

## MINE FIRES IN UNDERGROUND MINES

I want to write about my experience with mine fires in lignite coal mines. Lignite coal is very susceptible to spontaneous combustion under certain conditions of ventilation.

At one time I was a member in the Organization of Mining and Metallurgy. In the early years about fifty years ago, we discussed mine fires on a number of occasions but seemed to have very few suggestions how to take care of these fires. Two or three of the large mines had a lot of trouble with mine fires. I can remember on three occasions when the fire got out of control and was burning like a large furnace down the main roadways of the mine.

Most of the time these fires started in the old workings of the mine and abandoned rooms from which the coal had been mined.

However, the way we took care of the problem in the main roadways was that we bypassed the air at the nearest cross-cut to the fires and boarded up the roadway and then followed up with water and fire extinguishers.

Mine fires are very expensive. They were continually breaking out at the Manitoba and Saskatchewan Coal Co. Ltd. before I went there as Mine Manager in the winter of 1926. They were spending thousands of dollars each year making cement stoppings and the fires would burn around them. When I went there, I immediately installed a large mine fan and changed the direction of the air. Instead of forcing the air into the mine, we had the air pulled from the mine workings to take the pressure away from the old working places in the mine and were soon able to control the fires with a minimum of expense.

There is very little explosive mine gas in lignite coal mines so there was very little danger from mine explosions. In later years the Electric Power Company found that by packing their stock piles of slag<sup>ck</sup> coal they could prevent fire starting in the stock piles and thus were able to keep a larger amount of coal on hand.