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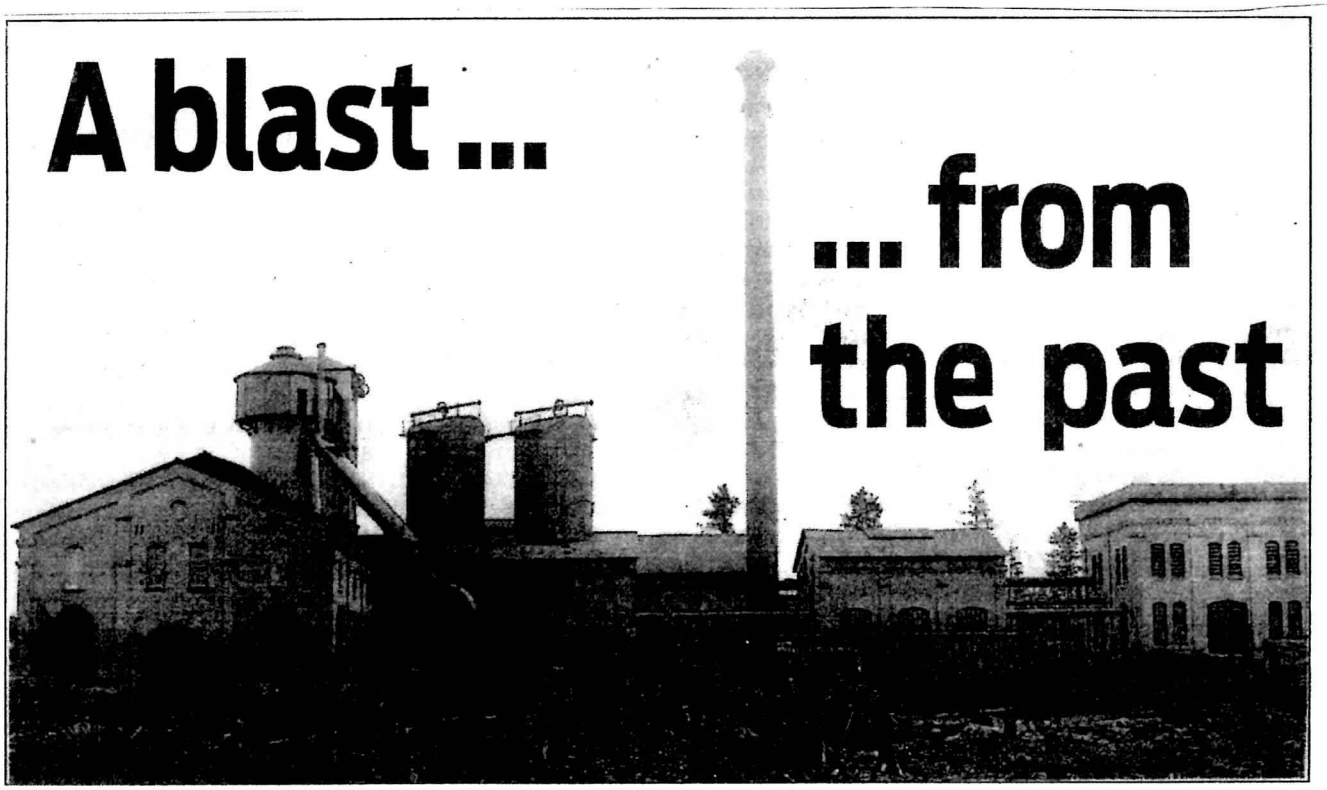


ASHLAND HISTORICAL SOCIETY/SUBMITTED PHOTOS

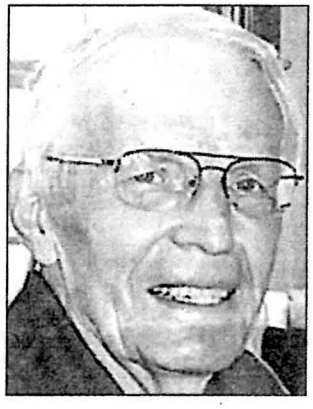
The Ashland Iron and Steel Company's blast furnace, above, and the kilns in which the charcoal was produced, below, were extremely active in Ashland from 1886 until 1921 when the operation was shut down. In one week in September 1890 the furnace produced 1,009 tons of pig iron, or a daily average of 144 tons. During 1891, its peak output, 37,192 tons of iron were made.

CJ 4/11/13

Huge furnace, kilns made Ashland the great iron city

Ashland possessed the three necessary conditions for the operation of a charcoal blast furnace: a supply of iron ore, forests of hardwood and cheap water transportation.

To take advantage of these conditions, the Ashland Iron and Steel Company was organized in November 1886. The officers of the company, probably its principal investors, were A.H. Hinkle, president, and W.H Hinkle, secretary and trea-



a loading hopper at the top.

The furnace was twice as large as any previously built charcoal blast furnaces. In the stock house, 62 feet by 150 feet, and 32 feet high, ore and limestone were pulverized in a larger crusher and loaded, along with charcoal, into charging buggies.

These buggies were hoisted to the top of an enclosed tower, then wheeled to the loading hopper and from there dumped into the furnace.

the molds, broken into the individual "pigs," graded and moved to a storage yard to await shipment. The charcoal was made from hardwood obtained from thousands of acres of timberland owned by the company. It was produced by heating the hardwood in 85 brick beehive kilns, each with a capacity of 55 cords of wood.

Other buildings on the site that carried out ancillary functions included a pump house with three pumps to provide cooling water to the furnace, drawn from a 3,000-foot well, and a boiler house, containing four boilers that produced steam for the steam engines.

[redacted] The company offices were located in Minneapolis, with a local manager responsible for the Ashland plant.

The company's furnace operations in Ashland were located in a nine-block area, between Second Street and Fifth Street, and 17th Avenue and 20th Avenue West.

The charcoal blast furnace, known as the Hinkle furnace, after its owners, was an iron shell, 60 feet high and 12 feet in diameter at its base, tapered to

Lars Larson CJ 4/11/13

■ has been a guest columnist for The County Journal for many years.

As this mixture gradually descended in the furnace, the charcoal burned and chemical reactions in the ore produced impure molten iron and waste products called slag.

In the cast house, the molten iron flowed into sand molds, consisting of a central channel with several branches, reminding early iron masters of a sow suckling piglets, hence the name pig iron. Four casts were made each day.

The iron was removed from

The stack for these boilers was an iron shell lined with brick, 7 feet in diameter at its base and 150 feet high.

In one week in September 1890 the furnace produced 1,009 tons of pig iron, or a daily average of 144 tons. During 1891, its peak output, 37,192 tons of iron were made.

The furnace closed in 1921 due to competition from the Bessemer steel-making process. It reopened briefly in 1924-1925 but finally closed permanently due primarily to the depletion of the hardwood that provided the charcoal.