

ASSIGNMENT

Managing Operations & Quality

TOPIC

Increasing Productive Capacity of Metstamp Limited

Submitted to

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Introduction

The given problem is on a small business supplying pressed metal parts to the automotive sector, named Metstamp Limited. Directly it is hard to suggest any formula how the company can be more productive. But some issues got identified which give a sign, if those problems are recognized and solved, the production efficiency may increase. In the following part, this has been noted.

Stages for Tool Changing

According to the given problem, the tool changing process can be better understood by table and precedence diagram. Here are those diagram and table.

Task	Followers	Time (Minutes)	Description	Predecessors
A	3	15	Switch off machine & remove tool from press	None
B	2	90	Locate next tool, refurbish, clean and wipe out	A
C	1	15	Transport to press	B
D	0	30	Fit tool and ensure good quality pressings before starting	C

Table: Tool Changing Task Detail

From the table and graph, it has become clear, that task B is the bottleneck which takes the 60% of the total time of the whole setup process.

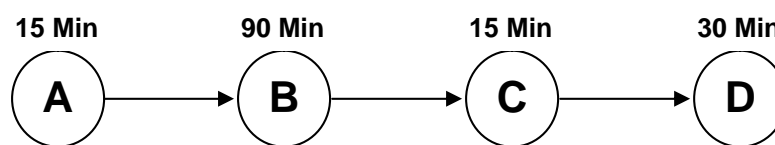


Diagram: Precedence Diagram

Issues & Possible Solutions

Issue 1

The break times have plenty of sphere labor.

Possible Solution

The break times within working hours require further review. It needs to be readjusted based on the finding, how much break requires for maintaining better work performance.

Issue 2

The second stage (Stage B) of tool change takes maximum time, 90 minutes.

Possible Solution

By redesigning this particular stage, the whole setup time be reduced a lot. It takes time to locate next tools. If the tools are well organized and kept in a well planned manner, the time spent for this stage can be reduced a lot.

Issue 3

From the given data, it has found that, it takes weekly (80 x 2.5 Hours =) 200 Hours just for tool changing, which is half of the total machine working hours, since weekly total available machine work hours are (8 Hours x 5 Days x 10 Machines =) 400 Hours. So, setup time eats up the maximum production time.

Possible Solution

(a) Through detail study it is possible to reduce the setup time & Other bottlenecks.

(b) The company has 10 small to medium size presses and they make 15 different types of metal parts. It can be possible to find which machine takes minimum time to setup for which metal part and which machine produces which metal time within minimum process time and hurdles. Based on that finding some machines can be assigned for producing specific type of metal part which will reduce setup time and process time.

Conclusion

Based on some issues stated in the case detail, some possible solutions tried to drawn which still requires real life survey and study. Real life survey and study may include (but not all),

- Identifying true bottlenecks (not just based on setup time and other visible reasons)
- Identifying how essential each worker is for the company
- Finding options to synchronize and balance the processes
- Finding options to ensure maximum utilization of machines
- Identifying non-value adding activities and eliminate those etc.

Since, new orders are coming, that's why no suggestion provided to reduce or eliminate essential fixed costs.