

## Case Study – Batliboi Limited

### The Industry

Batliboi, founded in 1892, has grown to a position of leadership among engineering companies. The company has spearheaded technological change in all the activities that it is engaged in today: manufacturing, engineering, contracting and marketing. At plants located at Udhna(Surat) and Bangalore. Batliboi manufactures sophisticated machinery. The range includes equipment designed and fabricated indigenously as well as in collaboration with some of the world's leading engineering companies. Their operations are in Machine Tools, Industrial Machinery, Environmental Engineering, Textile Engineering and Air-conditioning and Refrigeration.

### The Client's Need

The systems at Batliboi are integrated and computerized using a third party ERP solution developed by TCS. The ERP solution does not address the Planning & Scheduling issues in totality. Implementing ExSched (Finite Capacity Scheduling) at their manufacturing department would fulfill the requirements and the issues in planning and scheduling.

Following were the problem areas and requirements of Batliboi:

- Pressure for meeting schedules
- Daily Resource Load chart for better control
- Facility should be provided to enter production plan for the next 3 months.
- Facility should be provided to link production plans with rolling plan.
- Control and monitor should be possible as per product serial numbers.
- The system should generate resource efficiency reports, worker performance reports and idle time analysis reports.
- System should provide utility to transfer product/component masters, process sheets, work center/machines and shop orders from the existing ERP system.

### The Solution

After a thorough evaluation of competing products, Batliboi chose Walchand Infotech's ExSched. ExSched is a software package designed specially for Production Resource Scheduling on the Shop Floor. It simulates the shop floor environment and provides the most effective and efficient scheduling for the jobs.

The scheduling program uses the technique of Discrete Event Simulation. The scheduling rule uses combination of parameters such as 'Due Date', 'Priority', 'Minimum WIP' and 'Backward Scheduling'. Schedules are arrived at after considering practical constraints such as resource availability, holidays, resource breakdowns, outside operations etc.

### Key requirements addressed

- Scheduling summary, detailed reports can be generated based on the selected scheduling rule/scenario.
- Facility to manually override the schedule by modifying resources, timings, priorities, due dates etc as per practical loading.
- The standard scheduling rule was customized according to the manufacturing needs. In case of Batliboi, some of the operations such as planing, etc are performed with minimum batch quantity. Such operations were scheduled considering the minimum batch quantity, as it is economical to perform the operation at single stroke.

- Shop floor feedback system allowed to enter actual timings, idle times and excess times with appropriate reasons. Based on the schedule and the shop floor feedback system was customized to generate resource utilization and worker efficiency reports.
- Product level control: Facility to enter production plan was provided to the user of this system. Every product and its components was identified and controlled through a serial number generated by the system. The software was customized to enter/import product part list. Facility to enter item stock was provided. Based on the product demand, shop orders for the parts were generated by checking the stock. Such shortage item shop orders were scheduled on the finite capacity resources.
- Adapter program utility was developed to transfer ExSched related data such as Product, Part lists, Items, Processes, and Machine Resources etc from Sybase to local database.

#### Business Benefits

- The time spent by planning persons is considerably reduced from days to couple of hours for preparing the schedule.
- The Planning department can predict the delivery time of jobs well in advance considering the current load in the shop floor.
- Effective utilization of resources with minimum idleness of machine resources.
- Subcontracting schedule is available in advance.
- Gantt charts and reports give an overall view of the shop floor in a single screen.