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oven is charged with coal again. It's probably empty, oh, 20 minutes or so. The heat of the brick carbonizes the new charge of coal. (And gets it started right away.) Yes. (Gives off gases) that are processed to some extent, and about 40% of it goes back to burners to continue the heating process. J. T. Collier's talk ends here. The Blast Furnace produces molten iron. Rather than filling and emptying, it is a continuous operation. The furnace is charged from above with coke, limestone or dolomite, and iron ore. These ingredients are mixed together and slowly work their way down to the furnace floor (hearth). Iron is reduced from its oxides principally by carbon monoxide (formed by the combustion of coke and the oxygen of the air blasted in below), rising up through the falling materials. Impurities are run off one side as slag. The reduced iron settles further into the hearth area and is tapped off. Molten iron goes either directly to the Open Hearth furnace or it is held until needed in the Mixer. In the Open Hearth, it is added to quantities of iron ore, limestone and scrap steel and the product tapped off is steel. ii. Steel is tapped out and teemed into ingot molds. (See photos on page 17.) The ingots are stripped from molds, re-heated in the soaking pit, rough-shaped into billets or blooms. Billets are rolled into such things as rods and bars, and blooms can be shaped into rails and structural steel.

Lew Allan Davis & the Railroad
Lew Allan Davis: I was born the 12th day of August, 1887. I'll be 92 my birthday (1979). I was born in Newfoundland. A lot of the people who came to the plant were born there--I suppose 50% at that time. The old tradition was going from Newfoundland to Sydney, going to work, I was 22 when I came to Cape Breton--and the steel plant was already going. I hired on there in 1909, just common labouring. You had to work a certain amount of time that way, and if you felt like you were capable of handling another job, you could look for it, and after awhile you'd get transferred to that job, I started railroading. They had 14 or 15 engines there--two shifts-- from 6 in the evening to 7 in the morning, and then day shift would start 7 in the morning and quit 6 in the evening, I wasn't operating an engine, I was outside, brakeman at that time. There's a crew, you know. A fireman and an engineer and three men outside--conductor and two brakemen. Well, when you worked yourself up, you'd become a conductor and you had charge of the whole crew. In that kind of work, you know, it's not like on the main line. There were no passengers. The job of the railroad was to tie the plant together. The conductor, he got the orders and told the men what to do, where to go. Night time, you'd get the orders for the whole night, but daytime you'd get so many orders, and then when that was done you'd go back for some more. Say a call would come in from the open hearth to make a shunt-- so you'd go in there and pull out so many cars. And then you'd have empties to put back. Clear of the steel, all the open hearth made was rubbish--slag and dirt and everything. It would all be cleaned up and we'd haul it to the dump. And there'd be (9)