2022 TPM Award

Outline (Official ver. : Nov 2021)

Valid for regions outside of Japan

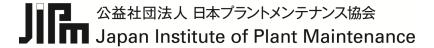
[Note]

Due to the impact of COVID-19, TPM Award 2022 will be implemented as follows.

1st Stage Assessment: 'Online' Assessment

2nd Stage Assessment: 'On-site' or 'On-line / Document' Assessment

* When the result of the 1st Stage Assessment is announced, JIPM will make a decision based on the situation at that time.



This Application Outline is valid for regions outside of Japan for 2022 TPM Awards only. TPM and TPM logo are registered trademarks of Japan Institute of Plant Maintenance.

2022: SECTION 1 INTRODUCTION

Foreword

Established in 1964, with the purpose of encouraging development of the manufacturing industry, factories which displayed remarkable achievement in plant maintenance were presented with PM Excellence Awards, the predecessor of the TPM Awards. Since 1971, the awarding criteria were changed due to advancements in plant maintenance technology, and factories which displayed remarkable achievement in Japan originated Total Productive Maintenance were presented with TPM Awards. In response to further advancements, the definition of TPM was refined in 1989. It now encompassed the entire company from the shop floor to the executive boardroom, creating a true company wide commitment to production excellence. As a result, factories which have achieved company-wide efficiency by adopting company-wide TPM are presented with the award.

In accordance with amendments made to the Japanese legal system, JIPM transformed itself on April 1, 2012 from a *Shadan-Hojin*, a public interest corporation under the control of the Ministry of Economy, Trade and Industry, to a *Ko-eki Shadan-Hojin*, a public interest incorporated association approved by the Cabinet Office. The TPM Awards, which started in 1964, has been certifying Assessment Agencies since 2007 and, in cooperation with these certified agencies, has been operating the TPM Award system for enterprises and factories outside Japan. Due to the change of its structure, <u>JIPM will directly accept applications for evaluation</u> from the 2013 TPM Awards onward. Agencies that have served to date as assessment agencies—CETPM (Centre of Excellence for TPM, Germany), CII (Confederation of Indian Industry, India), CSD (Corporate Synergy Development Center, Taiwan), KSA (Korean Standard Association, Korea), SMMT (The Society of Motor Manufacturers and Traders Limited, UK) and TPA (Technology Promotion Association Thailand-Japan, Thailand)—are going to assume the role of Associate Agency during the evaluation for the JIPM-TPM Award. We recommend that enterprises and factories that would like to be evaluated consult with the nearest Associate Agency as required.

We would like to take this opportunity to offer our sincere gratitude to all enterprises and factories who have received awards and have embraced the system of evaluation by overseas assessment agencies as well as by assessment agencies and concerned parties who have been involved.

We strongly recommend the use of the TPM Awards operated by JIPM, who has evaluated and awarded for "Operational Excellence and Maintenance Excellence" throughout the world, as a step to further progress and develop your enterprise or factory.

Japan Institute of Plant Maintenance

2022: SECTION 1 INTRODUCTION

1. Eligibility and Requirements

Plants/factories that have introduced TPM (Total Productive Maintenance - PM with participation by all members) and that have shown significant achievement are eligible to apply.

Please confirm that your plant meets the requirement before applying.

Eligibility for each category is as specified below.

1) Award for TPM Excellence, Category B

- Must have minimum of 2 years or more of achievement activity after the introduction of TPM
- Must have deployed activity based on 5 pillars of TPM focusing on the production site (individual improvement; autonomous maintenance; planned maintenance; education and development; safety, sanitation and environment control).
- Must have completed Step 4 for autonomous maintenance activity¹.
- Must have completed infrastructure development for TPM activity with both tangible and intangible achievements obtained

2) Award for TPM Excellence, Category A

- Must have minimum of 3 years or more of achievement activity after the introduction of TPM
- Must have deployed activity based on 8 pillars of TPM by all staff members of the
 plants/factories (individual improvement; autonomous maintenance; planned
 maintenance; initial management; quality maintenance; administrative and supervisory
 department; education and development; safety, sanitation and environment control).
- Must have completed Step 4 for autonomous maintenance activity¹.
- Must have completed infrastructure development for TPM activity with both tangible and intangible achievements obtained

3) Award for Excellence in Consistent TPM Commitment

- Must have received the Award for TPM Excellence (Category A or B)
- Must have approximately 2 years of achievement activity after receiving the Award for TPM Excellence
- Must have deployed activity based on 8 pillars of TPM by all staff members of the
 plants/factories (individual improvement; autonomous maintenance; planned
 maintenance; initial management; quality maintenance; administrative and supervisory
 department; education and development; safety, sanitation and environment control).
- Must have maintained and enhanced the results achieved at the time the Award for TPM Excellence was received and have established measures for their maintenance and continuation

¹ From 2011 there must be clear evidence of completion of Step 4 from the time of making the application.

4) Special Award for TPM Achievement

- Must have received the Award for Excellence in Consistent TPM Commitment
- Must have minimum of 2 years or more of achievement activity after receiving the Award for Excellence in Consistent TPM Commitment
- Must have deployed activity based on 8 pillars of TPM by all staff members of the
 plants/factories (individual improvement; autonomous maintenance; planned
 maintenance; initial management; quality maintenance; administrative and supervisory
 department; education and development; safety, sanitation and environment control).
- Must have maintained and enhanced the results achieved at the time the Award for Excellence in Consistent TPM Commitment was received, and be engaged in distinctive and revolutionary activities

NB Award for excellence in Consistent TPM Commitment is required for the applicants who wish to apply for Special Award for TPM Achievement.

5) Advanced Special Award for TPM Achievement

- Must have received the Special Award for TPM Achievement
- Must have minimum of 2 years or more of deployment activity based on 8 pillars of TPM after receiving the Special Award for TPM Achievement and show significant improvement in results
- Must be deploying TPM activities after establishing important items and be showing results
 - eg: Management (production maintenance, quality maintenance, environment maintenance, cost reduction, etc.), SCM, Development (new products, new facilities, etc.), and other contents are independently determined in line with the business category of the eligible site.

6) Award for World-class TPM Achievement

- Must have minimum of 2 years or more of deployment activity based on 8 pillars of TPM after receiving the Special Award for TPM Achievement or the Advanced Special Award for TPM Achievement.
- Must have deployed distinctive and creative TPM activities, and be showing results.

[Notes for Application]

- 1. Each Award Category is applicable by plant/factory. (Applications for single department or lines are not eligible).
- 2. Applicant must have implemented Total Productive Maintenance (TPM) for at least the minimum time periods outlined above.
- The period between winning an award and applying for the next award category must be two years at least; however, in certain situations such as temporary shutdown of the applicants' plants, this requirement may be waived.
 - (e.g. Plant who wins the Award for Category A in 2021 can apply in 2023at the earliest.)
- 4. The eligibility of applications from sites which have had a serious accident resulting in pollution, explosions, fires and/or serious injury or which has been/is involved in any social scandal within a year of application will be decided by the TPM Awards Committee.
- 5. All of the awards above can be applied for again after being won

IMPORTANT

Definition of "Completion of the 4th Step" with regard to Autonomous Maintenance (Jishu-Hozen) in the Application Requirements for 2022

One of TPM's focuses is preventive action. In Autonomous Maintenance (Jishu-Hozen), operators are expected to have the ability to prevent equipment and workplace-related losses. An assessment is carried out to quantitatively evaluate each operator's results and performance obtained through Autonomous Maintenance activities and verify whether each operator has the ability to prevent losses. The phrase "completion of the 4th step" with regard to Autonomous Maintenance means that each operator has understood the functions and structures of the equipment in their workplaces in order to prevent losses.

Under the application requirements, the 4th step is <u>NOT</u> considered to be complete in any of the following cases.

- A. If the 4th step in Autonomous Maintenance has been completed only for model equipment, model lines, and model workplaces
- B. If the 4th step is determined to have been completed through diagnosis by the Autonomous Maintenance teams (without involvement of managements)
- C. If the percentage of equipment subject to Autonomous Maintenance in the workplace being assessed for which the 4th step has been completed is less than 75% (note that this calculation includes equipment and production lines that existed at the kickoff of TPM but does not include new equipment introduced (or relocated) after the kickoff.)

Applicants for 2022 category A or category B are required to have completed at minimum 76% of the 4th step by the application deadline.

Typical examples of names for the 7 steps of Autonomous Maintenance:

| STEP | Mechanical Equipment case |
|------|--------------------------------------------------------------------|
| 1 | Initial clean-up (Cleaning and inspection) |
| 2 | Countermeasures for contamination sources and hard-to-access areas |
| 3 | Preparation of tentative standards for "Jishu-Hozen" |
| 4 | General inspection |
| 5 | Autonomous inspection |
| 6 | Standardization |
| 7 | Thorough implementation of self-management |

^{*} In the future, this percentage will be changed to 100% after sufficient notice has been given.

2. How to Apply

1. Fill in and submit the application form (refer to sample in <u>Section 3</u>) to the office of JIPM <u>by</u> <u>December 24, 2021</u>.

The application should be typed and made by the plant/factory.

- 2. In addition, the profile of the plant/factory must be attached to the application form (refer to <u>Section</u> 3)
- 3. It is optional (not obligatory) to submit a Non-Disclosure Agreement (NDA) (refer to sample in <u>Section 3.</u> The actual form is separately provided.)

3. Withdrawal and Refund Policy

The applicant may withdraw the application at anytime by submitting a withdraw form (refer to <u>Section</u> <u>2</u>) by electronic mail.

The withdrawal fee applicable will depend on the progress of the process at the time that the completed withdrawal form is received by JIPM.

See Section 4 for details of the fees that would apply.

4. Assessment Fee, Travel Cost and Tax

- For details of the Assessment costs, please refer to <u>Section 4.</u>
- All invoices will be issued in JP Yen and all payments should be in JPY also
- The invoiced amount does not include any tax and transfer fee levied by the applicant's country.
- Where withholding tax may apply due to specific circumstances in certain countries, JIPM must be
 made aware of this and the applicant must provide all necessary support to enable JIPM to recover
 amounts from the tax authorities on a timely basis.

5. Optional Pay Service for Applicants

1. Follow-Up

This is for applicants who have won a TPM award in the past and wish to know whether their plant is well improved as based on comment given by assessors during TPM Award assessment or their plant level is qualified enough to apply upper award.

An assessment team of two from JIPM, including an assessor, visit plant and give further advice.

[Fee]: 500,000 JPY per day + travel cost of two person

[Note]: * This is not consulting service.

- * A plant which apply to TPM Award of the year cannot apply to Follow-up during TPM Award assessment (from accepted application form to finish all assessment).
- * Applicant should submit Application Form for Follow-up (Please refer to our web-page) at least 3 month before the request schedule.
- * The schedule might be changed from the request. The schedule will be concluded in discussion after accepted Application Form.
- * It can also be conducted Online if you wish or considering your situation.

2. Application Outline & Principles

2.1 Application Outline

2. Pre-assessment

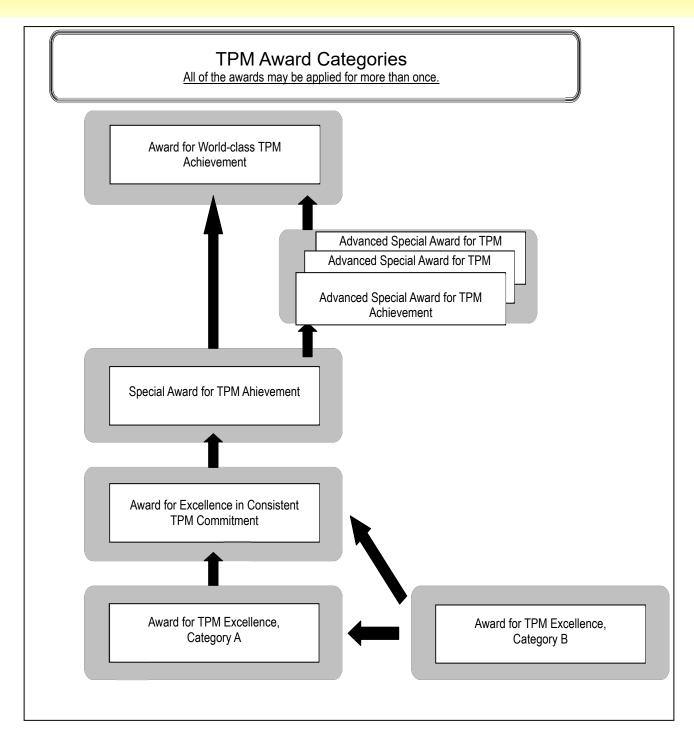
This is for applicants that are challenging the TPM Award for the first time (Category A or Category B). An assessment team of two from JIPM, including an assessor, will visit plant and check whether your activities meet the requirements for the assessment and point out any shortcomings.

[Fee]: 500,000 JPY per day + travel cost of two person

[Note]: * This is not consulting service.

- * A plant which apply to TPM Award of the year cannot apply to Pre-assessment during TPM Award assessment (from accepted application form to finish all assessment).
- * Applicant should submit Application Form for Pre-assessment (Please refer to our web-page) at least 3 month before the request schedule.
- * The schedule might be changed from the request. The schedule will be concluded in discussion after accepted Application Form.
- * It can also be conducted Online if you wish or considering your situation.

2. Application Outline & Principles 2.2 Flow of TPM Award Categories



All categories can be challenged repeatedly.

2. Application Outline & Principles 2.3 Main Assessment Principles

1. Main Assessment Principles

- (1) Assessment consists of first and second stages.
- (2) Assessment will be performed by the Award for TPM Excellence Assessment Committee in line with the assessment criteria and checklist items.
- (3) As a rule, the number of assessors is as follows:

Note: the number of assessors is subject to change depending on the scale of the plant/factory and the content of the assessment.

i) Award for TPM Excellence Category A and Category B, Award for Excellence in Consistent TPM Commitment, Special Award for TPM Achievement:
 <u>Document Assessment: 3 assessors</u>

 'On-site' or 'On-line' Assessment: 2 assessors

ii) Advanced Special Award for TPMAchievement, Award for World-class TPM Achievement:

'On-site' or 'On-line' Assessment: 3 assessors

- (4) Other than the above-mentioned assessors, an assistant assessor may be present during the assessment.
- (5) As a rule for 'On-site' and 'On-line' Assessment, Category B, A, Consistent, Special Award, the assessment will be performed in 1 day. However, this is subject to change depending on the scale of the plant/factory and the content of the assessment.
- (6) Advanced Special and World Class Award, the duration of the assessment will be decided after the submission of the application (2 days or longer in many cases).

2. Competence Research (Period: February – April 2022)

About the detail of Competence Research, TPM Award Office will announce to applicants after received application form.

3. First-stage Assessment : On-line Assessment (Period: March - July 2022)

The 1st Stage Assessment will be conducted Online using web conference system*

- (1) Using the Assessment Criteria and Checklist for each award (refer to <u>Section 6</u>), assessment will be performed for the status of TPM activities, their tangible and intangible results, and the level of understanding exhibited by supervisors, promotional staff in charge, and promotional staff members. Assessors will determine whether the applicant is eligible to move on to the next stage.
- (2) Applicant being assessed must satisfy the items contained in the "Assessment Criteria" (please refer to Section 6).
- (3) The assessment of tangible and intangible achievements will cover the performance following comment of TPM activities.
- (4) The results of the assessment will be announced on assessment day.
- (5) In the event that the applicant does not pass the first-stage assessment, the applicant may reapply in following years.

Please refer to the attached guide on how to conduct the 1st and 2nd assessment.

2. Application Outline & Principles 2.3 Main Assessment Principles

Required Documents

- TPM Activity Reports: should be delivered to JIPM (Qty = Number of assessors + 2 books)
 * Please also send the TPM Activity Report data (PDF) by online storage or electronic file such as CD/USB (2 pieces)
- Assessment Agenda

*Note:

- Presentation materials for 'Room Presentation'
- Presentation materials for 'Onsite Presentation'
- Videos showing TPM activity (ex. On-site, work process, equipment ...)
 within 10 minutes

*To avoid a large data volume, the resolution of the video is fine at HD(1280 x 720 pixels) or Full HD(1920 x 1080 pixels).

4. Second-stage Assessment (Period: September - December 2022)

The 2nd Stage Assessment will be conducted in one of the following ways. (End of June 2022, JIPM will make a decision based on the situation at that time.)

- 1) On-site assessment of applicant plant/factory
- 2) On-line assessment using web conference system :

Word Class Award and Advanced Special Award Document assessment* : Special Award, Consistent, Category A and Category B

Depending on the points raised in the 1st Assessment, the 2nd Assessment may be conducted online.

- (1) Applicants who have successfully passed the first-stage assessment will continue to the second stage.
- (2) Using the assessment checklist for each award, assessment will be performed for progress in the status of TPM activities following the first-stage assessment.
- (3) Assessment results will be determined at JIPM TPM Awards Committee Meeting that will be held by **the early February 2023**.
- (4) In the event that the applicant does not pass the second-stage assessment, the assessment result from the first-stage assessment will be annulled.

Please refer to the attached guide on how to conduct the 1st and 2nd assessment.

Required Documents

[Common materials : Onsite / On-line / Document]

- TPM Activity Reports: should be delivered to JIPM (Qty = Number of assessors + 2 books)
 * Please also send the TPM Activity Report data (PDF) by online storage or electronic file such as CD/USB (2 pieces)
- Kaizen/Improvement Report

[On-site Assessment]

Assessment Agenda

2. Application Outline & Principles

2.3 Main Assessment Principles

[On-line Assessment]

- Assessment Agenda
- Presentation materials for 'Room Presentation'
- · Presentation materials for 'Onsite Presentation'
- Videos showing TPM activity (ex. On-site, work process, equipment ...)
 within 10 minutes
 - *To avoid a large data volume, the resolution of the video is fine at HD(1280 x 720 pixels) or Full HD(1920 x 1080 pixels).

[Document Assessment]

- · Presentation materials for 'Room Presentation'
- Presentation materials for 'Onsite Presentation'
- Videos showing TPM activity (ex. On-site, work process, equipment ...)
 within 10 minutes
 - *To avoid a large data volume, the resolution of the video is fine at HD(1280 x 720 pixels) or Full HD(1920 x 1080 pixels).

Note: Updated information from the First Stage assessment should be easily recognized by the assessor such as highlighting the section with the updated information. Sections with new improvement cases also should be highlighted to be found easily. (Information in the CD format should be protected as a security measure).

5. Passing Score

Using the assessment criteria and checklist, the following minimum scores are required to pass the Second Stage assessment. (**Note:** Applicants' scores are confidential and will not be disclosed to the applicants themselves)

- Award for TPM Excellence, Category B
 The applicant must score a minimum of 70 points on 100-point Checklist C.
- Award for TPM Excellence, Category A
 The applicant must score a minimum of 70 points on 100-point Checklist C.
- Award for Excellence in Consistent TPM Commitment
 The applicant must score a minimum of 80 points on 100-point Checklist C.
- Special Award for TPM Achievement
 The applicant must score a minimum of 70 points on 100-point Checklist B.
- Advanced Special Award for TPM Achievement
 The applicant must score a minimum of 80 points on 100-point Checklist A.
- 6) Award for World-class TPM Achievement
 The applicant must score a minimum of 80 points on 100-point Checklist S.

2. Application Outline & Principles 2.3 Main Assessment Principles

6. In the Case of Social Scandal or Serious Accident

- (1) In the event that a TPM Award applicant has a past record of social scandal or serious accident causing pollution, casualty, or death 1 year prior to the TPM Award application, the TPM Awards Committee will determine whether the application will be accepted.
- (2) In the event that a TPM Award applicant has a social scandal or serious accident causing pollution, casualty, or death before passing the assessment by the TPM Awards Committee Meeting, the TPM Awards Committee will discuss the matter and may cancel assessment.
- (3) In the event that a TPM Award applicant has a social scandal or serious accident causing pollution, casualty, or death during the year after passing the assessment by the TPM Awards Committee Meeting, the TPM Awards Committee will discuss the matter and may revoke the Award given.
- (4) A report should be submitted to JIPM at the time an application is submitted if (1) above applies, or upon the occurrence of the scandal or accident if (2) or (3) above applies. Please include the following information in the report:
 - ① Name of company/plant/factory
 - 2 Location
 - 3 Date of occurrence
 - 4 Location of occurrence
 - Status (including casualty)
 - © Copies of any articles if published in the media such as newspapers
 - ⑦ Causal analysis
 - ® Measures taken to prevent recurrence, etc.
- (5) In the event that the application has been withdrawn or revoked due to social scandal or serious accident, achievements for the relevant year will be annulled (passing of application screening, etc.). If a decision has been made to withdraw or repeal the award after the awards ceremony, the award plaque must be returned immediately.

7. Notification of the Assessment Result

The assessment result will be finalized **end of January 2023**, and all applicants will be advised of the result.

The TPM Awards Committee will take charge of the final approval of passing.

The results of the TPM Awards will be announced by e-mail from JIPM to the contact person within the applicant company as stated on the application form.

The Awards winners will then be listed on the JIPM Web-Site (http://jipmglobal.com)

For further progress of TPM throughout the world, JIPM would ask the winners to make their TPM activity public by presentation or publishing.

2. Application Outline & Principles

2.4 Other Points

1. Confidentiality Agreement

A confidentiality contract (Non-Disclosure Agreement) will be entered into between the applicant plant/factory and JIPM concerning the intellectual properties of the applicant provided through the assessment processes.

2. Handling of Activity Reports and Requirement for their Return

The applicant will send activity reports, CD-ROM/USB, minutes, Kaizen improvement plans, and other presentation materials to JIPM. JIPM will use the activity reports, CD-ROM/USB, minutes, Kaizen improvement plans, and other presentation materials sent by the applicant only for the purpose of assessment. JIPM will compulsorily store all of the activity reports and CD-ROM/USB of the awarded applicants as confidential data that will not be disclosed publicly.

3. Assessors and Assistant Assessors

Since 2007 JIPM has commenced a programme to develop new Assessors on an international (non-Japanese) basis. During 2009 the first non-Japanese TPM Award Assessors were appointed. Others are progressing towards becoming Assessors and are categorized as Assistant Assessors. The Assistant Assessor will make comments to the Assessors but will not be involved in the scoring process during the Assessment Day.

4. The Assessment Days

Great care must be taken to ensure the Assessment Day runs efficiently.

5. Awards Ceremony

Winners will be presented with a plaque at the "TPM Awards Ceremony" to be held some time during <u>March of 2023</u>. (The exact details to be announced in the future)

6. Complaints

During the assessment process, neither JIPM nor the Assessors will make any personal requests to the applicants that are unrelated to the assessment. If an Assessor personally requests an applicant to take them sightseeing, to play golf, to dine at a fancy restaurant, or to any other places at the applicant's expense, the applicant should immediately report it to JIPM.

2. Application Outline & Principles 2.5 Withdrawal Form (Sample)

[Date]

2022 Award for TPM Excellence Withdrawal Form

| To TPM Awards Committee | |
|----------------------------------------------------------------------------------------|--------|
| Name of company/plant/factory | |
| Address | |
| Name and office of the representative | |
| We wish to withdraw from assessment for Award for TPM Excellence for the reason below: | stated |
| <reason></reason> | |
| | |
| | |
| | |
| | |
| | _ |
| | _ |
| We wish to re-apply for the TPM Excellence Award in (year) | _ |
| *It's hetter that concrete reason is mentioned | |

3. Document Submission Schedule Schedule of Submission

Every document should reach JIPM by each deadline

| Co | ntent | Delivery | Deadline |
|----|--------------------------------------------------------------------|------------|-------------------|
| • | Application Form (download from website) | By Email | |
| • | Original Application with authentic signature (not a photocopy) | By Courier | 24 December 202 |
| • | Company Profile TPM Award Assessment Achievement Sheet | By Email | - 24 December 202 |
| • | 2 copies of Non-Disclosure Agreement(NDA) with authentic signature | By Courier | Arbitrary |

| | Content | Delivery | Deadline |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------------------------|
| BEFORE | TPM Activity Report (Book) TPM Activity Report (PDF) *Sending USB/CD is possible. | By Courier By Email or Online | 40 Days prior to Stage Assessn date |
| Assessment | Assessment Agenda Presentation materials for 'Room Presentation' Presentation materials for 'Onsite Presentation' Videos showing TPM activity | storage | 30 Days prior to Stage Assessme date |
| AFTER | The Minutes of the 1st Stage Assessment | By Email or Online | 30 Days after the Stage Assessme |

2nd Stage Assessment: September – December 2022 * JIPM will inform you when the 2nd Stage Assessment process is decided.

<On-site Assessment>

| | Content | Delivery | Deadline |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------|
| BEFORE Assessment | TPM Activity Report (Book) TPM Activity Report (PDF) *Sending USB/CD is possible. Kaizen/Improvement Report | By Courier By Email or Online storage | 40 Days prior to 2 nd Stage Assessment date |
| | Assessment Agenda | | 30 Days prior to 2 nd Stage Assessment date |
| AFTER Assessment | The Minutes of the 2 nd Stage Assessment | By Email | 30 Days after the 2 nd Stage Assessment Date |

3. Document Submission Schedule **Schedule of Submission**

2nd Stage Assessment: September – December 2022
 * JIPM will inform you when the 2nd Stage Assessment process is decided.

<On-line Assessment>

| • | Content | Delivery | Deadline |
|------------|------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------|
| | TPM Activity Report (Book) TPM Activity Report (PDF) *Sending USB/CD is | By Courier | 40 Days prior to 2 nd Stage Assessment |
| BEFORE | possible. | By Email or Online | date |
| Assessment | Kaizen/Improvement Report | storage | |
| | Assessment Agenda | 1 | 30 Days prior to 2 nd |
| | Presentation materials for 'Room Presentation' | | Stage Assessment |
| | Presentation materials for 'Onsite Presentation' | | date |
| | Videos showing TPM activity | | |
| | The Minutes of the 2 nd Stage Assessment | | 30 Days after the 2 ⁿ |
| AFTER | | By Email | Stage Assessment |
| Assessment | | | Data |

2nd Stage Assessment: September – December 2022

<Document Assessment>

| | Content | Delivery | Deadline |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------------------------|
| BEFORE | TPM Activity Report (Book) TPM Activity Report (PDF) *Sending USB/CD is possible. | By Courier By Email or Online | 11 th Nov, 2022 |
| Assessment | Kaizen/Improvement Report Presentation materials for 'Room Presentation' Presentation materials for 'Onsite Presentation' Videos showing TPM activity | storage | |

[Delivery address]

Japan Institute of Plant Maintenance **TPM Award Office**

Jimbocho SF III 5F, 3-3 Kanda-Jimbocho, Chiyoda-ku, Tokyo, 101-0051, Japan

Telephone: +81 3-6865-6081 E-mail: TPMAWARDS@jipm.or.jp

^{*} JIPM will inform you when the 2nd Stage Assessment process is decided.

Company Profile

Required Profile of Applicant

This should be sent via email at the time of submission of the Application Form.

1. Company Profile

Your Company Profile should be prepared as a Microsoft Word document using Helvetica for the headline of each article and Times New Roman font, size 12pt, for the body of the text. We request that printed data or a PDF file also be submitted at the same time in order to prevent printing errors. Both black-and-white photos and color photos are acceptable.

| | | Item | Words |
|----|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1. | Com 1.1 | Company, Plant/Factory Profile 1.1 This should include company ownership, national or international spread of other divisions within the group but the main emphasis should be on the profile of plant applying for the TPM award. | |
| | 1.2 | Items to include would be product range, process technology, management organization and staffing structure. | |
| 2. | Mile | stone on the Journey of Manufacturing Excellence | 400 – 440 words |
| | 2.1 | Please explain the reasons for adopting TPM as a company policy and the major items that have been introduced since commencing the journey. | |
| 3. | Ben | efits Achieved Explain the benefits that have occurred from: | 140 – 200 words |
| | 3.1 | Tangible business results that have improved and | |
| | 3.2 | Employee involvement, motivation and other intangible improvements that have occurred. | |
| 4. | Key of our Manufacturing Excellence | | 200 – 300 words |
| | 4.1 | With the experience gained so far on the TPM journey what are the key items in our manufacturing excellence programme the in the future. | |
| 5. | Achi | evement Record | |
| | 5.1 | Objective measures should be listed for the following general headings: - Productivity - Quality - Cost - Delivery - Safety | |
| | | - Moral See next page for suggested items for inclusion | |
| | 5.2 | Serious Accident Index | |

TPM Award Assessment Achievement Sheet

-SAMPLE-Use separate form

| Category | | Index tion Formula) | Unit | Kick off/ TPM Started (or last time awarded) | Actual Status 2021 | Target 2022 |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------------|------------------------------------------------------------|------------------------------------|-------------|
| S | Number of work-related accidents requiring days off work | | Cases/ year | | | |
| S | Number of wo | rk-related accidents lays off work | Cases/ year | | | |
| Р | Productivity fo | r main products | Parts/Operator hours | | | |
| Р | OEE (or Overall Pla | nt Efficiency) | % | | | |
| | Availability | | % | | | |
| | Performance F | Rate | % | | | |
| | Quality Produc | cts Rate | % | | | |
| Р | Number of breakdowns | | Breakdowns/ year | | | |
| Р | MTBF | | Hour | | | |
| Р | MTTR | | Hour | | | |
| Q | Number of cus | tomer complaints | Number/year | | | |
| Q | In-line defect rate | Scrap Scrap and rework | % | | | |
| С | Cost index | Sciap and rework | Cost/Unit Cost/Kilogram | | | |
| D | Production Lea | ad time | Days | | | |
| D | Delivery performance | | % | | | |
| S | Safety index (ex Lost Time Incident Rate) | | (Accidents per 1,000,000 operator hours) | | | |
| М | Number of Employee Suggestions | | Number/year | | | |
| Other | Specify achievements not expressible in numeric Do you have a program where all employees Do you have a program allowing employees t Are top management involved in the audit/ver Are all pillar activity boards displayed and rev | | | articipate in TPM ecognized their a on of completion | achievements? of TPM pillar ste | ps? |

Note: Have the indices covered all important items related to PQCDSM measures being undertaken in the entirety of the subject to be assessed. Note all indices in the TPM Activity Report. Where your specific indices vary from those above attach relevant data.

Non-Disclosure Agreement

-SAMPLE (page 1 of 2)-Use separate form

THIS AGREEMENT is made on [Insert Date of filling out this form] BETWEEN:

- (1) **Japan Institute of Plant Maintenance** whose registered office is at Jimbocho SF III 5F, 3-3 Kanda-Jimbocho, Chiyoda-ku, Tokyo, 101-0051, Japan (hereinafter referred to as the "**JIPM**"); and
- (2) [Insert Company Name] whose registered office is at [Insert Company Address] (hereinafter referred to as the "ASSESSEE".)

BACKGROUND

This Agreement is made with respect to the confidentiality of the information provided by either party to the other party in connection with the assessment affairs (hereinafter referred to as the "Assessment") for the TPM Award conducted by the Company for the Assessee.

Article 1 Definition

- 1. The term "Confidential Information" herein used means any technological or business information disclosed by either part to the other party, whether orally, in writing, in electronic or optical form or in other type of media, in connection with the Assessment, except the information that:
 - (1) was already publicly known when disclosed;
 - (2) was already obtained and possessed by the receiving party in a lawful manner when disclosed;
 - (3) becomes publicly known after being disclosed without fault of the receiving party;
 - (4) is obtained by the receiving party in a lawful manner after disclosure from a duly authorized third party without confidential obligation;
 - (5) is required by law to be disclosed; or
 - (6) is required by a duly authorized third party, including without limitation a competent authority, to be disclosed.
- 2. The Confidential Information either party intends to disclose to the other party must be marked as confidential. The Confidential Information which may be disclosed orally must be specified in writing and marked as confidential within 30 days from such disclosure.
- 3. No information that may be disclosed in a manner not governed by the preceding clause shall be considered as confidential Information.

Article 2 Confidentiality

- Neither party shall use the Confidential Information for any purpose other than the Assessment or disclose or divulge it to a third party unless the disclosing party first gives its advance written consent.
- The two parties shall strictly control the Confidential Information disclosed by the other party, or that they gained knowledge of from the other party, in connection with the Assessment, and neither party shall use the Confidential Information for any purpose other than the Assessment or disclose or divulge it to a third party.
- 3. If reasonably needed, either party may disclose the Confidential Information only to its officers or employees who need to know it or a third party to whom JIPM subcontracts the Assessment. In this case, the same obligation as imposed on JIPM hereunder shall be imposed on the officers and employees or subcontracting third party to whom the Confidential Information has been disclosed.

Article 3 Return

All documents submitted to JIPM will be destroyed except one TPM Activity Report in Digital Media for JIPM's archives. If you would like your TPM Activity Report returned, you must contact JIPM immediately after the assessment. The Report will be returned by receiver-pay international courier.

Article 4 Terms of Contract

- 1. This Agreement shall be valid from the date of this Agreement for five (5) years and may be renewed in accordance with the discussion of both parties.
- 2. Notwithstanding the preceding clause, this Agreement may be terminated if either party proposes the termination of this Agreement to the other party in writing and the other party accepts the same in writing.
- 3. Provisions of clause 2 of Article 2 and Article 5 shall survive the termination of this Agreement by expiry, cancellation or any other reason as long as a relevant event exists.

Non-Disclosure Agreement

-SAMPLE (page 2 of 2)-Use separate form

Article 5 Compensation for Damages

Either party may make a claim against the other party to compensate for damage incurred by it arising out of the other party's violation of this Agreement without reasonable cause or may seek an injunction to suspend such violation.

Article 6 Settlement of Doubt

Anything now specified in this Agreement or any doubt arising out of this Agreement shall be settled by both parties with a good-faith negotiation. This Agreement shall be governed by and construed in accordance with the provisions of Japanese Law and any dispute which cannot be settled with negotiation shall be subject to the exclusive jurisdiction of the Japanese courts to which the parties to the Agreement hereby submit.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in duplicate as a deed and each party shall retain one original.

| Date: |
|------------------------------------------------------------------------------------------------------------|
| Signed as a deed and delivered by |
| Senior Managing Director, Satoshi Suzuoki For and on behalf of Japan Institute of Plant Maintenance |
| Signed as a deed and delivered by |
| [Insert Position] [Insert Name of Representative] For and on behalf of [Insert company name] |

Other Associated Costs

1st Stage Assessment Fees (On-line Assessment)

All Fees are in JPY (Japanese yen)

| | Assessment Fee per day | Additional Fee (Online Fee) |
|---------------------------------------------------|------------------------|--------------------------------|
| Award for TPM Excellence - Category B | JPY 1 050 000. | |
| Award for TPM Excellence - Category A | JPY 1 050 000. | |
| Award for Excellence in Consistent TPM Commitment | JPY 1 100 000. | JPY 450 000. |
| Special Award for TPM Achievement | JPY 1 150 000. | |
| Advanced Special Award for TPM Achievement | JPY 1 250 000. | |
| Award for World Class TPM Achievement | JPY 1 350 000. | |

[Note]

*Assessment Fee is for a single day Assessment. (Make sure to check the number of days required to carry out the assessment for each assessment category. -See <u>Section 2.3.1</u>. Multiple day Assessments - See <u>Section 4.3.</u>)

- *For 1st Stage assessment Additional fee includes the following costs.
- Domestic traveling fee
- Accommodation fee
- System usage fee
- Conference room fee

2nd Stage Assessment Fees (<u>for On-site Assessment</u>)

| | Assessment Fee per day | Additional Fee (Travel Cost) |
|---------------------------------------------------|------------------------|---------------------------------|
| Award for TPM Excellence - Category B | JPY 1 050 000. | |
| Award for TPM Excellence - Category A | JPY 1 050 000. | |
| Award for Excellence in Consistent TPM Commitment | JPY 1 100 000. | Actual cost |
| Special Award for TPM Achievement | JPY 1 150 000. | |
| Advanced Special Award for TPM Achievement | JPY 1 250 000. | |
| Award for World Class TPM Achievement | JPY 1 350 000. | |

[Note]

^{*}Assessment Fee is for a single day Assessment. (Make sure to check the number of days required to carry out the assessment for each assessment category. -See <u>Section 2.3.1(6) and (7)</u>. Multiple day Assessments - See <u>Section 4.5.</u>

^{*} Travel Cost is required for the 2nd Stage Assessment. JIPM will arrange the travel.

Other Associated Costs

2nd Stage Assessment Fees (<u>for On-line Assessment</u>)

*Target: World Class and Advanced Special

| | Fee per day | Additional Fee (Online Fee) |
|---------------------------------------------------|----------------|--------------------------------|
| Award for TPM Excellence - Category B | JPY 1 050 000. | |
| Award for TPM Excellence - Category A | JPY 1 050 000. | |
| Award for Excellence in Consistent TPM Commitment | JPY 1 100 000. | JPY 450 000. |
| Special Award for TPM Achievement | JPY 1 150 000. | |
| Advanced Special Award for TPM Achievement | JPY 1 250 000. | |
| Award for World Class TPM Achievement | JPY 1 350 000. | |

[Note]

*Assessment Fee is for a single day Assessment. (Make sure to check the number of days required to carry out the assessment for each assessment category. -See <u>Section 2.3.1</u>.

Multiple day Assessments - See Section 4.3.

- *For 2nd Stage assessment (Online Assessment) fee includes the following costs.
- Domestic traveling fee
- Accommodation fee
- System usage fee
- Conference room fee

2nd Stage Assessment Fees (for Document Assessment)

*Target: Special Award, Consistent, Category A and Category B

| | Assessment Fee | Additional Fee |
|---------------------------------------------------|----------------|----------------|
| Award for TPM Excellence - Category B | JPY 1 050 000. | |
| Award for TPM Excellence - Category A | JPY 1 050 000. | Nothing |
| Award for Excellence in Consistent TPM Commitment | JPY 1 100 000. | |
| Special Award for TPM Achievement | JPY 1 150 000. | |

[Note]

There is no additional cost for Document Assessment.

^{*}Depending on the points raised in the 1st Stage Assessment, Category B, Category A, Consistent, Special Award will also be assessed online in the 2nd Stage Assessment.

Other Associated Costs

1. Invoices, Payment of Fees and Receipts

- 1.1 On receipt of the complete application form, an invoice will be issued to cover the First Stage Assessment Fee, First Stage Additional Fee (Online Fee) and Second Stage Assessments fee. The fee of the 2nd Stage Assessment is tentatively set at the fee of the "On-site Assessment".
- 1.2 (Case of On-site Assessment in 2nd Stage)

When travel arrangements have been made for the Second Stage Assessment a second invoice will be issued to cover this item.

1.3 (Case of Online Assessment in 2nd Stage)

A Second Invoice will be issued for the difference between the Online Assessment and On-site Assessment fees.

1.4 (Case of Document Assessment in 2nd Stage)

A second invoice will not be issued. (There is no additional fees.)

- When the fee is paid from overseas by bank transfer, please make sure that the total amount of the fee is paid as per invoice.
 All transfer fees and bank comissions are to be paid by the applicant. In case of a shortage in the payment, additional payment for the lacking amount with the payment additional payment for the lacking amount with the payment.
 - case of a shortage in the payment, additional payment for the lacking amount will be required.
- 1.6 All invoices are payable within 60 days of invoice date. Where purchase order numbers or contracts are required to remit payments, this must be indicated on the application form.
- 1.7 When you make wire transfer, please fill in correct bank information of JIPM which mentioend in invoice, for example, bank account number, receiver name: Japan Institute of Plant Maintenance.
- 1.8 If your company has outstanding bills for JIPM, the application might be cancelled.
- 1.9 JIPM does not have chack, so cannot provide scanned voided check or deposit slip as certificate document of bank account. Please confirm on this issue with your financial term in advance.

2. Travel Expense

JIPM will make reservation for air tickets (In principle, air tickets are business-class with regular fare tickets), local transportation in Japan (From assessor's home to airport and back), travel insurance and business VISA if applicable .

These travel expense will be charged to the applicant.

Only under special circumstances will JIPM consider requesting the applicant to reserve and pay for air tickets.

3. Accommodation Expense

Accommodation and subsistence expenses that are necessary to carry out an assessment will be paid by the applicant.

If additional expenses are incurred that are necessary to the assessment process these will be charged to the applicant.

Other Associated Costs

4. Tax

The fee does not include taxes, such as transaction tax and value added tax.

When you electronically transfer the fee, please make sure that the total amount of the fee is paid. In case of underpayment the application may not be accepted.

Any tax and bank commission should be paid by applicants.

If TPM Award Office does not received the full amount of invoice, the application will be canceled.

Note that invoices for travel and subsistence are also not considered to attract with-holding tax as there is no provision of services.

5. Additional Fee

An assessment is defined as 0900 – 1700 hrs or as 8 hours including 1-hour lunch and necessary breaks. The assessment schedule should be formatted to fit this time frame.

If the Assessment requires all or part of a second day to complete, the fee charged will be 2 x the fee shown in the table at the beginning of $\underline{Section \ 4}$. Similarly, if a third day is required the fee charged will be 3 x the fee shown in the table at the beginning of $\underline{Section} \ 4$.

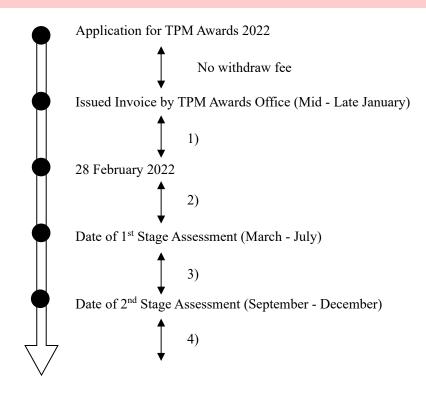
6. Withdrawal Fee

In the event of withdrawal, a withdrawal fee in line with the table outlined below will be applied with the balance of the payments made by the applicant to be refunded.

Should an applicant company wish to withdraw after submitting an application, they are required to complete and submit the Withdrawal Form – See <u>page 13</u>.

| Timing of Notification of Withdrawal | Fee Payable to JIPM |
|----------------------------------------|-------------------------------------|
| 1) | |
| From Issued Invoice | -300 000 Yen as Admin Fee |
| To 28th February 2022 | |
| 2) | -50% of 1st Stage Assessment fees |
| From 28th February 2022 | |
| To Date of 1st stage Assessment | |
| 3) | -100% of 1st Stage Assessment fees |
| From Date of 1st stage Assessment | -50 % of 2nd Stage Assessment fees |
| To Date of 2nd stage assessment | |
| 4) | -100% of 1st Stage Assessment fees |
| After 2 nd Stage Assessment | -100 % of 2nd Stage Assessment fees |

Other Associated Costs



7. Follow-up/Pre-assessment Fee

| 7.1 Follow-up/Pre-assessment Fee | All Fees are in JPY (Japanese yen) |
|----------------------------------|---------------------------------------|
| Fee (for 1 day) | JPY 500 000. |

^{*}Not including travel cost.

The following section will assist with the necessary preparations for an Assessment.

Items contained in this section are:

Section Contents

- 1 The Activity Report
 - 1.1 Guide to Creating the activity Report
 - 1.2 TPM Activity Report Contents
 - Award for TPM Excellence Category B & A and Award for Excellence in Consistent TPM Commitmen
 - Special Award for TPM Achievement
 - Advanced Special Award to TPM Achievement
 - Award for World-class TPM Achievement
 - General Points
 - 1.3 Example of Content
 - Outline of Your Company and Plant
 - TPM Policies and Objectives
- 2 Example of Meeting Minutes
- 3 Example of Kaizen / Improvement Report

1. The Activity Report *Please refer to 'Preparation of TPM Activity Report'.

One of the main objectives of the TPM activity report is to provide a record of the TPM activities conducted to date and to allow Assessors to study carefully prior to commencing the assessment. The report should not contain audio or video material as this may hinder the screening process.

1.1 Guide to TPM Activity Report

Style

Paper Format

- A4 (210 mm (297 mm) or similar size with left-bound format
- Printing copy number on the cover page is required.
- Duplex printing (printing on both sides of paper)
- Use 12 point font or larger
- Provide the Report in easy to read style
 Must bookbinding (Just papers with clip cannot be accepted)
- Avoid using plastic ring binder (the ring might be broken when the reports are delivered by courier)
- Provide 4 Copies (5 Copies for Advanced Special, World-class)

CD/USB Format

- Must be in PDF file format with using 12 point font or larger and with indexes for each chapter. For the security purpose, some sort of protection should be on the data or the file itself.
- Provide 2 CDs or USBs

Language

- Must be in **English or Japanese**.
- If you prepare Activity report in Japanese, <u>please mention your English company name also</u> on cover page.

Report Length

- Report to be a **maximum of 300 pages**

Report for Second Stage Assessment

<u>Update information from the First Stage assessment should be recognised easily by the assessor</u> such as highlighting the section with the updated information. Sections with new improvement case studies also should be highlighted to be found easily.

Activity Reports Submission Deadline

| Item | Submission Deadline |
|---------------------------------------------------------------------------|---------------------------------------------------------------------|
| TPM Activity Reports for 1st stage | 40 Days prior to Assessment |
| 4 Copies and 2 CDs or USBs | Date |
| TPM Activity Reports for 2 nd stage 4 Copies and 2 CDs or USBs | -Onsite or Online assessment 40 Days prior to Assessment Date |
| | -Document assessment Late Nov 2022 |

NOTES:

1. In cases, please prepare the spares of Activity Report in your plant.

A further copy of the company's TPM Activity Report should be made available for the Assessors when they check into the hotel the day before the assessment. This will ensure that the latest information is available to the Assessors prior to the assessment day.

- 2. Should the company require the Activity Reports to be returned, shipment charges will be paid by the applicant.
- 3. While the activity reports may contain PowerPoint slides, slides alone are insufficient information. Support evidence on TPM implementation should be provided.

1.2 TPM Activity Report Contents

EXAMPLE CONTENTS FOR:

- Award for TPM Excellence Category B
- Award for TPM Excellence Category A
- Award for Excellence in Consistent TPM Commitment

Index

Chapter 1 "Outline of Your Company and Plant" (Refer to page 33 – Example of Content for Structure Guidelines)

- 1-1 Company
 - 1-1.1 Brief history; History of Capitalization and Sales. (Here and in the rest of your report, you may refer to necessary details by using item numbers that are consistent throughout the report, e.g., '1.' or '1)' or '(1)', etc.)
 - 1-1.2 Areas of business your company/plant is engaged in
 - 1-1.3 Organizations
- 1-2 Plant
 - 1-2.1 Brief history
 - 1-2.2 Organizations
 - 1-2.3 Plant Layout
 - 1-2.4 Size of Business
 - Annual production volume
 - Major equipment

Specify the equipment you have, and its volume, etc; volume subject

to TPM, and average length of use of such equipment.

The Staffs

How they are organized, what their work schedule is, and what their working hours is, etc.

- 1-3 Production Systems From order receiving down through shipping; also production lead time
- 1-4 Main Products and Production Processes
- 1-5 Position of Your Company within Industry; Your Share of Market
- 1-6 Date of TPM Inauguration in Your Plant (What year and month, etc.)

Chapter 2 "TPM Policies and Objectives" (Refer to page 32 for Example)

- 2-1 Company's/Plant's Overall Policies and TPM; how they are inter-related
- 2-2 TPM Policies, Objectives, Implementation

Chapter 3 "TPM Organizations and Activities"

- 3-1 History of Equipment Management Organization Evolution
- 3-2 Status of Plant Organization and Staffing by Section
- 3-3 TPM Promotion Organization and Activities

Chapter 4 "Individual Improvement Activities (Kaizen)"

- 4-1 Outline
 - Aims, Goals, Concepts and Key Points of Practice
- 4-2 Structure of Losses and Analysis
- 4-3 Kaizen Topics; how is being practiced
 - Major/minor topics; number of ideas, present status, and techniques used
- 4-4 PM Analysis
- 4-5 Individual Kaizen Examples and Effects
- 4-6 Results and Future Plans

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Chapter 5 "Autonomous Maintenance Activities"

- 5-1 Outline Aims, Goals and Concepts
- 5-2 Key Points of Activity
- 5-3 Step-by-Step Implementation and Diagnosis Systems
- 5-4 Activity Status; Status of each step, activity boards, one point lessens, etc.
- 5-5 Autonomous Maintenance Examples and Effects
- 5-6 Results and Future Plans

Chapter 6 "Planned Maintenance Activities"

- 6-1 Outline Features of equipment; issues of equipment maintenance
- 6-2 Maintenance Department Organization and Staffing
- 6-3 Role Sharing between Operating Departments and Maintenance Group
- 6-4 Support for Autonomous Maintenance
- 6-5 Establishing Planned Maintenance System
- 6-6 Maintenance Information Control, Breakdown Analysis, MTBF, MTTR, etc.
- 6-7 Status of Corrective Maintenance
- 6-8 Technical Developments for Automatic Maintenance
- 6-9 Equipment Diagnosis Techniques, Status of Predictive Maintenance
- 6-10 Lubrication Control
- 6-11 Stock Control
- 6-12 Control of Dies, Jigs, Measuring Instruments, Drawings and etc
- 6-13 Maintenance Budgets and Control
 - 6-13.1 How maintenance costs are determined
 - In relation to sales, staffing and maintenance cost
 - 6-13.2 How budget is classified By department, goal, etc.
 - 6-13.3 Budget item breakdown
 - Material repair costs paid outside, internal labor cost, etc.
 - 6-13.4 Criteria by which total budget is fixed
 - Actual performance in previous accounting periods, production volume, repair plans by nature of repair, etc.
 - 6-13.5 Authority for appropriation By position level
- 6-14 Planned Maintenance Examples and Effects
- 6-15 Results and Future Plans

Chapter 7 "Quality Maintenance Activities"

- 7-1 Outline Aims and Objectives
- 7-2 Progress and Inspection Methods
- 7-3 Examples and Effects
- 7-4 Results and Future Plans

Chapter 8 "Development Management Activities"

- 8-1 Product Development Management
 - 8-1.1 Outline Concepts, Aims, and Schedule
 - 8-1.2 Designing easy-to-make products in the development stage
 - 8-1.3 Product Development Management System
 - 8-1.4 MP Information, its collection and use
 - 8-1.5 Designing Recyclable Products and Manufacturing Systems
 - 8-1.6 Results achieved and Future Plans
- 8-2 Equipment Development Management
 - 8-2.1 Outline Concepts, Aims, and Schedule
 - 8-2.2 Integrating Product Development Management and Equipment Development Management
 - 8-2.3 Equipment Development Management Systems
 - Status Analysis, Capital Investment Plans, Economic Comparisons,

Development and control of equipment budgets

- 8-2.4 MP Information; its collection, storage and use
- 8-2.5 Results and Future plans
- 8-3 Individually developed Management Examples and Effects

Chapter 9 Training and Education

- 9-1 Basic Concepts and Priority Measures
- 9-2 Determining Training Budgets
- 9-3 Outline of training and education and methods to improve skills
- 9-4 Evaluation of maintenance work knowledge and skills
- 9-5 Qualified specialists
- 9-6 Examples of training/education materials and effects
- 9-7 Results achieved and future plans

Chapter 10 Administration and Other Indirect Departments

- 10-1 Outline
- 10-2 Autonomous maintenance activities in administrative and other indirect departments
- 10-3 Individual improvement (Kaizen) activities in administrative and other indirect departments
- 10-4 Support for Production Departments
- 10-5 Examples of improvement in administrative and other indirect department and the effects
- 10-6 Results and Future Plans

Chapter 11 "Safety, Sanitation and Environment Control"

- 11-1 Outline
- 11-2 Objectives
- 11-3 Organizations and Systems for promotion
- 11-4 Environmental Protection at work places
- 11-5 Activity Status
- 11-6 Examples of improvement in Safety, Sanitation and Environmental Management and Effects
- 11-7 Results and Future Plans

2022: SECTION 5 Page 6

Chapter 12 "TPM Effect and Evaluation"

12-3

- 12-1 Tangible Effects (List specific equipment and/or the number of machines) 12-1.1 TPM Effect from overall management viewpoints 12-1.2 TPM Effect on Production (P) 12-1.3 TPM Effect as seen from quality (Q) viewpoints 12-1.4 TPM Effect on Cost (C) 12-1.5 TPM Effect on Delivery (D) 12-1.6 TPM Effect on Safety (S) 12-1.7 TPM Effect from Morale/Training (M) viewpoints
 - 12-2 Intangible Effect
- 12-4 Visions of 21st century and their implications for TPM

Issues of present practice and counter-measures

EXAMPLE CONTENTS FOR:

Special Award for TPM Achievement

Index

Chapter 1 "Outline of Your Company and Plant"

Chapter 2 "TPM Policies/Objectives and TPM Organization/Management"

Chapter 3 "Innovative/Breakthrough TPM Activity"

Chapter 4 – 12 Contents can be the same as for "Award for TPM Excellence Category A"

"Award for TPM Excellence Category B

EXAMPLE CONTENTS FOR:

o Advanced Special Award for TPM Achievement

Award for World-class TPM Achievement

Index

Chapter 1 "Outline of Your Company and Plant"

Chapter 2 "TPM Policies/Objectives and TPM Organization/Management"

Chapter 3 "Creative TPM Activity"

Chapter 4 – 12 Contents can be the same as for "Award for TPM Excellence Category A"

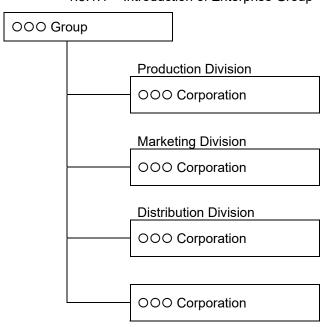
"Award for TPM Excellence Category B

GENERAL POINTS FOR ALL CATEGORIES OF ACTIVITY REPORT:

- 1. Terminology Definitions should be attached to the reports especially when applicant uses their own terminology which assessors might not understand.
- 2. If there is updated Information and new improvement cases in the activity report for Second Stage assessment, these should be highlighted for easy recognition.

1.3 Example of Content

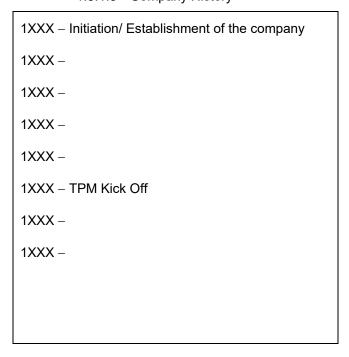
- 1.3.1 Chapter 1, "Outline of Your Company and Plant"
- 1.3.1.1 Introduction of Enterprise Group



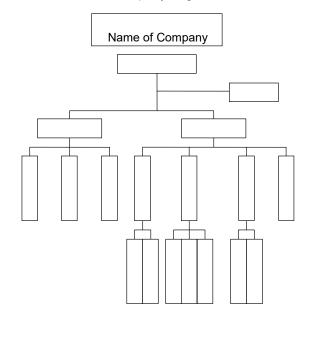
1.3.1.2 Profile of the Company



1.3.1.3 Company History



1.3.1.4 Company Organization



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Page 9

1.3.2 Chapter 2, "TPM Policies and Objectives"

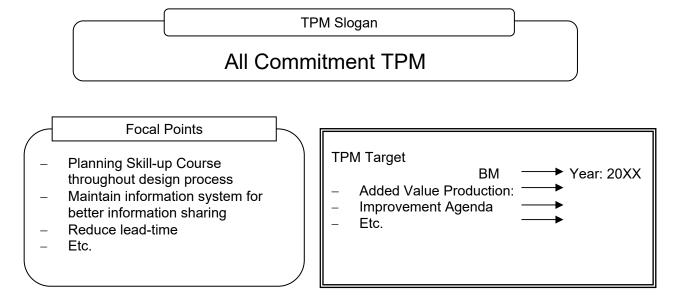
1.3.2.1 Background of TPM Implementation

(Reason for TPM Implementation)

Example: For becoming valuable and survivable company in the 21st century and becoming more competitive in the global market, we need effective business tool as TPM.

External Needs - Diversified customer needs - Intensification of global competition - Correspondence to environmental movement - Lack of management ability 20XX, XXX (Date) TPM Kick Off

1.3.2.2 Emphasized Target/Slogan and Category



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2. Example of Meeting Minutes

-Please submit in PDF file.

-Font size should be big enough to read when printing it out

Example (Cover Page)

| First Stage/Second Stage Assessment Meeting Minutes | | |
|-----------------------------------------------------|--|--|
| (Name of Your Company and Plant) | | |
| (Name of Award Category) | | |
| (Date of Assessment) | | |
| Attendees: (Names of Attendee) | | |
| | | |

Example Contents (pages after the cover)

| Example Contents (pages after the cover) | | | | | |
|------------------------------------------|------------------------|---------------------|----------|----------|-----------------------|
| Assessment Category | | Name of Assessor | Question | Response | Name of Respondent |
| Presentation | Autonomous Maintenance | | | | |
| Prese | Individual Improvement | | | | |
| ion | (cases) | | | | |
| On-Site Presentation | (cases) | | | | |
| Pre | (cases) | | | | |
| | , | , | 1 | | |
| Comment | (name of assessor) | | | | |
| Сош | (name of assessor) | | | | |

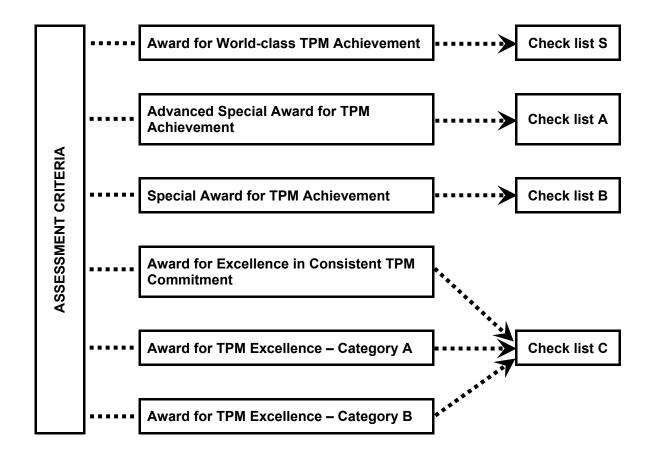
3. Example: Kaizen / Improvement Report

| -Please | submit | in F | PDF | file. |
|---------|--------|------|-----|-------|
|---------|--------|------|-----|-------|

| Comp Name | any : | | | | | | |
|--------------|--------------------------------------------|-------------------------|----------|----------------------------------------------------------------------------------------------------|------|--------------|--------|
| Plant: | | | | | | | |
| TPM 1 | TPM 1 st Stage Assessment Date: | | | | | | |
| TPM 2 | TPM 2 nd Stage Assessment Date: | | | | | | |
| | | KAI | ZEN IMPF | ROVEMENT PLAN | | | |
| REF | KAIZEN ITI | EM | | ACTIVITY PLAN | RESP | COMP DATE | STATUS |
| 1 | Reach Step | o 4 in all 'A' Class ma | achines | New Plan agreed with all team members and machine-by- machine master schedule prepared | KP | Oct 2018 | ОК |
| 2 | | | | | | | |
| 3 | | | | | | | |
| | Continue as | s required | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | Report prepared by: Name: | | | |
| | | | | Signed: | | | |

⁻Font size should be big enough to read when printing it out

6. Reference Documents



6. Reference Documents Assessment Criteria For all Categories of TPM Award

| Ass | sessment Criteria | Explanations | | |
|----------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| | ic conditions as business nager | The basic conditions are to fulfil the social responsibility to be exercised by an enterprise, and achieve labour and equipment safety. | | |
| | Formulation of policy and target | A target contributing to management is established in line with the concepts that TPM policy is consistent with the basic corporate policy, TPM is clearly positioned in the strategy as an enterprise or working site, and "TPM is a job." | | |
| | Formulation of master plan | The master plan showing the basic promotion plan of TPM in chronological order is created in order to fulfil the initial purpose, and is used as a criterion for all activities and as a fundamental when making a plan to promote each pillar at the working site. | | |
| | Establishment of promotion system by top management | The chief executive for TPM promotion is the business manager who exercises leadership based on his/her own intentions. The organization for TPM promotion based on the premise above is established and functions. | | |
| | Manager and technical staff-led type formation of overlapping small groups | A manager and technical staff-led type of working organization consisting of overlapping small groups is formed in establishing the promotion system. The role and responsibility of each level of overlapping small-group organizations are clarified. | | |
| | Creation of opportunity for all members to participate | All members participate in TPM activities across all departments and levels, in order to clarify the presence and accomplishment of each member through participation by each member in the activities based on the idea that "TPM is a job." | | |
| entation | Introduction of step-by-step implementation system | The steady progress management of activities is carried out through step-by-step implementation which clearly shows what to do at the present stage, what to do at the next stage and the final picture, in order to definitely implement what to do and clarify the guidance points in the process of activities. | | |
| . impleme | Implementation of step-by- step examination | Appropriate consultation is carried out in the system where a group in a position of leadership evaluates the appropriateness of going on to the next step when implementing activities through step-by-step implementation, and where top management at the working site also evaluates it. | | |
| sites fo | Ensuring of top management diagnosis function | The business manager confirms at a certain time the status of accomplishment as stated in the TPM policy and implemented as planned by the manager to produce results, and also confirms the need to change the future policy, plan, system, etc. | | |
| Prerequisites for implementation | Establishment of pillars of TPM implementation | Basic pillars toward activities are established from the viewpoints of a double-wheel system concerning equipment management by a field operator and specialized maintenance so as to avoid problems in production equipment, prevent the occurrence of problems by upstream control, and develop human resources. Based on the above, pillars for activities according to the needs as a working site are clarified. | | |
| | Clarification of loss | TPM aims to contribute to business by thoroughly eliminating "losses" including chronic loss. Therefore, the existence and definitions of loss and structure are clarified, and the level of contribution to business by eliminating such losses is clarified. | | |
| | Utilization of methods and techniques to solve problems/issues | In order to produce results toward solving problems including chronic loss, such approaches as applicable analyses and improvement, and their methodologies are clarified and activities logically implemented. | | |
| | Utilization of tools for circle activation | "TPM activities board," "one-point lessons" and "circle meetings" are utilized as effective tools for circle activation. | | |
| | Establishment of system for developing human resources | A system for training is established in order to secure personnel having capabilities corresponding to the work, and education and training based on that system are carried out. Special programs are systematized and implemented for workers directly engaged in equipment management, in order to secure professional engineer capabilities and develop human resources having new capabilities. | | |

6. Reference Documents Checklist C - Page 1 of 2

Award for TPM Excellence - Category B Award for TPM Excellence - Category A Award for Excellence in Consistent TPM Commitment

| С | Categories | Check Points |
|---|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | TPM Policies | TPM policies are planned in relation between company policies and plant/factory policy. |
| | and Objectives | The relation between TPM target values and management target results are clear. |
| | | The master plan is in an appropriate order as an action plan to achieve TPM. |
| | | TPM policies and objectives are checked using methods such as benchmarking that all sections of PQCDSME are displayed corresponding to 8 pillars. |
| | | TPM policies and objectives have been set forth and observed by all the departments and sections. |
| | | The achievement status of TPM policies and objectives is available in a time line using objective data. |
| | | Overlapping small groups, the TPM promotion committee, and other special committees are organized in a way that leads to TPM activities. |
| | | TPM promotion units help facilitate TPM activities within departments/sections. |
| | | Small groups on the front line have been vitalized. |
| | | The achievement status of TPM objectives is confirmed and necessary actions are taken for unachieved indexes. |
| 2 | Individual | Individual improvement issues and themes are set up in relation to TPM policies and objectives. |
| | Improvement | Objectives are set forth for each subject of individual improvement, and contributions are being made clear by performance indexes. |
| | | Terms and definitions are being made clear on production department losses and their elimination is being dealt with. |
| | | A system is set up to analyze and understand the relationship between loss and cost using the loss map and loss tree methods. |
| | | Improvement activities are being actively carried out, and contribution to the achievement index is clearly understood. |
| | | A system to prevent recurrence of problems such as defects, breakdown, and short mechanical stalling is standardized. |
| | | A system to apply cases of individual improvement horizontally is established. |
| | | There are many cases of zero occurrences of defects, breakdown, and short mechanical stalling. |
| | | Many necessary improvement measures, such as the QC method, Nazenaze analysis, and PM analysis, are used effectively and the custom of thinking with rationales and principles is being established. |
| | | The results of improvement are being announced qualitatively and in terms of PQCDSME, and future issues and goals are clearly set. |
| 3 | Autonomous | Autonomous maintenance achievement goals are set up using a step-by-step method. |
| | Maintenance | Achievement goals are appropriately assessed at each step by managers for progress and completion. |
| | | Workplace/on-site visual boards, which show the status of activities, goals, accomplishments, and issues to be resolved, are in place. |
| | | Actions are being taken to remove dirt, stains, scattered raw materials, oil leakage, etc. and to eliminate their cause. |
| | | Cleaning, lubrication, bolt tightening, and inspections are performed perfectly and without fail, and thorough measures are taken for difficult-to-handle areas. |
| | | Excellent storage procedures are in effect for tools and jigs, and cleaning is carried out routinely. |
| | | Improvement proposals are made and implemented. |
| | | A system to upgrade the skills of all employees is established with a skill evaluation chart, one-point lessons, and maintenance skill training, and is showing results. |
| | | One-point lessons are available as training texts and are being used. |
| | | Employee morale surveys and skill maps are used to confirm that all employees are working on workplace improvement with a sense of accomplishment. |
| 4 | Planned | Goals for autonomous maintenance are set up in line with TPM policies. |
| | Maintenance | Duties for autonomous maintenance and planned maintenance are clearly defined and a mutual cooperative structure is established. |
| | | Appropriate equipment diagnosis technologies are being put to use for predictive maintenance and deterioration checks, and TBM (time-based maintenance) and CBM (condition-based maintenance) are selectively used. |
| | | Maintenance standards are in order and an appropriate maintenance calendar is created. |
| | | Sudden breakdown has significantly decreased with thorough failure analysis and enhanced improvement maintenance; a system is set up for MP design information to accumulate and utilize the data. |
| | | A system is set up and is being upgraded for professional maintenance skills such as repair skills, inspection skills, lubrication control skills, and failure analysis skills, for which a sufficient technical level has been reached. |
| | | Spare parts, molds jigs, fixtures, measuring equipment, drawings, etc. are all stored as data. |
| | | Maintenance information on the status of equipment deterioration, failure, equipment shutdown, maintenance man-hours, etc. is stored and utilized. |
| | | Maintenance technology training is provided, and maintenance men are obtaining certification as equipment maintenance engineers. |
| | | Maintenance costs are being adequately budgeted and controlled, and the maintenance cost ratio is monitored. |
| 5 | Quality Maintenance | Goals for quality maintenance are set up in line with TPM policies. |
| | waintenance | Data are being accumulated for defect outflow and defect process, causes are being analyzed, and improvement goals are being set up. |
| | | A system is structured to set up requirements for equipment that will not turn out defects, and maintenance control is performed appropriately. |
| | | For quality defects, measures are taken to prevent recurrence from the aspect of 4M. |
| | | Various analytical methods such as Pareto analysis, QM matrix, and PM analysis are effectively used at the appropriate stages. |
| | | Based on fundamentals and principles, quality defects are being analyzed for cause. |
| | | Measures aiming for zero occurrences of quality defects are showing results. |
| | - | A measure is set up to effectively and thoroughly applies the brakes on defect recurrence. |
| | | A system is established to set up a quality maintenance system with figure 8 deployment. |
| | | In order to reduce the defect rate caused by equipment, necessary training and research are moving forward. |

6. Reference Documents

Checklist C - Page 2 of 2

Award for TPM Excellence - Category B Award for TPM Excellence - Category A Award for Excellence in Consistent TPM Commitment

| C | Categories | Check Points |
|----|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6 | Product and | Goals for development and control of plants and products are set up in line with TPM policies. |
| | Equipment Development | Items of development and control of plants and products and their standards are clear and the progress is monitored. |
| | and Control | In product and plant development management, a system that extracts the origin of problems in design review and debugging is fully functioning. |
| | | The structure generating loss for product development management is clear and improvement measures are put in place. |
| | | The MP design approach and the implementation of equipment, molds, jigs, and fixtures are both systemized. |
| | | An information feedback system for MP design is in place. |
| | | Economic comparison and risk analysis of plant investment plans are carried out appropriately for the cash flow base. |
| | | A design method based on assessment standards for ease of production is introduced. |
| | | Initial phase control is being exercised on new products and equipment, and there is a positive case. |
| | | There is a case in which development of new technology and processing has led to the development of new products and equipments. |
| 7 | Training and | Goals for training programs are qualitatively set up. |
| | Development | Important themes for the training programs are interlinked with the future plans of the company. |
| | | A systematic training program for each job and rank is established with employees having a full understanding of the required knowledge and skills for each job |
| | | and rank. |
| | | A training curriculum and lecturers are available based on the training system, and appropriate training is provided. |
| | | Effective training programs are set up for managers, staff members, operators, and maintenance workers. |
| | | A place for maintenance skill training is provided and utilized for professional maintenance training and operator training, making it possible to carry on the skills. |
| | | OJT training programs are fully functioning leading to the upgrading of skills for all staff members and progress in multi-skilled worker training. |
| | | Staff members are actively working to obtain certification as autonomous maintenance engineers and equipment maintenance engineers. |
| | | Employee satisfaction and the status of motivation are quantitatively analyzed and measures are in place for their enhancement. |
| | | Results from the human resources program are being fed back to TPM activity, and achievement is understood. |
| 8 | Administrative and | Goals for administrative and supervisory departments are set up in line with TPM policies. |
| | Supervisory | By supporting the efficacy of production activity and improvement of supplier activity, the product inventory and goods in process have been reduced. |
| | Departments | Losses by the administrative and supervisory departments are accurately measured. |
| | | Significant reduction in man-hours has led to a reduction in overtime and work on holidays, which has reduced fixed administrative costs. |
| | | A multi-disciplinary and multi-skill approach has moved forward, and man-hours for different departments are becoming equal. |
| | | Morale is being enhanced in the administrative and supervisory departments. |
| | | The office supply inventory is kept at a minimum and the office environment is improved. |
| | | An information system is being structured and a system is set up for quick and accurate information transmission. |
| | | Each department is dealing with reducing costs incurred from operations and overall cost reduction is improving. |
| | | A system to carry over the skills required for sustainable operation maintenance is in place. |
| 9 | Safety, Sanitation and | Safety, sanitation, and environment control policies are well defined, improvement targets are set for reduction in waste and emissions, etc. |
| | Environmental Control | Past cases of labour accidents and plant disasters have been scientifically analyzed, and action has been taken to prevent recurrence. |
| | Control | The Industrial Safety and Health Law is being complied with and the work environment (noise, vibration, dust, light, etc.) meets the legal standards. |
| | | A risk analysis hazard map of the entire plant has been created, and the safety inspection manual is in order and is being audited. |
| | | Safety awareness improvement activities take place regularly with near accident, KY and other measures. |
| | | An emergency manual is in place, protective equipment and lifesaving equipment are ready to use, and emergency drills are being executed. |
| | | Safety devices such as safety covers, safety nets, safety signage, and foolproof disaster prevention measures are appropriately prepared. |
| | | Safety assessment is enforced before introducing new equipment and/or process. |
| | | Results from improvement activities have led to energy and resource conservation. |
| | | Environmental measures such as risk management and waste management are being considered, moving forward targeting zero emissions and reduced environmental load. |
| 10 | Effects and Evaluation of | The level of achievement for the TPM goal is being assessed, and cause analysis is being carried out for its achievement or non-achievement. |
| | TPM | Objectives are being met in terms of overall equipment effectiveness, sporadic breakdowns, minor stoppages, and defective product indexes. |
| | | Prominent results have been obtained in reducing process defects and customer complaints. |
| | | The product inventory and works in process have been drastically reduced in comparison to before TPM introduction. |
| | | A record of zero accidents and zero pollution is continuing. |
| | | Product cost is reduced, and cash flow is improved. |
| | | Achievement is seen that contributes to the operation profit improvement. |
| | | TPM cost/benefit analysis is in order. |
| | | High worker morale and a stimulating working environment are in place as an intangible benefit of TPM activities. |
| | | Problems that remain unsolved in connection with TPM activities are being clearly recognized and concrete action plans are being envisioned. |

6. Reference Documents Checklist B – Page 1 of 2

Special Award for TPM Achievement

6. Reference Documents

Checklist B - Page 2 of 2

Special Award for TPM Achievement

| Categories | | Check Points |
|------------|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6 | Product and | Systems are in effect for the development and control of plants and products; results have been achieved. |
| | Equipment Development and Control | Systems are in effect for economic comparison and risk analysis of plant investment alternatives. |
| | | Systems are in effect for MP design and MP information feedback. |
| | | A number of cases are available for easy-to-make products and easy-to-use equipment. |
| | | Plants and products have been developed that achieve high-level customer satisfaction. |
| | | Management items and standards are clearly defined for product and plant development management, goals are set in line with TPM policies, and |
| | | progress is being monitored. |
| | | In product and plant development management, a system that extracts the origin of problems with design review and debugging is fully functioning. |
| | | The MP design approach and implementation in equipment, molds, jigs, and fixtures are all systemized and an information feedback system for MP design is in place. |
| | | Initial phase control is being exercised on new products and equipment, and it is producing a positive result. |
| | | A system that connects the development of new technology and processing to the development of new products and equipments is in place and specific cases are available. |
| 7 | Training and Development | The training environment, curriculum, and tools are in order for the improvement of knowledge, skills, and techniques. |
| | | Internal TPM instructors have been trained and appointed. |
| | | All company staff members eligible for certified maintenance specialist have taken the examination, with a high passing rate. |
| | | The criteria for training assessment are in good order and are proving conducive to operator vitalization. |
| | | A challenging training program is in good order providing a comfortable workplace. |
| | | Goals for training programs are qualitatively set up and important themes for the training programs are interlinked with the future plans of the company. |
| | | A systematic training program for each job and rank is established with employees having a full understanding of the required knowledge and skills for each job and rank, showing results. |
| | | A place for maintenance skill training is provided and utilized for professional maintenance training and operator training, increasing the ability to carry on skills. |
| | | OJT training programs are fully functioning and lead to the upgrading of skills for all staff members, improving multi-skilled worker training. |
| | | Results from the human resources program are being feed back to the TPM activities and system to verify that achievement is moving forward. |
| 8 | Administrative | People-friendly, pleasant offices are in place. |
| | and Supervisory | Actions are being taken to provide shorter work hours and care of senior workers. |
| | Departments | Effective support is being rendered to production departments to improve operation efficiency. |
| | | Cost control is in effect for each product. |
| | | Work improvement is being aggressively pursued, and concrete results are being obtained. |
| | | Improvement goals for administrative and supervisory departments are in place in line with TPM policies and progress is being monitored. |
| | | By supporting the efficacy of production activity and improvement of supplier activity, the product inventory and goods in process have been reduced. |
| | | Losses by the administrative and supervisory departments are accurately measured, significant reduction in operation man-hours is achieved, and indirect fixed costs are reduced. |
| | | Information is being transmitted quickly and accurately, and information needed is available on demand. |
| | | A system to carry over the skills required for sustainable operation maintenance is in place. |
| 9 | Safety, Sanitation, and Environmenta I Control | Company policies regarding safety and the environment are being observed in every area of company operation. |
| | | Human contact is being aggressively pursued on production floors. |
| | | Work environment protection (noise, odor, light, etc.) is in effect. |
| | | Zero accidents and zero pollution are being pursued in an effort to create a globally friendly plant. |
| | | Safety, sanitation, and accident prevention are all being handled adequately. |
| | | Safety, sanitation, and environment control policies are well defined, improvement targets are set for reduction of waste and emissions, etc., and progress is being monitored. |
| | | Past cases of labor accidents and plant disasters have been scientifically analyzed, and action has been taken to prevent recurrence. |
| | | A risk analysis hazard map of the plant has been created, the safety inspection manual is in order, and safety patrols are being made. |
| | | Safety assessment is enforced before introducing new equipment and/or process. |
| | | Environmental measures such as risk management and waste management are being considered, moving forward targeting zero emissions and reduced environmental load. |
| 10 | Effects and Evaluation of TPM | TPM activities are in place with a goal-oriented emphasis. |
| | | The level of achievement for TPM goals is being assessed, and cause analysis is being carried out for its achievement or non-achievement. |
| | | Objectives are being met in terms of overall equipment effectiveness, sporadic breakdowns, minor stoppages, and defect product indexes. |
| | | Prominent results have been obtained in reducing process defects and customer complaints. |
| | | The product inventory and works in process have been drastically reduced in comparison to before TPM introduction. |
| | | A record of zero accidents and zero pollution is continuing. |
| | | Product cost reduction, cash flow improvement, and achievements leading to operating profits are showing. |
| | | High worker morals and a stimulating working environment are in place as an intangible benefit of TPM activities. |
| | | Problems that remain unsolved in connection with TPM activities are being clearly recognized and concrete action plans are being envisioned. |
| | | |

6. Reference Documents Checklist A

Advanced Special Award for TPM Achievement

| | Categories | Check Points |
|----|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | TPM Policies and Objectives | As premises for the fulfillment of corporate social responsibility (CSR), the corporate vision for business growth is defined and open management takes place based on the roadmap. |
| | | With distinctive and innovative TPM activities fusing market needs and corporate seeds, restrictions hindering product cost reduction and loss are being thoroughly eliminated. |
| | Important Themes | |
| 2 | Individual Improvement | Loss hindering product cost reduction is accurately extracted, with the participation of all departments, including sales, development, production, distribution, and management. |
| | | Loss from product cost is being categorized in line with the flow of materials and information, and activities in each department and section and activities surpassing departments and sections are clarified to achieve zero-loss. |
| | | Cost effectiveness is being considered for improvement, and methods appropriate for loss items are being effectively used. |
| | | Many zero-defect and zero-breakdown lines are created with improvement measures, and there are many cases of reduction in non-value-added processes. |
| | | New technologies and processes are being developed that can be boosted in the industry. |
| 3 | Autonomous Maintenance | Steps for autonomous maintenance are evolving to the point that autonomous management is being implemented. |
| | | Training to upgrade maintenance skills continues to be provided, with skill level goals being upgraded and reaching a high level. |
| | | The autonomous maintenance percentage has been heightened to reach goals by involving a part of the professional maintenance operation. |
| | | All staff members are flexibility dealing with new equipment, products, and processes, and are working for workplace improvement. |
| | | Improvement proposals are actively made, leading to a cheerful, safe, and pleasant workplace. |
| 4 | Planned | Computers are effectively utilized to provide good results for spare supply management, maintenance fee management, and maintenance information management. |
| | Maintenance | Methods, tools (measuring instruments, sensors), and evaluation methods for facility analysis are being systemized. |
| | | Ex post facto, regular, prognostic, and improvement maintenance are differentiated in consideration of appropriate maintenance fees, and are effectively implemented. |
| | | The facility makes autonomous maintenance easy to handle. |
| | | With improved maintenance, measures for zero breakdown and defects, and conservation of resources and energy, are implemented and there are many cases that produce effects for product cost reduction. |
| 5 | Quality Maintenance | The 4M requirement to ensure quality is clearly defined, role sharing by each pillar is accomplished, and collaboration issues are specified to prevent defect occurrence and outflow. |
| | | A structure and facility that prevent material defects, and establish and manage operation and work requirements, are set up and are showing results. |
| | | It is possible to track down material procurement, manufacturing, and distribution records for each product, enabling easy pinpointing of causes of defect generation and outflow, making it possible for improvement measures to be taken immediately. |
| | | Quality maintenance at the mass production stage is in effect. |
| | | Systems are in effect for zero-defect production. |
| 6 | Product and Equipment Development and Control | A cross-functional system and information network is organized for development management by sales, development, designing, trial production, manufacturing, and distribution departments. |
| | | Evaluation is performed in new facility development for product cost-saving benefit, operability, maintenance, safety, environmental load, and LCC. |
| | | LCA is introduced in the development of new products. |
| | | CAE and 3D-CAD simulation technology is used at the development stage progressing in non-test production. |
| | | In view of the market lifespan of a product, a percentage-of-sale goal value is set up for new products, and the goal is being met. |
| | | Product development with high customer satisfaction is taking place with intellectual property rights, such as patent applications, being obtained. |
| 7 | Training and | Necessary technology and skills, core and detailed, are being systemized, and training programs are installed and provided in steps according to job and position. |
| | Development | Training programs are established in line with corporate renovation, and employees are improving in the technological and skill aspects of their positions. |
| | | Training is provided to foster human resources that can comprehensively manage cross-functional organization for development. |
| | | The criteria for training assessment are in good order and are proving conducive to operator revitalization. |
| | | The number of certified equipment maintenance engineers is increasing. |
| | | The training provided, which is firmly established, inspires motivation, purpose, and ease. |
| 8 | Administrative and Supervisory Departments | A management control system is established that connects related departments such as the sales and distribution departments. |
| | | A system is established for product cost control for each product in line with the flow of materials and information. |
| | | A support system is established that leads to the optimization of the overall production process. |
| | | Improvement measures are actively installed for operation contents and are showing results. |
| | | A project is actively deployed for time reduction with significant efficacy of operation. |
| | | The workplace is made kind and pleasant by taking time reduction measures and giving consideration to senior staff members. |
| 9 | Safety, Sanitation, and Environmental Control | Company policies regarding safety and the environment are being observed in every area of company operation. |
| | | Considerations are made for sound human relationships in the workplace and employee satisfaction surveys are carried out regularly. |
| | | Training is systematically provided for safety assurance, environmental conservation, and disaster measures. |
| | | Workplace safety, environmental conservation, and disaster measures are evaluated when new technology, equipment, or products are being introduced. |
| | | Waste and emissions are being controlled with yield enhancement and energy source improvement. |
| | | The work environment is becoming pleasant to its workers with workplace environmental protection (measures for noise, odor, and light), sanitary measures, and health checkups. |
| 10 | Effects and | TPM activities are in place with a goal-oriented emphasis. |
| | Evaluation of TPM | |
| | | Through continuation of TPM activities, applied goals are being met. |

6. Reference Documents

Checklist S

Award for World-class TPM Achievement

| | 0-4 | Objects Defined |
|----|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Categories TPM Policies and | Check Points As premises for the fulfillment of corporate social responsibility (CSR), the corporate vision for business growth is defined and open management takes place based |
| ' | Objectives | on the roadmap. |
| | | Fusing market needs and corporate seeds, creative world-class TPM activities take place giving birth to innovative products and manufacturing methods. |
| 2 | Individual Improvement | Company-wide backbone technologies such as product quality improvement, reliable equipment, process streamlining, ease of operation, production efficiency, speeding up of information processing, and efficient distribution are being theoretically systemized and utilized in relation to the flow of funds, materials, and information. |
| | | Processing and reaction phenomena, the core of production, are being visualized and monitored by visual images, sensors, and simulations, aiming to enhance product quality. |
| | | An innovative plant and production system that can flexibly respond to new product manufacturing and small-volume production of multiple items are established. |
| | | Profit planning is established with product value enhancement and reduction of prime cost. |
| | | Review of loss is being performed regularly and zero-loss activity has been established. |
| 3 | Autonomous Maintenance | Autonomous plant maintenance is evolving into autonomous production maintenance, and into autonomous production management, thereafter developing into company-wide autonomous management. Sustamized maintenance training has been established to gain skills, and achievements have been made. |
| | | Systemized maintenance training has been established to gain skills, and achievements have been made. Innovative activities and suggested activities directly related to company management are producing achievements. |
| | | A friendly and comfortable workplace exists. |
| | | Autonomous maintenance is taking place with commitment and a sense of ownership. |
| 4 | Planned | The relationship between facility function and component parts is systematically understood, leading to effective weakness improvement, the specification of |
| | Maintenance | sections prone to produce defects, and the establishment of a maintenance time cycle. |
| | | Deterioration of the facility is categorized as regular and irregular deterioration based on facility structure and load history, for which measures are taken to prevent breakdown and accidents. |
| | | Measurement and sensor technology for facility analysis is being upgraded, and the maintenance period, cycle, and area are determined with a high degree of |
| | | accuracy. With the improvement in the planned maintenance technology, measures to prevent recurring breakdown are established and the facility is improved for ease of autonomous maintenance. |
| | | The system and concept of optimal maintenance is completed in comprehensive consideration of the 4M requirements. |
| | | Facility maintenance is systemized and implemented from the perspective of the production system. |
| 5 | Quality | Unified control of materials, purchasing, specifications, design, manufacturing, and distribution data has been developed, with which quality can be guaranteed, and |
| | Maintenance | has become a source of pride for the company in its industry. A system is established to swiftly obtain information on defective products and immediately utilize the information in the production process and company-wide operations. |
| | | Quality maintenance is implemented for new product development. |
| | | Zero customer complaints and zero defects are standardized and are being achieved. |
| | | The structure is systemized to avoid defects and, at the same time, continuous feedback concerning quality improvement is leading to learning opportunities. |
| 6 | Product and | New product development and technological development are taking place through strategic alliances. |
| | Equipment Development and Control | Internal and external technologies and market information are being managed in unification and utilized in the establishment of development themes for products and equipment. Development in consideration of the product lifecycle management (PLM) of products and equipment is taking place and a management system for the development |
| | | is established. |
| | | A cross-functional system is organized for product and equipment development by planning, designing, manufacturing, distribution, and marketing departments. |
| | | A mutual relationship between product development and equipment development is fully considered. There are many coses that show examples of user friendly and environmentally gentle product design and development. |
| | | There are many cases that show examples of user-friendly and environmentally gentle product design and development. Innovative products that can be boosted in the industry are being developed. |
| 7 | Training and | The thinking that a company stands on its people is being established and implemented. |
| , | Development | An ideal of training has been developed individually among employees with different jobs and positions, and training is provided systematically. |
| | | Training is provided to foster human resources that can comprehensively manage cross-functional organization for development. |
| | | A training program is available for young and mid-level employees aiming to foster managers with an understanding of management, sales, finance, development, technology, and skills. |
| | | Systemization and technological improvement of skilled workers is being done through cooperation from individuals exceeding the pillars of TPM activities. |
| | | TPM training is provided at cooperative companies and other plants/factories, leading them to the level for assessment. |
| | | The number of certified maintenance specialists (highest level) is increasing. |
| | | The results of TPM implementation are periodically presented and experiences are exchanged with other plants for the purpose of mutual development. |
| 8 | Administrative and Supervisory Departments | A consolidated system is established ahead of the industry that organizes management resources (people, things, funds, information). |
| | | Major operation processes are defined and continued process improvement is taking place with the operation inventory. |
| | | An SCM system is established that is consistent in terms of procurement, manufacturing, sales, and distribution. |
| | | Reform of the operation content is performed appropriately. |
| | | Use of a comprehensive system is leading to a stronger relationship with related and cooperating companies. |
| | | Expansion in ROA is further progressing with downsizing. |
| | | The workplace has become kind and pleasant to its employees. Considerations are made for part time and senior workers, increasing the pleasantness of the workplace. |
| | | Considerations are made for part-time and senior workers, increasing the pleasantness of the workplace. |
| 9 | | Evaluation is performed on 4 levels of satisfaction (4S: CS, ES, SS, GS) and specific activities are deployed. Sufficient consideration is given to health and safety issues. |
| Э | Safety, Sanitation, and Environmental Control | Sufficient consideration is given to health and safety issues. Physically demanding labor has been automated and a user friendly assembly line is being structured. |
| | | Physically demanding labor has been automated and a user-friendly assembly line is being structured. Resign thinking on environmental conservation is clarified and regional environment assessment is being performed for new business development. |
| | | Basic thinking on environmental conservation is clarified and regional environment assessment is being performed for new business development. In addition to the realization of a safe and sound workplace, contributions are made for the realization of a safe and sound community. |
| | | Steady reform is taking place for the realization of a resource-recycling production factory. |
| | | Exchange activities take place with the local community. |
| 10 | Effects and | TPM activities are in place with a goal-oriented emphasis. |
| ٠٠ | Evaluation of TPM | т и выплась ато птрівос мішта учанчліство стірнавів. |

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