

The man is frequently met with who talks about power costing so much per horse power per year. This is, perhaps, the most uncertain, unsatisfactory and misleading expression imaginable. Two considerations will suffice to show this. An article appeared in a technical paper recently on steam power costs, and the supposed results in certain cases were brought down to a basis of "— per horse power per year." On examination it was found that whilst reasonable care had been exercised in making the costs inclusive, the whole value of the deduction was destroyed by an error. The engine was described as 200 horse power; the total cost obtained was divided by 200, and the result described as the cost per horse

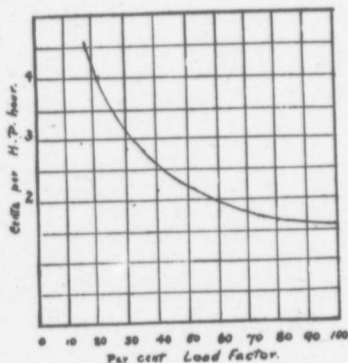


FIG. 1

power per year. Now the maximum load on that engine might have been 160 or 220, and the load factor might have been 40 or 70 per cent., but was certainly not 100 per cent.

Again—in one case the plant is in operation for eight hours daily for five and one-half days in the week; in another case for ten hours daily, and six days in the week; and in a third case for sixteen hours daily for five and one-half days. Now, assume these plants to be identical in construction doing exactly similar work, under exactly similar conditions—excepting only in the matter of time. It will be seen at once then that although the efficiency will be as great in either case, yet the annual costs will vary. But more than this—the cost will not vary exactly as the number of hours. Take the first and third cases mentioned. The operating time in the latter is twice that in the former. But the cost will not be double, in fact, it will be found that the shorter runs—forty-four hours,—will cost somewhere about two-thirds of the longer