

jority of the vessels which have come from either the North or the South to load with coal, coke or lumber have usually arrived at the Island ports in ballast, offered an opportunity to promote not only the smelting interests but also the shipping interests, because in future it will be possible for vessels to load from their home ports with ore instead of ballast, and thereby obtain paying freight on both voyages, and at the same time admit of the freight cost on ore being sufficiently low to induce many of the producing mines in California, Mexico and South America to ship their ore to the Crofton Smelter in cases where high railway freights to interior points would prohibit shipments.

(4) The close proximity of the Vancouver Island Washington and Queen Charlotte Island coal mines, as well as the possibility, if necessary, of obtaining coke from the Crow's Nest Pass Coal Field via the Great Northern Railroad Co.'s newly constructed line from Morrissey Creek in the Crow's Nest Pass, insuring a fuel supply at exceptionally low cost.

(5) The presence in the immediate neighbourhood of suitable fluxes, such as limestone and iron ore, in large quantity, both of which are obtainable from several points on the east coast of Vancouver Island.

(6) The ample supply of timber obtainable in the smelter's vicinity for calcining purposes if required in the case of certain classes of refractory ores.

(7) The fact that labour conditions are favourable, there being less likelihood of strike troubles so common in many of the smelting centres of the United States.

(8) And the fact that the location of the smelter on the Coast would admit of the product being consigned direct to the English markets by water transportation and thus avoid the excessive all-rail freight rate across the continent to the New York market.

These then were the reasons duly considered, together with the circumstance that the ore in sight in the Lenora mine at Mount Sicker was sufficient to guarantee a base for supply, that influenced such practical smelter operators as Messrs. Breen & Beltinger in their decision to inaugurate this important enterprise at Crofton. Meanwhile construction had hardly been commenced on the smelter at Crofton before the Tyee Copper Co., which owns the Tyee mine on Mount Sicker, also gave practical assurance that they had sufficient confidence in their property and the future growth of the mineral resources of the Island by making arrangements to build a smelter at Ladysmith, situated on Oyster Bay on the East Coast of Vancouver Island and about ten miles northerly from Crofton. The plant at present being installed by this company will have a capacity to treat about 100 tons of ore a day, and the company estimate that they have sufficient ore in sight in their own mine to keep the smelter running continuously for at least two years, and they anticipate that as the development work progresses further reserves of ore will be exposed. This smelter is being erected under the superintendence of Mr. Thos. Kiddie, a thoroughly competent and practical metallurgist.

While it is almost certain that the results from smelting on this portion of Vancouver Island will prove satisfactory and profitable to the smelter com-

panies, there is another feature in connection with the establishment of these enterprises, which is important.

The establishment of the Crofton smelter will, as has already been pointed out, have a strong tendency to promote the shipping industry here by inducing the construction of vessels for the carrying of ore not only from the coast mines of British Columbia, but from those situated in countries to the North and South.

For the reason just given the lumber and coal trades, which are so important to Vancouver Island and the Coast of the Mainland, will likely develop far beyond their present limits. The establishment of the smelter, moreover, should furthermore prove an incentive to owners of the many promising claims in the immediate neighborhood to put forth greater effort in the direction of developing these properties and placing them upon a productive footing. Meanwhile the immediate effect of Messrs. Breen & Beltinger's enterprise has been to stimulate enquiry on part of both American and British investors for partially developed properties in this section of the country, and there can be no doubt but that capital in large amounts will be invested in the near future in mining on Vancouver Island and the adjacent islands in consequence. The mineral resources of Vancouver Island, so far as metalliferous ores are concerned, have not been developed in the past as they should have been, and it is not likely that a repetition of past mistakes will be witnessed.

MINES AND METALLURGY BUILDING AT THE EXPOSITION TO BE HELD SHORTLY AT ST. LOUIS.

THE Mines and Metallurgy Building of the Exposition to be held shortly at St. Louis forms part of the east wing of the fan-like general ground plan of the Exposition, and is the last building on the south side of the esplanade leading to the group of Government Buildings, which are to stand on a higher level. It will have a rich background of hillside foliage toward the southeast.

Considered as part of the general scheme, it plays a very unimportant role in the spectacular display of the Fair, and for this reason no attempt has been made to force attention to it by such means as towers, domes or similar architectural devices.

The outside dimensions are 55x750 feet. The building is divided into eight oblong parts almost equal in area. The division is accomplished with glass covered and ventilated arcades, from 30 to 50 feet wide, which makes it possible that each one of the eight divisions shall receive abundant light from every side and that no skylights shall be necessary directly over any of the exhibition spaces. At the intersection of the two principal arcades through the main axis a colonnaded rotunda is shown with an appropriate monument.

The ground floor will furnish an exhibition space of about 265,000 square feet, and about 150,000 square feet may be gained by the introduction of galleries. A sub-division of the exhibit space into numerous alcoves for each classification is suggested.