

The importance of maintaining machinery in forest products industry

Mehmet Çolak^{1,*}, Tahsin Çetin¹

¹ Muğla Sıtkı Koçman University, Technology Faculty, Wood Working, Industrial Engineering, Kötekli Campus, 48000, Muğla, Turkey.

* Corresponding author: cmehmet@mu.edu.tr

Abstract: Organizations, maintaining their existence depends on their profiting by marketing in an economical manner. Moreover, the organization should compete with their rivals. As such, organizations need to keep their production systems continuously functioning and this requires repair and maintenance activities to be conducted in a planned way and to keep the unexpected breakdowns at minimum. In this way, reliability of the organization will increase. The advancements seen in the field of technology and organizational changes enhance the importance of effectively working machine. Moreover, the increasing competition forces the organizations to use their facilities and machine more efficiently.

1. Introduction

One of the most important issues in organizations, either producing service or good, is what to do in case the equipment possessed and used in the production breaks down. Some organizations deal with the issue by purchasing one more machine than the required so that they can use the spare ones in case of malfunctioning. This approach is not economically viable because when the broken machine is repaired, the number of the machine will increase and the organization will have more machine than required in its machine park [1].

The purposes of repair and maintenance activities can be listed as follows [2];

- Increasing the quality of machine and its parts,
- Developing a design to make the maintenance and renewal of the machine easier,
- With the inactive capacity available, minimizing the losses resulting from the breakdowns,
- Establishing the system and having the equipment required for fast maintenance and renewal,
- Through regular inspections, critically damaged parts are changed and so doing, breakdowns to lead big losses can be hindered,
- Preventing machine and the personnel operating it from being inactive,
- Enabling to timely provision of the customer demands and preventing sales from dropping,
- Allowing losses to be low.

Repair And Maintenance Methods Used In Organizations

Types of maintenance to be used in an organization are divided into three:

1. Corrective maintenance
2. Preventive maintenance
3. Corrective and improving maintenance

These are the maintenance activities going up to design of all the original parts of a machine.

If the maintenance activities are not carried out on time, this may result in some adverse effects on efficiency, production increase, and costs. Some of the negative effects are listed below [2]:

1. Leaving the machines and the personnel operating them inactive,
2. Increase in indirect labor and production expenses,
3. Not meeting customers' demands and decrease in sales,
4. Other units remaining inactive due to the unit where the breakdown has occurred,
5. Decrease in quality and increase in the rate of the discarded,
6. Compensations paid to the customers due to delays in the delivery of orders,
7. Increase in the ratio of breakdowns due to deficient maintenance.

The main point to be emphasized here is that when machine and equipment are used for production, maintenance is an indispensable part of the process.

2. Results

As a result, export development has been stifled, resulting in a national foreign trade balance deficit in this sector. In addition, government investment strategies have resulted in a rapid increase in the number of forest product enterprises, but technology, scale and establishment location placement have developed haphazardly. Deficiencies in technology and finance, lack of qualified employees and their rapid turnover, bureaucratic obstacles, and insufficiency in demand are the main problems in the Turkish forest sector [3].

Timely prevention of breakdowns is possible only when all the factors involved function to a certain extent as planned before. If some factors do not function as planned before, loss of productivity may appear.

References

- Anonymous 1. 2012. <http://www.sayisalyontemler.com/>. Access Date:10.11.2012
- İlhan, R., and Burdurlu, E. 1993. Woodworking Industry Factory Planning, Ankara.
- Aksu, B., Koç, K. H., and Kurtoğlu, A., The forest products industry in Turkey, African Journal of Business Management Vol.5 (6), pp. 2363-2369, 18 March, 2011