

Underlying the province of Saskatchewan are immense deposits of very poor lignites. Better lignites and bituminous coals occur in Alberta. For the utilizing of these fuels in the most effective way for both domestic and commercial purposes, commercial preparation is necessary. For years past, German has burned practically no raw coal of any description; the raw product when mined being either briquetted or coked; the by-products together with the resulting fuel being of more economic value to the community than if the coal were burned without recovery processes, as is the practice on this continent.

When the Honorary Advisory Council for Scientific and Industrial Research was formed about a year ago, one of the first problems to attract attention was that of fuel. The situation in the North West in winter time, complicated as it is by stoppages of mines due to strikes, shortages of fuel due to lack of transportation, storms, etc., presented a field for useful work.

A review of the records of the Dominion Mines Branch and various Provincial departments, and of the reports made from time to time by Commissions and individuals both in this country and in the United States, indicated the commercial possibility of transforming the lignites of Saskatchewan into a marketable equivalent of anthracite coal.

Analysis of recorded facts demonstrated that preliminary carbonizing treatment, by which two tons of the raw lignite was converted into one ton of coke and then briquetted under pressure with the aid of a binder, gave better results than any attempt to briquette the raw material itself.

It may be stated in passing that some of the German brown coal can be, and is, briquetted without binding material; but it has been found that this is not possible in the case of the lignites of Saskatchewan and North Dakota. What little pitch they contain has to be supplemented by some effective binder to produce a sound briquette.

During the carbonizing process, the moisture is first driven from the coal, then the gases, and, still later, distillates which yield ammonia, oils, and pitches, all valuable products, so valuable, in fact, that for years past Germany has coked all her coal and saved the distillates and gas.

While these by-products are valuable, their value has not been considered in this respect as it was felt that the quantities which