

Electricity consumption: The plant consumes 51.4 kWh of electricity to produce a Hltr of product compared to best practice of 5.3 kWh per Hltr. Thus sub-metering has to be put in place to find the problem area among the processes. Grid power consumption could be reduced by reducing unnecessary lighting as well as sub-metering the various plant processes for close monitoring with view to reduce. Correcting load factors on electric motors can also complement this effort in the plant.

Coal usage: Again the plant used 15.1 kg per Hltr produced compared to 1.5kg per Hltr for best practice. For the boilers optimal combustion efficiencies have to be maintained on the steam boilers. Also elimination of visible steam leakages and lagging of pipes is key. High quality coal should be used by all means, and also avoid coal pulverization through per handling.

Water consumption: It was unbelievable to note that the plant uses more water to produce just 9% of saleable product. Over and above sub-metering various major water consumption sections, employees in different production centers can be asked to brainstorm to provide suggestion to save water in the plant as an interim quick fix initiative.

IV. CONCLUSION

The thrust of becoming competitive is in implementing environmental conscious manufacturing through CP as an effective tool. The CP assessment was done at a beverage plant, a number of low cost and high value action item options were generated to bring the operation close to the best practice targets. Major areas of potential improvement were identified as reduction of water and energy consumption. Material balances for various key processes were generated to reveal system losses and possible corrective action. Modernizing the plant operation by replacing some obsolete lines could also result in competitive products in terms of quality, cost and availability.

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