maintained and improved upon were a statutory responsibility for inspection and reporting upon the condition of each working district - this being completed every 4 hours.

Also maintained and improved was a provision for the workforce to appoint a workman's inspector who shall have the authority to inspect workplaces and make written formal reports which must be made available to the Government inspector.

This Act contained provisions relating to Management and Control, Surveying, Plans, Ingress and Egress, Roads, Supports, Ventilation, Fire and Rescue, Training, Dust and numerous other provisions all relative to historic findings from past mistakes.

Whilst recognizing there may exist a different system of administration in China an offer to help reduce the accident rate in their mines by an exchange of existing safety knowledge seems the right and proper thing to do.