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**Proposed Solution**

- Insert cradles in between such that multiple plates can be lifted together, it will increase the efficiency of searching plates.
- Introduce a white board to record the order of plates in a stack.
- Use two separate places on a rotational basis to store metal plates for bridge cutting buffer area.
- When new shift starts, first move the remaining plates to the right stack. Then continue cutting from right.

**Proposed Solution**

- Both MSS and NC formats are ready 2 weeks before actual cutting. 2 week plan is settled right after MSS and NC are ready.
- Current inventory level is monitored and shared with Logistic Steel Stock. Logistic Steel Stock can help manage the inventory level in NC shop.
- Plates arrives two days before actual cutting.

**Proposed Solution**

- Both MSS and NC formats of week 5&6 are issued
- Plan of week 5&6 is ready
- Plan is shared with Logistic Steel Stock and changes are made accordingly.

**Conclusion**

- In this system design project, the main focus is on the above three aspects to increase the material flow and efficiency.
- In terms of tracking, we propose to add cradles to facilitate lifting and two stacks of plates used on a rotational basis to achieve First In First Out (FIFO) for bridge cutting.
- As for the planning part, we suggest that the issuance of MSS and NC format must be in time for steel plates cutting. And it is strongly suggested that the Logistics Steel Stock can manage the inventory for NC shop, as Vendor Managed Inventory (VMI) or even Collaborative planning, forecasting, and replenishment (CPFR) is successfully used in many industries.
- Finally for the operation part, we simulated the actual situation in the software automod, and different scenarios have been tested. The proposed solutions above prove to be effective.

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