

This process is worked on much the same lines as the Potter process, with the exception that a certain amount of mineral oil is used with the sulphuric acid solution of about the same strength— $\frac{1}{2}$ per cent. The material to be treated—the oil and the acid solution—are passed through six centrifugal mixers by which the oil, acid and material are thoroughly mixed, and then passed into a spitzkasten. The cold acid having cleaned the mineral particles, the oil—which has an affinity for mineral—floats it to the surface, and it is collected as before. The percentage of extraction in this process is said to be about the same as that obtained by the Potter process.

The "Delprat Salt Cake" Process.—The third process in use at Broken Hill obtaining zinc from tailings is the "Delprat salt cake" process, which followed the Potter process, and is almost identical with the latter except that a small amount of salt is added to the acid solution. The proprietors of the Potter process, however, are now engaged in a legal action against the Delprat people for infringement of patent rights.

Acid Used and Improved Machinery.—In connection with the treatment of the tailings it may be stated that the sulphuric acid used is made by the local Carmichael-Bradford Co., owing to its cheapness and efficiency. A concentrator, made by the Gillies Co., has been designed to provide an improved mechanical means of producing zinc concentrates by the use of the Potter process.

CHANGE OF SUPERINTENDENTS AT TYEE MINE.

AFTER having been six years in the service of the Tyee Copper Co., Ltd., as superintendent of its Tyee mine at Mt. Sicker, Vancouver Island, B.C., Mr. Edward C. Musgrave leaves that company's employ on July 1, prox., to commence business on his own account as a consulting engineer, with office at Victoria.

Following his graduating at the Kingston School of Mines in Ontario, Mr. Musgrave commenced his active association with the mining industry in British Columbia in 1894, which was about the time lode mining in the Province began to assume important proportions. He first entered the employ of the Hall Mining and Smelting Co. of Nelson, and afterwards was with the Columbian Mining Co. In July, 1900, he was appointed superintendent of the Tyee Copper Co.'s mine, and during the six years that have since elapsed that property has, under his direction, been developed from little more than a promising prospect into one of the paying mines of the Province.

During the period above mentioned the main shaft of the Tyee mine has been sunk to a depth of 1,100 ft.; other shafts aggregating more than 1,000 ft. have also been sunk on the property; several miles of underground workings, in drifts and cross-cuts, have been driven; and upwards of 150,000 tons of ore have been extracted and shipped to the company's smelting works at Ladysmith. Practically the whole of this

work was planned and carried out by Mr. Musgrave in a thorough and efficient manner. While nothing has lately been given out for publication it is known that the indications in the deepest workings of the mine are so favourable as to give promise of leading to results, when the development work now in hand shall have been completed, that will be further testimony to the grasp Mr. Musgrave has of local conditions, and fully justify his confidence that ore of payable grade occurs at depth in quantity.

While looking closely after the interests of the company employing him, Mr. Musgrave has at the



Mr. E. C. Musgrave, C. E. and M. E.

same time assiduously cultivated such friendly relations with the men employed under him in and about the Tyee mine as to have gained their respect and goodwill. The kindly feeling existing found happy expression in the presentation of a valuable gold watch by the mine employees to Mr. Musgrave on the occasion of the valedictory dinner given to him on the termination of his period of service with the company.

It is gratifying to know that, although Mr. Musgrave has voluntarily retired from the superintendence of the Tyee mine, his knowledge and experience of mining conditions in the Province will be available in his new sphere as a consulting mining engineer.

A few words in conclusion relative to Mr. Musgrave's successor—Mr. J. W. Bryant, who recently arrived at Mt. Sicker. Mr. Bryant is a graduate of the Camborne School of Mines, Cornwall, England, after leaving which he was engaged in both Cornwall and Wales, afterwards going to Nicaragua, Central America. Later he was for four years and until his