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The need for planned maintenance

Scope

To explain the reasons for and benefits to be derived from a planned maintenance program.

Safety precautions

Since the purpose of this document is to educate the reasons for and benefits to be derived from a planned maintenance program, no direct safety cautions apply. However, during the actual maintenance of plant equipment, appropriate and specific lock out tag out procedures must be followed for the equipment being worked on. This also applies to the proper handling of any chemicals such as lubricants, cleaning solvents, inks, etc. being used. These maintenance procedures may require the use, disposal of chemicals, which may present serious health, and environmental hazards to plant employees. Proper procedures for handling of these materials are set forth on Material Safety Data Sheets that must be developed and presented by all manufacturers and importers of potentially hazardous chemicals. All distributors of potentially hazardous chemicals must maintain the MSDS sheets. Prior to the use of this technical information paper, the user should determine whether any of the chemicals to be used or disposed of are potentially hazardous. If there is a potentially hazardous situation, the user should strictly follow the procedures specified by both the manufacturer, as well as local state, and federal authorities for safe use and disposal of these chemicals.

Planned maintenance

The attainable goals of planned and scheduled maintenance are to minimize any unscheduled downtime, reducing repair cycle, and improving product quality by maintaining the equipment in its best operating condition. Records show that production can be increased by 10-15% if the (usually unrecorded) 5-12 minute delays can be eliminated.

However, before downtime can be controlled, its major causes must be determined. Experience indicates that poor housekeeping is the major cause of downtime, excessive machine maintenance, and low quality output. This is followed by lack of maintenance, insufficient parts inventory, improper machine adjustment and repair.

Dried ink and adhesive are very abrasive materials. When these are permitted to remain on a part which must move in relation to another part—such as scraper blade with anilox roll or shaft journal with bearings — either or both parts can become grooved or scored. This can and will badly affect their operation as well as the product being produced.

Paper dust, mixed with grease or ink on adjusting screws, can and will cause binding and seizing. If the shafts are motorized, the adjusting motors themselves will overload and burn themselves out. A similar buildup on the scoring or slotting shafts or on manually positioned side gauges also restricts movement. The crews then tend to use hammers or screw drivers to make necessary adjustments. Besides wasting time, any misdirected blows can and will dent the shafts or slide bars. This causes even greater restriction of movement. Correction of these problems

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requires the services of a mechanic and, sometimes, new machine parts. In addition, a substantial loss of production results while repairs are being made.

Less time is generally required to troubleshoot a clean machine with mechanical problems. A clean environment offers the troubleshooter a better opportunity to diagnose and repair faulty parts. A clean machine also inspires both machine operators and mechanics to do their best work.

Any production time lost in housekeeping can be regained with dividends by reducing both downtime and improving both machine performance and product quality.

A predictable maintenance program should be implemented. Forecast and schedule when items need to be replaced. This gives the plant the necessary time to order the parts and have them on hand when required.

Keywords

Maintenance, Downtime

Additional information

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