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Improved Method of Estimation of Standard Time In Process Industries With Manpower Applications

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Abstract : Literature review indicated many methods of computing standard time for completing job, involving higher percentage of machine and manual utilization. Based on the type of requirement various methods namely activity sampling, standard data analysis, analytical estimation, comparison and predication, application of elemental motion standards etc are in use. Of late, there is greater demand in market for determining the accurate standard time of product with the help of scientifically determined standard time. It is almost impossible to prepare manufacturing plans, programming, forecast, pricing and technical managerial activities. This problem assumes higher dimensions when dealing with estimation of standard times in process industries where high percentage of time is consumed by human and not the machine. This is because there are no defined methods for time estimation dealing with human being. Further literature review revealed that there exists few methods to address above issues. However an in depth study is to be undertaken to completely address above issues. Hence an attempt made in this paper to suggest an improved method of calculating standard time in processes involving major time consumption by human by suitability considering the various allowances to be allotted to the various time elements involved in time estimation. The major contribution of present work is to suggest the modified method of computing standard time for process involved in higher percentage of total time by humans. The result out of present work is used real time situation and it has been observed that the proposed method offers better results.