

Limit of present system reached at Addington.

Since the Board are of opinion that the limit of the present system has been reached at Addington, their criticism of existing methods must be regarded as being not so much a criticism of past administration as an indication of their ideas of the course to be followed if profitable manufacturing is to be carried on in the Government shops.

Proceeding to the consideration of the special matters referred to the Board as constituting the scope of their inquiry: With regard to,—

1. THE EFFICIENCY OF THE PLANT AND APPLIANCES.

The Board find that there are at Addington, especially in the machine-shop, many modern and efficient machine-tools; also, that the shops generally are well equipped for doing repair-work. They are, however, of opinion that, if manufacturing is to be economically and efficiently carried on, very considerable alterations and additions must be made to the plant, appliances, and buildings.

Dealing with the several shops in turn: In—

(a.) *The Smith-shop.*

Stamping system antiquated.

The stamping appliances are antiquated and awkward in use.

New appliances required.

The Board would suggest the provision of—

Furnaces for much of the heating which is now done in open fires.

A direct steam-driven drop-stamping plant.

A hydraulic bending and forging plant.

Bar shears and bolt-making machinery; and that the strikers should be supplied with some heavier sledge-hammers than those at present in use.

(b.) *The Boiler-shop.*

Overhead traveller.

The rate of working of the existing overhead travellers is absurdly slow. The speeds should be brought up to—lifting, 4 ft. and 20 ft. per minute; traversing, 60 ft. per minute; travelling, 100 ft. per minute.

Lifting-magnets required.

Either the existing travellers should be electrified, or if, as is probable, their construction is found to render them unsuitable for conversion, three-motor electric travellers should be substituted. These travellers should be provided with lifting-magnets to facilitate the handling of plates, &c.

Radial cutting-head.

The radial cutting-head now used on the plate-planer is an improvement on hand-cutting, but is inefficient as compared with a plate-planer fitted with “former” bars, which should be provided if the execution of taper work is to be continued.

Large riveter. Inefficient accumulator plant.

The large riveter is a good machine, but the accumulator and pumping plant, which is apparently that originally imported for the old fixed riveter, is altogether too small, and must limit the rate of work, especially when any of the other riveters which it may be called on to supply are also in action. The provision of a sufficiently large accumulator plant is imperative.

The present performance of the riveter—200 rivets, or less, per diem—must be regarded as most unsatisfactory. An average of 500 rivets per day would, in the opinion of the Board, much more nearly represent a fair rate of work on locomotive boilers. With a sufficient supply of water this should be easily attained.

Plate-flanging.

The plate-flanging appliances are inadequate. The time taken at present to flange an “A” throat-plate—five men five days and a half—is excessive. A modern hydraulic flanging plant, capable of dealing at one heat with the largest plate used, is, on the grounds of both safety and economy, urgently required; safety, in that locally heated plates, unless subsequently subjected to most careful heat treatment, will be in a dangerous condition of crystallization and stress; and economy, in that such a press could, with suitable tools and dies, be used for many operations at present effected by hand-labour.

Plate-rolls.

The work has outgrown the capacity of the plate-rolling plant.

Pneumatic tools.

There appears to be a fair supply of pneumatic hand-tools, but it is desirable that these should be maintained in better order than at present.