MACHINE HOUR RATE

Time (out of total working time) which could have been used for productive activities are termed as effective working time or productive time. It includes time lost due to abnormal reasons (i.e. abnormal idle time) as otherwise it would have been used for productive activities.

Thus, Time which can be allocated to any particular job/work order/cost unit or abnormal idle time is called productive time or effective working time.

Note: Setting up time or maintenance time is regarded as unproductive time unless otherwise given.

EFFECTIVE WORKING HOURS

Total available time (total working hours) = Productive time (Effective working hours) + Unproductive time

Productive time (Effective working hours) = Total available time (total working hours) - Unproductive time

Productive time (Effective working hours) = Time used in producing goods/services + other productive activities + Abnormal Idle time

STANDING CHARGES are expenses which are fixed in nature and do not vary with running of the machine(s). Eg. Insurance, Rent, Salary, Consumable stores etc.

MACHINE EXPENSES are expenses which are variable in nature and do vary with running of the machine(s). Eg. Depreciation, fuel expenses, repair and maintenance etc.

STEPS FOR COMPUTING MACHINE HOUR RATE

STEP 1 Calculate *Effective Working Hour* for the period given

STEP 2 Bifurcate the cost elements in *Standing Charges* and *Machine Expenses*

STEP 3 Calculate total cost for each cost element for the given period

STEP 4 Sum up the cost for each cost element in S*tanding Expenses* and divide it by Effective Working Hour to get standing expenses per machine hour

$$\textit{Standing expenses per machine hour} = \frac{\text{Total standing expenses for the given period}}{\text{Effective Working Hour for the given period}}$$

STEP 5 Divide the cost for each cost element in *Machine Expenses* by Effective Working Hour to get cost per machine hour for each cost element in machine expenses, and sum it up to get *machine expenses per machine hour*

$$\text{Expenses per machine hour (for each individual cost elements in machine expenses)} = \frac{\text{Total individual expenses for the given period}}{\text{Effective Working Hour for the given period}}$$

Machine expenses per machine hour = Sum of *Expenses per machine hour* (for each individual cost elements in machine expenses)

STEP 6 Sum up the Standing expenses per machine hour and machine expenses per machine hour to get *machine hour rate*

machine hour rate = Standing expenses per machine hour + Machine expenses per machine hour