# DEVELOPMENT PROSPECTS OF MAINTENANCE

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*The paper discusses about the development trends of maintenance nowadays. The analysis is based on the established methods of maintenance and overall economic development in the world. These conditions predispose new directions for maintenance equipment and machinery.*

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## INTRODUCTION

The more efficient development of technology, is the more use of all possible reserves in production. In the 18th century in the UK, was the passage from an agrarian country to an industrial state. Production from the beginning had manufactory character which prevailed manual operation. Gradually but saw the development of production machinery, which has significant economic benefits for businesses. This benefit is sustainable only as long as competitors fail to reach a comparable level of production, which inevitably decreases the demand for products and the profit margin is reduced. New increase in the rate of profit only brings new streamline production. This cycle is repeated continuously.

## THE FIELD OF MAINTENANCE DEVELOPMENT

Planned obsolescence is a business strategy in which the obsolescence (the process of becoming obsolete—that is, unfashionable or no longer usable) of a product is planned and built into it from its conception. This is done so that in future the consumer feels a need to purchase new products and services that the manufacturer brings out as replacements for the old ones [4]. Due to planned obsolescence, products are becoming ever more one-off character. This means that if a product develops a fault, then it is best to purchase a new product. Components of such a product may not be made of durable and precious materials. Production costs are significantly lower.

Predictive maintenance ensures low failure rate respectively risk reduction components which do not apparent before the fault condition. Predictive maintenance provides increased service life [2]. Outwardly devices work without fault.

Proactive maintenance of all indicates minor faults that are not externally visible, but the time may develop into a major failure. It's economical maintenance trend, which focuses on the root causes of wear equipment. Predictive methods are external manifestations of maintenance and proactive methods are internal expressions of maintenance [3]. Unlike predictive maintenance is already in the bud prevents the development of a fault condition.

Planned maintenance is done in all cases where the measurement is very difficult to determine the actual risk status of the machine. Difficulty can be given the unavailability of measuring devices, the length of time evaluating or high cost measurement. Planned maintenance enables you to check the status of the device inaccessible places.

Routine maintenance is the last important maintenance philosophy. It is actually corrective maintenance of minor defects. This type of failures, unlike other is visible respectively recognizable with human senses and does not require special instrumenta-

tion. This form of maintenance is as important as the other, because the human negligence leads to many serious disturbances.

**PROSPECTS FOR THE FUTURE MAINTENANCE**

Energy price hike as well as increasing production efficiency has a regression character. Presumably are the development tendencies that promote resilience of the system at the expense of efficiency. To the regression are indirectly associating the environmental burden. This is a reduction of life resources. From a systematic approach is basically a matter whether lack of resources to one person is caused by the overgrowth of population, reducing the environment from pollution or depletion of energy resources. The result is the same.

These above mentioned factors will change the philosophy production and maintenance in the near future. In an environment, where energy resources are considerably more expensive than it is today and where food security will more difficult than today, inevitably changes range of manufactured products.

Today is prevailing philosophy of continuous productivity growth and maximum profits. This situation is sustainable because the available relatively cheap natural source of energy and due to large exercise capacity of environment. In the seventies of the last century has already made significant scarcity was felt in exercise capacity of the environment. Gradually was came new laws to deal with environmental policy. This had a direct impact on product formation. Some hazardous materials were gradually prohibited. This had a direct impact on product formation. Some hazardous materials are gradually prohibitions [1]. In this respect, it is still much to do. It can be assumed that in the near future, there is a general price increase of energy resources. This phenomenon will clearly impact on the maintenance policy.

Developmentally can outline the following changes:

- They start out increasingly to favor materials and technologies whose products are biodegradable in nature.
- Transportation shall be limited to the transport of the most important commodities. Logistics products will have more local character.
- Easy to operate on low-energy drive and interchangeability on various types of drives will be more prominent.
- Equipment will be less powerful but highly energy efficient.
- Tolerance fields of production parts will be significantly wider base than nowadays. This results in a lower power but high reliability.

**ANTICIPATED IMPACTS FOR MAINTENANCE**

- Exchange product policy changes to repair and re-use policy.
- It will be enforce the requirement that the longest lifetime components associated with low-technology for repair.
- They start out make more use of used parts and products damaged parts to be replaced remanufactured parts.
- Serviceability equipment is adjusted to the available technological level. Will probably be less disposable equipment.
- Deepen the large local differences in opportunities in the repair and maintenance of machinery. It will fully prefer diagnostic tools. Emphasis will be on multifunctional and wide spectral diagnostics. Maintenance will be much stronger position than today.

**CONCLUSION**

In the transition stabilization period of the economies countries, a change in maintenance priorities has a key importance. The value of things around us is determined

by their availability and reliability. If the availability is deteriorated reliability will be more important position. This fact is directly related to the maintenance philosophy of production and use.Contribution was created under projects KEGA 047TUKE-4/2011, VEGA 1/0810/11 and ITMS 26220220164 applied research.

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