Michigan Steel Case

Michigan Steel Case Study

Michigan Steel Processes and distributes steel coils and sheets to customers within Southern Michigan. One of its customers, Acme Stamping, recently did some "lean thinking" and has asked Michigan Steel to increase the deliveries of steel from twice a week (Tuesdays and Thursdays) to once a day. This case study deals with the order entry and processing of information before any shop order scheduling and delivery takes place.

Order Processing
Michigan Steel's current order processing includes receiving a fax on a weekly basis and processing it within an order entry process. Acme is asking them to receive a daily phone order and deliver the order the following day.

Michigan Steel wants to have only one way to process orders for all customers, as opposed to a special one for Acme Stamping. And it must process orders quickly to ship steel out the next day. They receive an average of 230 orders per week f rom all of their customers. The front office is paid to work an 8 hour day and is allowed two 10 minute breaks. Lunch is unpaid. The order entry function is as follows:

Orders are received by Order Entry by walking to the fax machine and returning with the fax to the work station. The faxed orders are batched, entered and sent to accounting to Credit Check through the finance system. Once the credit is approved, the orders are then printed and sent to Reconcile where the order information is reviewed and entered in the VRP system. The VRP system determines the shipping requirements for the orders (i.e., what goes on Tuesday vs. Thursday), and flags any partial loads or over loads. A report of these shipping problems is generated then Reconcile calls the customer to clear.   The customer then receives a confirmation phone call, and the order is then Finalized for scheduling by the MRP system. The order is then ready to be scheduled by Production Control.

All workers also provide other value streams with service – cross loaded.

Multiple work a-rounds for errors and expediting.

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Michigan Steel Data

Michigan Steel Data Set

Receive Order & Enter
Cycle time: 5 minutes
Batch size = 1/2 day
Technology used: Fax
Technology Used: Finance System
Rejects =0%
Rework = 15%

Check Credit
Cycle time: 2 minute
% of orders with credit denied: 10%
Batch size = 2 days
Rework = 5%
Technology used: Finance System
Technology used: Paper

Reconcile Order
Cycle time : 5 minutes
Batch size = 4 hour
Reject = 0%
Rework = 5%
Technology used:Paper
Technology used: VRP

Finalize Order
Cycle time: 1 minutes
Batch size = 4 hour
Reject = 0%
Rework = 0%
MRP System

Michigan Steel Data

Work Time
- 20 days in a month
- One 8 hour shift, excluding an unpaid lunch
- Two 10 minute breaks