

EXECUTIVE SUMMARY

With Covid-19 situation company wafer sales increased drastically compared with the past periods. Presently wafer turnover and production accounted for 26% out of factory production. The company wafer plant operated with a lower profit margin the major reason to lower margin is wafer plant low manufacturing productivity. With compared with the competitors production details Bright wafer batch output and productivity 40% less than the competitors. The purpose of this study is to analyse the major cause's effect to lower manufacturing productivity of the wafer plant. Maintaining continues productivity is contributed to every manufacturing entity to competitive in the industry and the market. Company lower productivity resulted for higher wastage and higher production cost in the wafer industry. When increasing wafer sales volume and demand the company lowers productivity becoming a major issue of the company.

There were several issues effects on productivity of wafer plant categorize as people management, plant management and process management. When compare Bright production details with competitor production details there were adverse deviation in batch output, no. of batches run per day, hours used per batch production, gas utilization per batch & no of labors used to production. continues machine breakdowns, delay fixing of machine breakdowns, high labor turnover, high labor absenteeism, delay startup of daily production and not having a proper production plan further adversely effect on wafer section productivity. Unavailability of proper production plan and production check list cause to derive process management issues, unavailability of machine maintenance checklist and high staff stores turnover reason for the plant management issue and lack of training and low take home salary reason to derive people management issues.

As illustrated by Syverson (as cited in Guzman, Brun, & Domingues, 2019, p. 676) Productivity defined as the efficiency in conversion of inputs into outputs. This report described under productivity analyzed and described literature on productivity & batch

production. Under process management we have described literature on process management & planning. Under plant management described literature on machine break down, machine maintenance, plant productivity, maintain of spare parts inventories & maintenance planning. Under people management described literature on labor absenteeism, labor turnover, employee satisfaction, employee training & labor productivity.

The overall objective of this report is to improve production productivity of wafer plant operation. To achieve overall objective it is supported with component objectives of eliminate wafer stock out situation, maintain wafer finished good buffer stock, product plan variation, reduce wafer plant breakdowns, reducing machine breakdown fixing time, reduce labour turnover & labour absenteeism, increase batch output & decrease gas consumption. To achieve components objectives it's supported with recruit of planning officer, introduction of production check list, introduction of machine maintenance check list, increase Factory workers take home salary, introduce new attendance incentive scheme and arrange on the job training to factory workers. The cost benefit analysis shows net saving of Rs.28.4 mn implementing of this project. The project major output is to increase the overall wafer plant productivity by 40%.

The overall outcome of this project is to increase the overall productivity of wafer section, through that increase the profitability of wafer section as well as company and to be competitive in the Sri Lanka wafer industry. The report recommends implementing proposed solutions on urgent and short term time period.