

Tpm case study coursework

Business



Total Productive Maintenance Overview solutions to Went Seen Engineering plant Marketplace & people Workplace Current situation Implement AS People Marketplace & people lop autonomous maintenance program Conduct focus improvement activities Marketplace Develop Develop initial planned phase control & maintenance of new program equipment Conduct operator and maintenance skills training Clean & safe workplace, Good machine condition, High employee morale & teamwork

Page 6 Total Productive Maintenance Implementation of AS: From the analysis of findings in Went Seen Engineering, management should not rely solely on past experiences and hunches, it should base on facts to discuss issues pertaining to P (production), Q (quality), C (cost), and D (delivery).

All the management basics (foundation of 8 pillars) are linked to AS, the meanings of AS as figure 01 Figure : Meanings of AS In Japanese Series Sexton ISO Stickiest Skittish In English Sort out unnecessary items and discard them Arrange the rest in good order for use Clean up the workplace and facilities Keep neat and clean / Prevent to come dirty Maintain a high level of discipline / work-ethics n Chinese Figure: Picture of AS Page 7 rhea first three steps, Series, Sexton and ISO are primarily housekeeping measures. Remember a AS System is not a one time event.

It is a continuous process of Improving the workplace. For a AS System to succeed the first three steps should be part of the daily work routine, usually carried out at the end of each shift or work day. rhea Series step should include a plan for both sort events and the daily work habits of employees.

Limits on the amount of work in progress should be set so as not to overload a workstation.

We will need designated areas where items tagged for removal from a workstation can be taken during a red tag sort event phase. These can be temporary areas near the workstations.

In planning for the sort step take into consideration a red tag event will disrupt work. We may need to plan for this event to be done during off work hours. The Sexton step has as its foundation “ There should be a place for everything and everything should be in its place”.

Ours AS team will need to establish designated areas for everything from parts to cleaning supplies. These areas should be marked and documented. One of the greatest benefits of the straighten step is employees will know where to go to find what they are looking for. The ISO step is all about cleanliness. Determine if more trash and recycling containers are needed and where they should be placed. If we do not have a green Marketplace plan, a AS System is a good place to lay the foundation of recycling items such as paper and cardboard.

Determine if we have enough cleaning supplies or any tools such as a shop-Vic are needed and where they will be stored. These items will be used on a daily basis. The Stickiest step of the AS System is about ours systems. Examine areas such as how our parts and supplies are received.

They should be put in place immediately. Examine our workflow system to see how efficient it is.

Parts, tools and work to be done should be close to the workstation. If an employee has to “ walk 500 feet to get something they routinely use, find a way it can be moved closer. The standardize step can be a framework for an overall process and quality management system. This step should be revisited frequently to look for areas to improvement. The Skittish step is the final and most important step in the AS System.

No matter how well laid out the plan we must be able to sustain it.

Sustaining the program requires employees to be educated on the benefits of a AS System and it should be made a requirement of their daily work routine. Old habits are hard to break so monitoring that the system is being following is a requirement. Management must understand the importance of AS as well as to all employee, AS are included in the training package that provide by the TAMP committee. To sustain the AS in the plant, there is recommended to conduct the monthly AS competition by inspect the workplace of all the departments and award the winner a trophy or certificate. Conversely, give training to the department that having poor AS.

Introductory education campaign for the workforce Figure: TAMP seminar in Japan Irish program will inform and educate everyone in the organization about TAMP activities, benefits and its objectives. For managers: offer seminars/retreats according to level, For general workers: provide slide presentation. This step to implementing TAMP also consists of collection of information about TAMP and to understand how it works. TAMP coordinator must understand what TAMP is, how it Norms, its proper implementation sequence, the amount of effort that will be required, how it can be benefited

for the plant, how long it will take to implement etc. Information resources include TAMP conferences, TAMP seminars, TAMP books, magazines, the Internet, and conversations with consultants.

Step 3.

TAMP promotion Special committees) TAMP is promoted through overlapping small groups. Figure below shows the models for overlapping small-group organizations. Further, the company-wide TAMP promotion committee and of the department or plant based promotion committees should be established. The personnel involved in TAMP are often called the TAMP Promotion Committee or the TAMP Office and they are responsible for driving and overseeing TAMP activities factory-wide. It is hoped that peccadillo persons will be included in such an organization.

In addition, working groups should be set up for principal according to each of the eight pillars. These papillary-pillar groups are called subcommittees.

When the organizations are in place, plant managers, department and section managers, staff members and managerial personnel should together select model equipment/areas for as a proving ground for RPM activities, personally implement autonomous maintenance and focused Improvement.

This activity to restore equipment and reduce losses is the foundation of TAMP. Figure: Typical Example of Overlapping TAMP Small Groups Page 10

Step 4.

Establish basic TAMP policies and goals TAMP is always executed with specific goals and policies which shall be attained and maintained by TAMP

activity of a company. The goals and policies are related to company's long and mid term business goals. Those goals are challenging and achievable, such as improve the *Overall Equipment Effectiveness by reducing minor stops in equipment to 1/100 or reducing 9/10 of defects.

If no current data is available pertaining to overall equipment effectiveness, analyses existing conditions and collect data for a minimum of three months and set the target values using this data as baselines. OWE calculation refers to appendix I.

Figure: MM company distribute cards that content company policies and goals to all employees. Step 5. Draft a TAMP master plan The outline flow of " TAMP Master Plan" should be the scheduling plan from the TAMP introduction preparation stage to the established stage, and turner to the stage to undergoing TAMP award assessment. The master plan is formulated by the committee for TAMP implementation and the activities decided (please refer to figure: The eight pillars of TAMP) and budgets for those activities will be set to be pursued to achieve the TAMP goals.

Eng Seen TAMP Initial phase control of new equipment Figure: The eight pillars of TAMP AS, TIE (Total Employee Involvement) Diploma in Industrial Engineering (DE 3/12) Page 11 Safety & Environmental Control Equipment & process improvement Process quality management Autonomous Maintenance Training & Education Planned Maintenance FMP in office Step 6.

TAMP kick off TAMP kick-off is a day of memorable occasion which launched with all the employees attending and invite external customers, affiliated and subcontracting companies. It also serves as an opportunity to gain the <https://assignbuster.com/tpm-case-study-coursework/>

full support of the employees. At a spacious location such as a gymnasium or dining hall, or other large venue, as many employees as possible are gathered to hold a large scale event called the TAMP Kick-Off.

An example of a Kick-Offs schedule is as follows: Address by the top person, who declares anew the company's or the plants resolve to introduce RPM. Announcement of TAMP promotional organizations, the basic principles and targets of TAMP, and the TAMP Master Plan (prepared by the TAMP Promotion Office Committee Chairman or the manager of the TAMP Office. The labor union leader's or employee representative's declaration of resolve to start TAMP activities.

Congratulatory address by guests. Announcement of focused improvement/autonomous maintenance results using formal organizational models during the preparatory period. Commendation of selected posters, catch phrases and composition works. Step 7. Develop company to maximize production effectiveness This step is divided into two activities.

Each is important and must be followed to solve Well Seen Engineering operation problems. 0 Conduct focused improvement activities: Focused improvement activities starting by forming a project team which typically include 5 to 7 operators, a maintenance person and a technical expert/facilitator (equipment engineer), then select a model equipment to identify and analyse equipment problems (refers to Appendix II: six big losses definitions), develop solutions and proposals for improvement. The tools of Total Quality Management (TQM) and Continuous Improvement (CI), such as Pareto charts, causes & effect diagrams, and method analysis are

advice to applies to the management and improvement of equipment.

Develop an autonomous maintenance program: Autonomous maintenance program is a handling-over of maintenance tasks, such as cleaning, lubricating, inspecting, tightening, and set-up adjustment from specialized maintenance personnel to production operators. Establish the machine ownership to operators is strongly recommended.

The following seven steps are widely Implemented: 1) 2) 3) 4) 5) 6) 7) Initial phase cleaning, Solutions for the source of problems, Preparation of provisional Autonomous Maintenance standards, Total Inspection, Autonomous inspection, Workplace standardization and Complete Autonomous Maintenance implementation by continuous improvement Reese steps are suitable for machining and can be modified to suit individual assembly processes of Job processes. The practice of LOT (Lockout-Dugout) is Indeed employed.

The TAMP Activity Board, one point lessons and meetings are set for Autonomous Maintenance activities. Diploma in Industrial Engineering (DE 3/12) Page 12 Develop a Planned Maintenance program: In order to extend the life span of the equipment, Planned Maintenance program is a plans and schedules that set up to carry out the work on equipment before it breakdown. It included periodic maintenance (refer to Time-Based Maintenance, TAB) and predictive maintenance refer to Mean-Time-Between Failure, MATT) based on current process parameter trends.

Computerized maintenance management system (CAMS) is widely used to managing these maintenance works, equipment spare parts and tools.

Figure: CAMS flow chart Conduct operator and maintenance skills training

The training sessions will be planned shortly after the kick-off presentation, it contains two major components: soft skills training and technical training, the training as well as involve leaders and give an opportunity for them to share their experience or information with group members. The training can be done by in-house or approved training centre, TACT (egg: TIE or SSP academy) Figure Certificate to attendance to soft skills training

Page 13 Step 8. Develop initial phase control of new equipment At this stage, the principle of designing for maintenance prevention can be applied to new products, to new and existing machines, and also to new accessories for machines. For new product, it must be designed to easily produce on new or existing machines.

For new machine, it must be designed for easier operations, changeover and maintenance.

For existing machines, it can be an equipment design change or by changing the process in order to eliminate the operation problems (egg: process parameter indicators were not easy to read or simply not readable. And reduce maintenance by analyzing its historical records, egg; trends of types of failure, frequency of component failures, and root causes of failures. Step 9. Build a Quality Maintenance System Quality Maintenance means reducing defects to zero by establish, maintain and control the conditions under which equipment can be remain free from defects. The variability in a product can be control by controlling the conditions of equipment parts.

Based on product quality, it is necessary to devise the methods to foolproof process and equipment, egg: put the simple operation guideline on equipment (one point lessons), or design an terrors in equipment to prevent Jumping operation steps. Figure: example of One Point Lesson Page 14 Step 10. Build an effective admit & support system TAMP activities in the development, sales and administrative departments are divided into three categories: supporting activities for improving efficiency, enhancing the efficiency of the respective sector and improving the efficiency of equipment under the charge of the departments. For supporting activities, refer to the methods of receiving and planning orders for materials that greatly influence production efficiency.

For enhancing the efficiency of the respective sectors, tasks such as organizing documents, space creation and saving manpower by shifting to office automation are carried out as autonomous or individual maintenance steps in collaboration with the production department.

The administrative/supervisory sectors should strive for improving the efficiency of equipment under the charge of the departments, fixed tangible assets including land, buildings, structures, machinery and equipment, deciles and other transportation equipment, ships, tools, articles and fixtures. JED system and SAP system are widely used in many international companies as their