

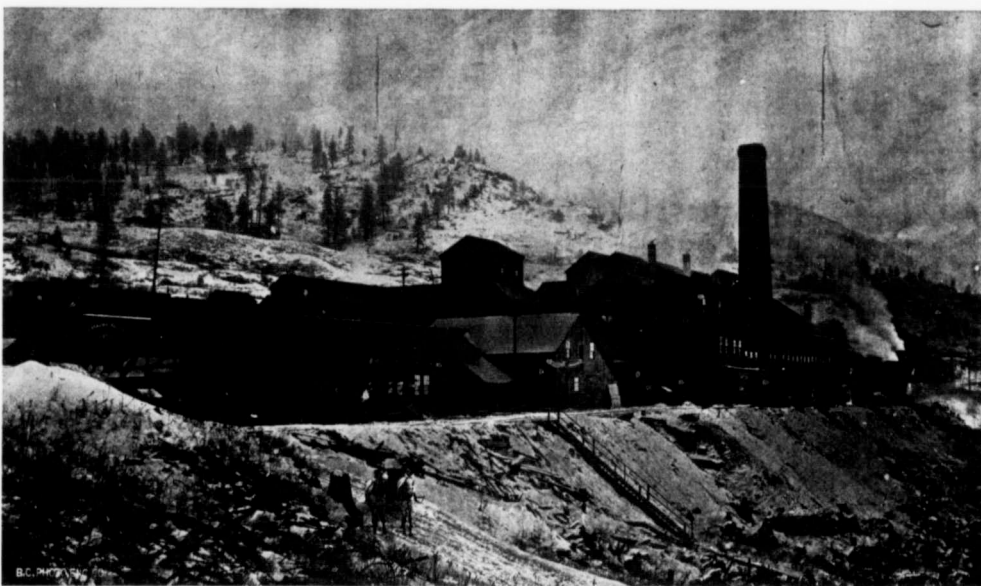
installed. Its function is to compress the flue dust into bricks, which, will afterwards be re-smelted. The plant was built by the Henry Mould Co., of Pittsburgh.

The converter building is on the same level as the furnace house containing the four blast furnaces and 100 feet therefrom. It is a steel fire-proof structure 160x68 feet, its height in the main portion being 45 ft. The contract for its construction was executed by the Hamilton Bridge Co. of Hamilton, Ont. This building contains two stands of converters of the horizontal barrel type supplied by the Gates Iron Works of Chicago. The shells are 72 inches in diameter by 100 inches in length. Each stand will have a capacity of from 50 to 70 tons of matte daily, and each is provided with three shells. This building also contains a forty-ton electric travelling crane, forty-foot span, for handling the shells and matte. In another portion of the building is a twenty-five ton reverberatory tilting furnace also supplied by the Gates Iron Works.

The converter building is connected with the furnace house by a ten-ton electric crane, 24-foot span. The matte from the furnaces is first settled in receivers, which in turn are tapped out into the matte ladles.

The small electric crane takes the ladle of molten matte to the end of the converter building and there pours the hot metal into the tilting reverberatory. When the converter is ready for a charge the 40-ton crane in the converter building places a large matte ladle in front of this furnace, and by hydraulic power the furnace is slowly tilted until there is enough for a charge. The large crane transfers this molten matte to the converter into which it is poured. The converter is then turned into an upright position and the blast turned on.

The pressure blast is 10 pounds per square inch. The blast is maintained until such time as sufficient slag has formed. Then the blast is turned off and the slag skimmed into a large ladle. This ladle is then carried by a



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In the same structure there is the quartz crushing plant and grinding pan for mixing the converter linings. Under each converter stand are three mould carriers operated back and forth by a hydraulic ram. The converters are also tilted by hydraulic power as well as the reverberatory furnace. Near the converter building is the engine room, in which is the blowing engine for blowing the converters; also the hydraulic pump which furnishes the pressure to operate the various machines in the converter building.

The blowing engine is run by a belt from a 200 h. p. alternating motor. It is of the power type, has an air cylinder 36 x 36 inches and has a special unloading device attached, so that when the pressure reaches a maximum of twelve pounds the valves are so arranged that they remain open and no power is consumed while the converter is not using air. This unloading device was built for the Granby Co., and has hitherto been used on any low-pressure blowing engine for converter purposes.

crane and the slag is poured hot into the tilting furnace. The converter is then blown for a short time when the matte is all converted into metallic or blister copper, still retaining the gold and silver values. The moulds on the carriages are now brought into position by the hydraulic ram and the copper is slowly poured out of the converter into these moulds. The copper, which is 98½ per cent. pure, is then moulded into cakes weighing about three hundred pounds each. The converter is now ready for another charge. It takes from two to four hours to convert one charge into metallic copper. By converting the matte at the smelter, a saving of fifty per cent. in freights is effected.

The converter began operations on January 15 last. Besides converting its own product, the Granby company has closed contracts and is now treating matte from the smelters of the British Columbia Copper Co., Greenwood, B.C., the Hall Mines, Nelson, B.C., and the Van Anda Co., Texada Island, B.C. Within a few weeks when the Granby plant will have four furnaces,