

e-Briefing on Productivity Improvement

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Line Layout for Increasing Productivity

Process layout: In this layout similar kind of machines are grouped together according to its function to increase efficiency of the production. This is also called the functional layout.

Process layout is used when product variety is very high, and style changes frequently, therefore, response to changing style is more flexible. An example of process layout is given in the figure for back pocket attachment in the garment production.

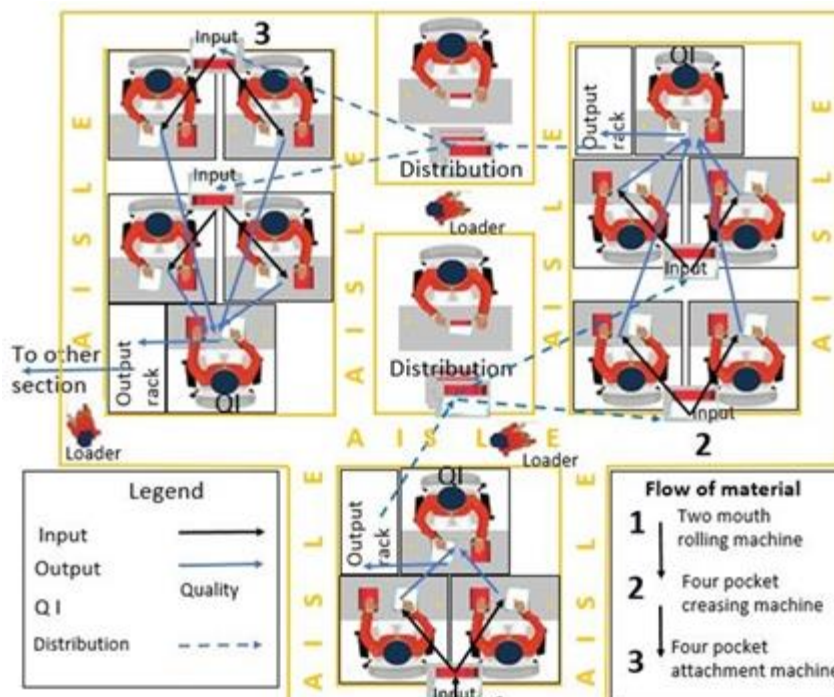


Figure: Process Layout for back pocket attachment

Advantages

- Facilitates flexibility in production;
- Better utilisation of available machines;
- Efficient and effective supervision results in better quality products;
- Single machine break down do not affect the whole production;
- Reduces machine handling during style change

Limitations

- May need more floor space compared to product layout;
- Waiting and idle time can be increased due to difficulty in line balancing;

- Increases material handling due to long routing and backtracking between processes;
- May increase work in process inventory between different processes;
- Requires specialized supervisor;
- Planning and co-ordinating production can be difficult due to complexities arising in routing, scheduling, dispatching and follow up.

Process layout can be used in garments manufacturing to reduce the handling of heavy or expensive machines or to increase the machine utilization. This layout also reduces the replacement time of machine tools such as jigs, foder, gauge etc. during style change, which will reduce overall setup time.