

There are three main points of interest. The first is the extent to which this report, based on caisson work on the other side of the world, agrees with the report by Paton and Walder in 1954 on the construction of the Tyne tunnel and, indeed, it models itself to some extent on the earlier study. In both, a wide variability in susceptibility among the workers was found. The discovery of the phenomenon of acclimatization is fully substantiated; a very interesting and striking example of its importance is shown in Fig. 9, which records an abrupt outbreak of bends produced by an 11-day strike during which the workers lost their "immunity". The other points of resemblance, to mention only a few, were that the shift workers bore the brunt of the illness, and bends incidence rose as the working pressure rose. In a field of work bristling with difficulties, it is heartening that there should be such agreement from independent and widely separated undertakings.

The second point relates to the differences. At Auckland the work was in caissons, and, after preliminary attempts to decompress in the blister lock on the caisson, a "decanting" method of decompression was used; decanting is the method whereby the men are rapidly decompressed, transferred to another more spacious chamber, rapidly recompressed, and then decompressed slowly according to normal practice. This report represents, therefore, the first full account of the effectiveness of decanting. The principal differences from Newcastle seem to be (1) the overall bends rate was rather high, 3.3% in shift workers, for pressures over 18 lb.; (2) the onset of symptoms was appreciably quicker—nearly a third developed *during* the decompression in the decanting lock; (3) the symptoms were somewhat more difficult to relieve by recompression; and (4) the incidence of bends rose rather sharply for pressures over 45 p.s.i.

The report points to the need for caution in the use of decanting; although other factors at Auckland, such as CO₂ accumulation in the lock or exercise immediately before decompression, could contribute to raising the total bends rate, the early onset of symptoms, their resistance to treatment, and the high incidence at high pressures all suggest that bubbles were forming *during* the decanting process. Now that decanting is coming into

general use, this report needs careful study by those in charge of the medical care of such work.

Thirdly, two cases of bone damage are described, one of frank necrosis following a single exposure to compressed air at a pressure of only 20 p.s.i. This emphasizes yet again the need for further study of this aspect of compressed air illness.

The report is not, of course, free from minor errors, but these are mostly trivial. There is, however, one more serious misconception (p. 83) regarding the calculation of decompression time. When it became necessary to lengthen the decompression time for the highest pressures, it was noticed at Auckland that in the tables the time in minutes allotted per pound of pressure blown off fell from 9½ minutes per lb. at 30 to 32 lb. to 8 minutes per lb. at 48 to 50 lb.; this was regarded as "illogical", and it is suggested that it represents an adjustment put into the tables to make them acceptable to industrial practice. This is not the case, and the tables are in fact the mathematical consequence of Haldane's theory, combined with the assumption (known, strictly speaking, to be wrong) that bends do not occur at pressures below 18 p.s.i. But a more important point is raised: the possibility that the underlying theory is insufficient. This doubt has been raised before; the Auckland experience, even though it is complicated by the use of decanting and of caissons, raises it again.

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Correction

Dr. K. E. Malten states that, owing to difficulties in translation, the following errors appeared in Table 7 of the paper by L. B. Bourne and F. J. M. Milner on Polyester Resin Hazards (*Brit. J. Industr. Med.*, 20, 106):

"cyclohexamine peroxide" should read "cyclohexanone hydroperoxide"

"methyl-ethyl-ketone peroxide" should read "methyl-ethyl-ketone hydroperoxide"

"polyester hardener: 4 positives" should read "polyester resin: 5 positives".