An Industrial Giant’s Fiery Workshop

The Production of Steel, Step by Step

1. The birth of steel: Flowing from the open hearth furnace, to which it has been delivered in the form of liquid iron, the molten steel, at a temperature of about 2,000 degrees Fahrenheit, descends into a waiting ladle. Impurities in this molten metal due to the top are allowed to run over the ladle's rim into another receptacle called the slag ladle.

2. The ladle of molten steel from the open hearth furnace splits its heavy cargo into lighter units in which the metal is allowed to solidify and partially cool.

3. A giant mechanical claw, the stricker, selects the molten steel and holds the glowing ingot down and out by means of a plunger.

4. After being placed in the soaking pit the ingot is removed to be started in the blooming mill.

5. In the so-called pinch, where the blooming mill is at the center man, who directs the ingot through the rolls of the blooming mill and over the draft, or roll adjustment, of the mill.

6. The white-hot ingot enters the blooming mill between giant rolls that reduce it to a stock of semi-finished steel. Chairs hanging beneath the rolls in the form of a certain prevent scale from flying on the rolls and engage the mill.

7. A roughing stand of the 1No. continuous mill takes the steel disk after it has left the blooming mill. The disk is further reduced in its dimensions, its width being slowly narrowed by means of vertical, edging rolls.

8. On the roughing furnace we find up which the reheated disk slides down to be conveyed by means of the rolls of the continuous strip mill.

9. A roll of heavy-gauge pickled steel is fed into a mill. The inverted shape of the metal that gives it the high finish and smooth surface required for seamless tubing, metal boxes, and fittings, and other objects of a similar nature.

10. Above: Under the scrutiny of a machine that inspects a roll of the new seamless tubing as it is fed into the mill, the seamless rolled ingot is fed into the mill. This is part of the process of making cold-reduced strip steel.

(Tom Juchtmans photos are courtesy of Indiana Steel Pipe ofIndiana Steel Company.)