Table 7.　The table of the month requirement amount.

The Requirement Amount in May 2014					
Week	Shipment Amoune	Stock	Safety Stock	Lot-Size	Requirement Amount
1	10581	2000	3000	1700	11900
2	10581	3319	3000	1700	10200
3	10581	2938	3000	1700	11900
4	10578	4257	3000	1700	10200
Sum	42321	3879			44200

Table 8.　The productivity analysis of the device.

Device No.	Device Model No.	Device Name	Supplier	Serial Number	Punch Times in 8 hours	Needed Punch Times	Difference
150	JH21-80	80T purchint machine	Wode Jingji (China) Company	12093	8000	9000	-1000

Based on the modification of the weekly requirement plan, the final plan from ERP is sent to the production department. The planner import it to ERP to schedule smartly.

3.5.3. The Productivity Analysis and the Adjustment of the Weekly Plan

The productivity analysis is to consider if the production capability of a device can satisfy the production load in a certain period of time. Compare the punch times with the capacity of this punching machine. Decompose the weekly production plan into sub-plan on each procedure according to process flow chart. Then, determine the needed device for each procedure, the needed production capacity per product and the needed total production capacity.

After the decomposition of the weekly production plan, compare the total punch times and the rated production capacity in 8 hours of one device, which is shown in Table **8**.

When the difference is negative, the system will notice and mark the related procedure. The planner of the production department will modify the weekly production plan based on the result of Table **8** until the production capacity is satisfied. If the difference is large, which causes extra working time irresoluble, then the planner of the production department needs to negotiate with the planner of the sales department to solve this problem by extending the due date or outsourcing. After the negotiation, the system generates the weekly procurement plan according to the determined weekly requirement plan. The details are not explained here.

CONCLUSION

This paper analyzes the problem in the process of making production plan, and then by adding the process of making monthly requirement plan, the monthly shipment amount is predicted. Using the economic lot-size, safety stock, production interval and the productivity analysis into the process of making production plan, a model of generating production plan automatically is established according to the reasonable allocation of the production resources. This model can achieve the goal of decreasing the production cost and increasing the productivity.

CONFLICT OF INTEREST

The authors confirm that this article content has no conflict of interest.

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