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from specialty «Mechanical Engineering»

Discipline RT 4319 «Repair technology»

Module AP 9 «Production automation»

LECTURE NOTES

Topic 2 Fundamental requirements of effective preventive repairment

When most people think of preventive repairment, they visualize scheduled, fixed-interval repairment that is done every day, every month, every quarter, every season, or at some other predetermined interval. Timing may be based on days or on intervals such as miles, gallons, activations, or hours of use. The use of performance intervals is itself a step toward basing preventive tasks on actual need instead of just on a generality.

The two main elements of fixed-interval preventive repairment are procedure and discipline. Procedure means that the correct tasks are done and the right lubricants applied and consumables replaced at the best interval. Discipline requires that all the tasks are planned and controlled so that everything is done when it should be done. Both of these areas deserve attention. The topic of procedures is covered in detail in the following sections.

Discipline is a major problem in many organizations. This is obvious when one considers the fact that many organizations do not have an established program. Further, organizations that do claim to have a program often fail to establish a good planning and control procedure to ensure accomplishment. Elements of such a procedure include:

1. Listing of all equipment and the intervals at which it must receive PMs

2. A master schedule for the year that breaks down tasks by month, week, and possibly even to the day

3. Assignment of responsible persons to do the work

4. Inspection by the responsible supervisor to make sure that quality work is done on time

5. Updating of records to show when the work was done and when the next preventive task is due

6. Follow-up as necessary to correct any discrepancies.

Effective repairment is not magic, nor is it dependent on exotic technologies or expensive instruments or systems. Instead, it is dependent on doing simple, basic tasks that will result in reliable plant systems. These basics include the following.

- Inspections
- Human Senses
- Sensors
- Thresholds

The friction of two materials moving relative to each other causes heat and wear. Friction-related problems cost industries over $1 billion per annum. Technology intended to improve wear resistance of metal, plastics, and other surfaces in motion has greatly improved over recent years, but planning, scheduling, and control of the lubricating program is often reminiscent of a plant handyman wandering around with his long-spouted oil can.