

Determining Time Standards From Standard Data and Formulas

Many time studies are made of a single operation, with little or no thought that the data taken will be of value on any other operation. Some kinds of work, however, have certain elements that are alike.

e.g. In a given class of machine- tool work, all elements may be virtually alike except for the cutting time.

Where, motion and time studies are to be made of many different operations of a similar class of work, it is best to consider the entire class of work as a unit, and standardize all factors for the entire class of work. When time studies are begun on this work, the elements should be selected in a way that will make it possible to construct tables of standard time data that maybe applied to all elements likely to appear continually in that particular class of work.

Use of Time Values for Constant Elements

The data shown in Tables 18 to 20 were obtained from a sufficient number of time studies of representative kinds of work to guarantee their reliability. With such data available in the time study department, it is possible to set time standards for the handling elements of any job on a sensitive drill falling within the classes listed in the Tables 19 and 20. Note: These data do not give the time required to drill the hole in the piece.

e.g. Assume that Tables 18,19, and 20 were available and that it is necessary to determine the standard time to drill the $\frac{1}{4}$ - inch hole at the end of a shaft.

The procedures are as follows:

Chuck and remove Piece (Table 19)	0.50
(Class B, work held by set screw)	
Machine manipulation (Table 20)	0.07
(Class A, drilling, one drill and no bushing)	
Drill $\frac{1}{4}$ - inch HOLE	0.54
(Stop-watch data obtained as in Fig. 184)	
Total Normal Time/ Piece ...-	1.11
5% Allowance	0.06
Total Standard time/ Piece	1.17 min
Setup time (from Table 18) =	15.00 min.

- ❖ The value of standard data such as those illustrated is evident. They reduce the number of time studies needed, shorten the time required to set the standard, and tend to bring greater accuracy and consistency in time standards for a given class of work.