

Condition or Costs in heartbeats was determined by the pulse rates before and after the fatigue curve, at the same intervals.

Spot running was again used in the production of the fatigue curve. Any skill similar to one involved in turning out piece work, as fast as possible could have been used. The right foot contacts were again counted for Production. Each individual was checked in his Application for ten innings of ten seconds each, with ten seconds rest between innings. The total foot contacts as skills were interpreted as Production for that particular day. The Costs in heartbeats were taken by the five pulse rates, one taken before production of the fatigue curve, immediately after, and then after two, four, and six minutes of rest.

Production went up and Costs came down from day to day as condition improved as shown in Figures 5 and 6. Application improved. Mastery of the skill improved. All improvements came as the result of good guidance and intelligent leadership. After twelve weeks, Production was up 45%, Costs were down 10%. Improved condition allowed the Engineers to do more work with less discomfort. If it isn't necessary to be physically fit it is certainly worthy of attention and some efforts.

It may be noted that the continuity of progressive greater increases in Production and decrease in Costs was broken July 28 by excessive temperature and higher humidity. In Figures 9 and 10 one can note the recorded improvement of the fourth day over the first day. Production is greater and costs are lower in the later day.

Please note below the averages plotted into the aggregate fatigue curve in Figure 7 and the curve of condition in Figure 8. In the fatigue curve the inhibition to production by fatigue can be noted in each successive inning to indicate 100% application.

The curves of condition in Figures 8 and 10 demonstrate again that with spurt efforts and then rest there is more recovery in the first two minutes than there is in the next four. Actually with good condition the recovery is more in the first two minutes rest, than it is in the next thirty minutes. *Recovery of original pulse rate after the fatigue curve within two minutes rest, indicates fine condition. The five pulse rates should not be over 450 in the best condition. Some of the above group need more conditioning as is indicated by the curve of condition.*