

Issues and aims (visions) for JIPM: No. 2

Study activities No. 1: Studies on “Maintenance Optimum Strategies Management System”

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1. JIPM's research activities

1-1 Themes of the research

In order to achieve the aims (visions) JIPM strives for, study groups will be organized for each of the following 4 fields.

- ① Progress on the current TPM
- ② Response to year 2007 problem
 - Management of the entire plant (ultimately, the whole company) by using RFID tags
 - Amalgamation of the above approaches by using sensors
- ③ Development of Maintenance Optimum Strategic Management System
- ④ Research on accidents and safety

1-2 Study Groups

The following is a list of study groups to constitute the aforementioned research themes.

- ① Studies on “progress on the current TPM”
 - Study group on equipment life prediction and replacement of equipment

- Study group to create an index for equipment management
- ② Studies on issues such as “response to the year 2007 problem”
 - Study group to improve plants entirely by use of RFID tags
 - Study group on sensing technology
- ③ Studies on “development of Maintenance Optimum Strategic Management System”
 - Study group to develop MOSMS (Maintenance Optimum Strategic Management System)
 - Study group on state-of-the-art maintenance technology
 - Study group on crisis control of plants
 - Study group on outsourcing
- ④ Studies on “accidents and safety”
 - Study group on safety for process industry
 - Study group on safety for machine assembling industry
 - Study group on TPM for workplaces handling toxic chemicals

1-3 Introduction on the contents of each research theme

This paper next introduces the contents, activities, members, output and others for each research theme.

Though in random order, with the aim to encourage each member to gain a deeper understanding, the explanation will start with the study group for the Maintenance Optimum Strategic Management System.

2. Research on “Maintenance Optimum Strategic Management System”

2-1 Positioning of MOSMS

Upon studying “the use of risk concept for TPM” that is one of JIPM’s themes for research & development in fiscal year 2005, aggregation of the research covering all research items necessary for this theme has been positioned as the “Maintenance Optimum Strategies Management System (provisional title),” or MOSMS, whose outline is as follows.

Today, there are serious problems originally related directly to maintenance, such as frequent cases of serious diseases and accidents caused by aging equipment, and a sharp decline in number of skilled workers due to a big change in the workforce, which is the so-called “year 2007 problem.” These have gone beyond the scope of issues in maintenance divisions and been pointed out as “management issues.” Such background

has yielded a view that maintenance has entered into a new phase.

2-2 Aims on building MOSMS

The needs such as “how maintenance should contribute to the management” and “how maintenance should keep pace with the new era” must be addressed. In order to do so, from the above-mentioned viewpoint, MOSMS should be built as a practical program for equipment management, with “risk assessment” and “introduction of maintenance that fits with the times” as its cores. Research on this has started as “MOSMS.”

The following two points are considered to be necessary for management.

- Consistent understanding on the top management’s policy throughout the hierarchy, “a top management group, a middle management group, a group of managers in manufacturing floors, and a group of employees.”
- Organically combined control technology and individual technology as well as skills for them

Also, from the perspective that they should be interlocked to each other and how to implement this needs to be considered, MOSMS is viewed as a “system.”

2-3 Characteristics of MOSMS

In the content items of MOSMS, the whole of equipment maintenance will be clarified in a systematic and panoramic manner, on a wide range of items such as maintenance to

contribute to management that cares about losses and risks, system operation, argument on maintenance technology, implementation system, crisis control and insurance. Also, this paper proposes how the reform should be done on the maintenance currently conducted by each company.

The nature of maintenance is considered to be unchangeable. In addition to this, it is necessary to respond to and keep pace with things related to the changing times (change in the management environment) or changes due to technological advancement.

In that sense, this changing segment needs to be always updated. In fiscal year 2005, we will explore how to position the risk concept as the “outline” of MOSMS in TPM, and introduce it if possible.

2-4 Unit structure of MOSMS to achieve upward spiral of PDCA

Another characteristic of MOSMS is that each content item is treated as a unit. In other words, it can introduce what changes along with the times and what advances according to the studies and research, without changing the structure of MOSMS.

For example, studies in specialized fields such as the following are relevant, so their findings will be incorporated into MOSMS.

- Studies on crisis management of plants
- Studies on the type of maintenance in response to the demands of the times
- Analysis from experimental study

This paper also aims to propose how to reflect and renew, in a timely manner, the aforementioned changing segment according to the times, while keeping the chain of PDCA spiraling upward.

2-5 Approach and development of MOSMS

It is decided that an “outline” (draft) of MOSMS will be compiled within fiscal year 2005.

As the collaboration with relevant study groups, the study group on state-of-the-art maintenance technology and the study group on crisis control on plants will be convened. This “outline” (draft) will be discussed among representatives from various industries in the committee for TPM technology and its working groups, aiming to establish the draft as “the outline of MOSMS.”

From fiscal year 2006 onward, this “outline” is planned to be demonstrated in business communities to encourage many industries and companies to use it so that it will be refined. We highly expect to have concurrence and participation from as many companies as possible.

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