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Maintenance Management Mastery Training Course Content

1. Top-Level Maintenance Management Process

This topic covers the development of the top-level process overviewing the complete maintenance management solution implemented in an operation.

2. Work Identification Process

This procedure ensures that maintenance work is properly identified, its requirements communicated with sufficient detail provided for the work to be effectively planned and scheduled.

a. Overview

Maintenance work needs to be prioritised, organised and coordinated to make effective and efficient use of resources and production time. This requires that maintenance work be reviewed to ensure it is valid before being done. Typically, a request for maintenance resources is made to do a job. Once the work request is reviewed and authorised it is then planned and prepared to minimize cost and lastly scheduled to minimize disruption to Production.

b. Scope

This procedure covers all requests for maintenance or improvement work done by the Maintenance Group on any operating assets under its responsibility to provide support.

3. Work Order Status and Priority

The purpose of this procedure is to provide a common way to determine codes for prioritising work and for determining maintenance work type and status on work orders to ensure correct work process flow.

a. Overview

These codes allow the maintenance group to track maintenance work orders and provide information for analysing the effectiveness of equipment maintenance strategies and to change or confirm maintenance intervals.

b. Scope

All Maintenance Work Orders are covered by this procedure.

4. Unscheduled Work Process

This procedure explains the process to handle any requested work that is not already in the Weekly Master Schedule or the authorised Shutdown Schedule. Before any jobs not on an approved schedule



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are accepted they are assessed according to their relative importance and impact on operations and maintenance goals.

a. Overview

Maintenance Supervision is responsible for reviewing all unscheduled work and assessing its effect on the Daily and Weekly Master Schedules. Similarly, during shutdowns the Shutdown Manager and Maintenance Supervision need to identify the impact of added work on shutdown goals, while not putting future operation and productivity at likely risk of a fatal problem by not doing the work.

A request for unscheduled work requires recognition of the availability of resources, time constraints, and access to parts, equipment and materials to do the work. After negotiating its scheduling with the Requester, the request is either accepted as an unscheduled job to be done urgently or it is passed to the Planner to prepare and schedule for another day.

b. Scope

This procedure covers work arising from unscheduled work such as backlog work becoming urgent, because of scheduled jobs being postponed or cancelled, ad-hoc requests from Production/Shift operators, legal requirements, or if breakdown or emergency work arises.

5. Work Planning Process

This procedure sets out the method by which each approved Maintenance Work Order is planned and prepared so work can be done flawlessly and safely to the required quality.

a. Overview

Planning work to go right-first-time requires detailed investigation and purposefully deciding how a job should be done so it is completed right and safe first-time. A fully planned work order has identified every task to be done, every tool to be used, every part to be installed, every safety item needed, all technical details, etc and compiled the details into a work pack for the job. We also procure all parts and external services needed to do the work.

b. Scope

All maintenance work in an operation is covered by this procedure. It covers all personnel involved in planning, scheduling, execution and completion of maintenance tasks.

In all circumstances, work requirements dictated in Regulations and Acts of Law must be adhere with.

6. Work Scheduling Process

This procedure explains the scheduling of planned corrective maintenance, preventive and predictive work orders for execution.



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a. Overview

Scheduling is the process of designing how to get each job done; starting with the work request and ending with a finished job. Planning is the process of designing what to do in each job to do the job right and safe. The aim of the scheduling process is to manage the time and resources needed to prepare work and do it successfully as timetabled.

The scheduling process gradually filters the work order backlog to deliver fixed work for each week and a draft schedule for the subsequent three weeks. The work orders in each 'fixed' week are set and never rescheduled once approved. Supervisors have the choice to select the work their crew does each day, but are responsible to complete all work orders that week. New work to be done is via unscheduled work orders, which are reported at each weekly Schedule Review Meeting.

b. Scope

This procedure covers the steps required daily to produce a projected rolling 4-week maintenance schedule. All Maintenance Work Orders are covered by this procedure except for Unscheduled (Emergency and Urgent) Work.

7. Work Execution Process

This procedure explains the process used to allocate and complete work orders:

- a) from the agreed Weekly Master Schedule, and
- b) according to priority from any unscheduled work arising.

a. Overview

Work Order execution is the doing of the work given to the Maintenance Group. Maintenance adds value to a company in two ways, first by making equipment reliable and second by removing operational risk so things don't stop production. This is achieved by completing all scheduled preventive and predictive work orders and by doing corrective work to prevent equipment breakdowns. By properly completing preventive, predictive and corrective work orders the two outcomes of reliability and reduced risk are achieved.

Work order execution is a resource management function that gets the right work done in an organised manner. The work is prepared and allocated by Maintenance and the plant is made available by Production. This makes coordination and cooperation vital if we are to get work done that keeps operating plant and equipment reliable and in a healthy condition.

Maintenance work orders are of two types—those scheduled on the Weekly Master Schedule and those that are unscheduled. Scheduled work orders are processed by the Maintenance Planner. Unscheduled work orders are processed by Maintenance Supervision.

b. Scope



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All maintenance work orders scheduled for the current week are covered by this procedure, including those raised on an ad-hoc basis during the week (i.e. unscheduled work). This procedure applies to the Maintenance Supervision, the Production Supervision, and to a lesser extent, the Tradespersons.

8. Work Close-out Process

This procedure sets out the method by which the details of a completed maintenance job are collected, managed and recorded.

a. Overview

Maintenance job history details and equipment condition feedback are retained as evidence that the correct work was performed and that the work was done correctly. Maintenance history includes information on the work conducted, the equipment and parts' condition observed and the condition that the equipment was left in at the end of the job. It is later referred to when performing equipment reliability analysis and root cause analysis.

The Maintenance Supervision is responsible for work order history reporting and ensuring adequate and accurate records are provided with regards to each job and details on equipment and parts condition and causes of equipment failure.

b. Scope

All Maintenance Work Orders are covered by this procedure.

9. Weekly Work Management Process

This procedure covers the conduct of fixed plant maintenance work not related to shutdowns. It explains how to address and handle the range of maintenance that occurs in an operation.

a. Overview

A vital purpose of maintenance is to deliver equipment reliability. We use maintenance to sustain the reliability designed into an item of equipment. This is done by establishing appropriate maintenance systems, methods and practices that ensure equipment is installed, operated and maintained to the designers' quality specifications.

Another critical purpose of maintenance is operating risk control. We should use maintenance primarily to prevent things from going wrong with production plant and equipment; not to fix failed things. The greater the number of plant and equipment risks an operation chooses to live with, the more failures there eventually must be. We minimise equipment failures through meeting best engineering quality standards, applying stress-reducing operating practices, and by removing risks all together.

This procedure is a methodology to help build a maintenance system with the right focus and the right activities that deliver highly reliable equipment with minimal chance of production losses.



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It covers the financial, work management, people management and continual improvement processes needed to ensure top-class production equipment performance.

b. Scope

This procedure covers the performance of all plant and equipment weekly maintenance, including preventive, predictive, corrective, and breakdown.

All parties involved in the preparation and execution of maintenance work orders shall follow this procedure.

10. Shutdown Work Management Process

This procedure covers the provision of major maintenance shutdowns. It provides a methodology to help ensure that shutdown work is clearly identified, is thoroughly planned and prepared, is done safely, meets the budget, is well coordinated and runs to schedule to deliver equipment of a level of reliability that is unlikely to breakdown between shutdowns.

a. Overview

Shutdown management and execution is the process of planning, preparing and conducting an outage on operating plant. There are a range of shutdown types and the frequency, duration and complexity of each shutdown type determines the project management time horizon, the contents of the project schedule and the extent of planning activities to be performed.

The aim of a shutdown is to minimise production time loss by safely, efficiently and cost effectively completing all necessary work. These aims feature in all planning and decision-making. A great proportion of a shutdown's success depends on peer support and review throughout preparation, planned and post review.

Maintenance shutdowns are outages conducted to refurbish plant and equipment suffering wear-and-tear or aging that are likely to fail if not returned to reliable condition to continue in-service. Often the opportunity is taken in a planned stoppage to visually inspect equipment condition or perform statutory inspections to assess their state and remaining life.

Success requires proactive lines-of-communication between all parties involved in the plant and equipment's daily operation and maintenance with those performing the shutdown; the aim being to identify and include all the requirements, information and resources needed to deliver a successful shutdown early in the project so there is plentiful time to prepare well.

b. Scope

All major shutdowns of 12hrs or greater are covered by this procedure. Its principles also apply to shorter outages.

All parties involved in the preparation of the shutdown and its execution shall work to this procedure. Typically, the Shutdown Team comprises the Shutdown Manager, Maintenance Superintendent (who maybe the Shutdown Manager), Production Superintendent, all



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Maintenance, Electrical and Production Supervision, OHS Representatives, Maintenance and Electrical Planners, and Subcontractors' Representatives (where necessary).