

steam into the condenser and pumping water there for the purpose of getting rid of it or condensing it. Now we turn that into the low pressure turbine and we convert it into mechanical work, and as there is as much heat left in it, we get nearly as much mechanical work from the steam we were formerly throwing away as we get in the begging from the cylinders. Consequently the low pressure turbine is going to apply itself so well to all.

One strong feature of this low pressure turbine is that it needs no governor or mechanical arrangement except the vanes to turn or generator to carry it. This turbine is very cheap because there is no reciprocating mechanism about it, it is composed of the revolving vanes. There have been a few plants remodeled on that plan, where the output has been almost doubled without using another pound of coal or any more men. In Philadelphia they remodeled a plant of this kind. They were formerly turning out 1,600 amperes load; with the low pressure turbine on the same engines they got 1,100 more amperes, and they did not use any more coal or labor. There is a gain in this case of at least 65 per cent., which came from the use of the low pressure turbine. Last Friday night we had a very elaborate paper in which was cited four different large plants where this plan has been recently done successfully.

Regarding Mr. McRae's question, where you have two generators which have to be synchronized, these operating as they would, would help each other to synchronise. The operating mechanism would give up a little more to the other and the other would catch up and synchronise. I think Mr. McRae can explain this better than I can.

Mr. Wilson,—

While you are on the steam question, I would like to ask a question. A boiler inspector was down to our plant lately and told me of a plant down East where a man took a steam main and opened it at the boiler where it ran to the steam log of the engine main, and he ran it down the brick work and through the combustion chamber. It made a terrible difference in the temperature. If I remember right they raised the temperature about 100 degrees. I would like a little information on this subject if I can get it. I have always been taught and always thought if a pipe did not have water in it and was subject to pressure, it was liable to burst in some way or other, that is, if it is carried in such a place as the combustion chamber of a steam boiler. However, this idea was apparently carried out and put into actual practice. The gentleman mentioned the factory and town. I would like to know whether some other of the members have seen this particular plant and whether it is possible.