

IENG301 LABORATORY 4

Experiment: Analysis –Application of Charts and Diagrams for Method Study
Bolt and Washer Assembly

- Objectives:**
1. To study an existing process or a job: recording all the tasks or events that occur during their performance with the help of Operation Chart.
 2. To analyze the process: suggestions for the improved method.
 3. To suggest the proposed method of doing the job or process: recording the tasks or events of the method with the help of Flow Process Chart, Assembly Process Chart, and Flow Diagram.
 4. To compare between the existing and the proposed methods: productivity improvement.

Preliminary Information:

Operation Chart is a very simple and effective aid for analyzing an operation. Its principal purpose is to assist in finding a better way of performing the task. It is commonly used on training operators. You can construct an operation chart by simply observing the operator at work.

Symbols to be used while preparing operation charts:

1. Small Circle: to indicate transportation
2. Large Circle: to indicate actions



Procedure to draw an operation chart:

- (a) Draw a sketch of the work place (indicate the location of tools)
- (b) Watch the operator (one hand at a time)
- (c) Record the motions of the elements for the left hand on the left hand side of the paper, and repeat the same for the right hand.
- (d) Redraw the chart for not to miss anything.

The following criteria may be followed:

- I. Time taken to complete the job
- II. Use of both hands simultaneously
- III. Symmetry in the arrangements/workbench layout

Assignment:

Draw the Simo Chart of the same process. Provide therbligs, individual time for each operation and accumulated time for the cycle. Submit the assignment as a group work.