Process Flow Design Validation - Body Shop

Client's Challenge

-The body shop plans to introduce new model C while producing existing models A,B
- Each body type requires its own special pallet type
- Study the proposed empty pallet release process flow to:
1. Ensure pallets are released efficiently in production sequence while maintaing current production levels
2. Minimize empty pallet set-asides

PMI's Approach

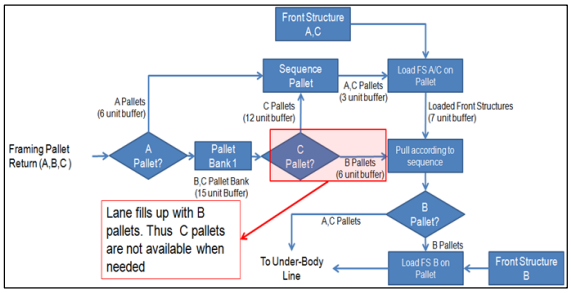
-Analysis of Data and Verification of Baseline Model
-Identification of bottleneck by measuring pallet set asides in return loop section

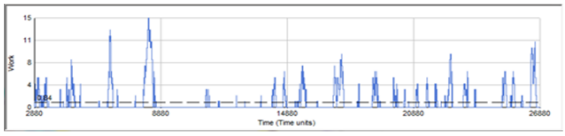
Findings & Recommendations

-Proposed process flow was ineffective because:
-Facility has to manually “set-aside” excess B type pallets to alleviate blockage(**see Fig. 1**)
- Revised the process flow in pallet return loop to minimize manual set-asides(**see Fig. 2**)
-Cost effective solution - 25% savings in buffer space while maintaining current production
-Revised process flow found to be able to handle up-to 20% variation in product mix(**see Fig. 3**)

Key Points

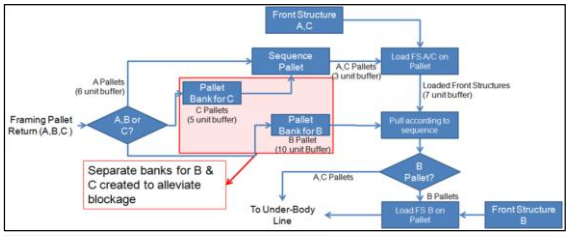
-Identification of potential bottlenecks in proposed process flow
-Redesigning of process flow to alleviate bottlenecks

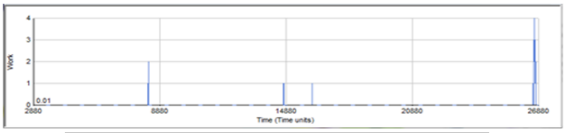




Frequent set-asides of B Pallets over time

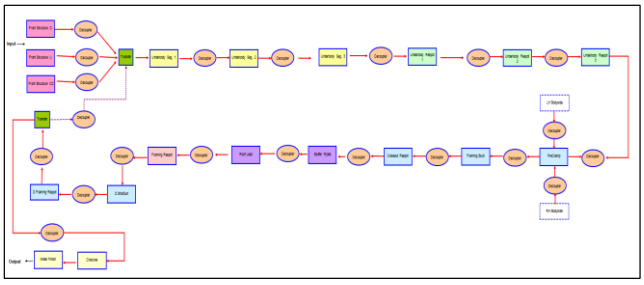
FIG. 1





B Pallets set-asides reduced significantly

FIG. 2



Process Flow

Experiment No	Change in Product Mix (%)	Average B Setasides
1	0	0
2	5	0
3	10	0
4	15	0.5
5	20	0.5

Change in Product Mix Vs. Average Set asides

FIG. 3

***Data shown here has been modified to protect client confidentiality**

Production Modeling India Pvt. Ltd.
902 Ozone House, Khare Town, Dharampeth, Nagpur 440010
Phone: 0712-6453180/6583 | www.pmi-services.in | asia@pmcorp.com