



Skelp mill in operation showing new roughing stands. An Elliott C-W 200-hp mill-type motor drives the edger.

THE Benwood, West Virginia, plant of the Wheeling Steel Corporation produces butt weld pipe by the Fretz Moon process with modern high-speed mills. Due to advancements in the art, higher mill speeds and mill improvements, the capacity of the pipe mills became greater than the supply of skelp and the problem of "what to do" required a practical answer.

It was realized that any improvements to the existing skelp mill had to be made with a minimum of down time on production. Also the improvements should result in better heating of slabs at lower cost in addition to the increased production. These decisions involved:

1. An increase of slab thickness from 3 to 4½ in.

2. Additional stands on the skelp mill for reducing the heavier slabs to skelp sizes.

3. An increase in mill speeds and billet heating capacity.

When approaching a problem such as this, a major consideration is the expenditure that can be justified for the improvements based on increased capacity, better product, and reduction in operating costs.

The capacity of a mill is usually controlled by two factors: first, the tonnage that can be heated in the furnace and, second, the capacity of the mill to roll product.

The maximum heating capacity of the old furnace was 60 tons per hour. The location and size of a new furnace were limited by the space requirements of the proposed roughing mill

additions and the mill area available in this location. The mill layout incorporating these conditions indicated that a modern furnace capable of heating slabs up to 4¾ in. and with a capacity of 80 tons per hour could be installed. A furnace of this rating was purchased.

This increase in slab thickness with the same length, would require heavier slabs, in turn producing longer lengths of skelp. These longer lengths would mean less crop per ton of production, hence, increase of yield.

If for example, we assume only two feet of skelp is cropped from each end of the piece with no production from the furnace would be some 1200 less piece crop on the new mill per week