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Influence Culture Organization on Practice Total Productive Maintenance (TPM) in Manufacturing Companies

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ABSTRACT

This study discusses the influence of organizational culture through the 8 pillars of TPM in improving the practice and implementation of Total Productive Maintenance (TPM) in manufacturing companies. Productive Maintenance (TPM) is A system or culture Which take ability and skills of each individual in an organization to carry out maintenance and upkeep on production equipment, this is an important strategy in manufacturing organizations in increasing their productivity. Literature study analysis was carried out on expert opinions and previous journals, research found that culture organization affect the whole pillar Total Productive Maintenance (TPM). The concept of Total Productive Maintenance (TPM) is a combination of organizational culture development and measurement practices, where an employee or production operator must have a good organizational culture so that they are able to develop the practices of Sorting Out, Arranging Efficiently, Checking Through Cleaning, Neatness, and Discipline.

Keywords
total productive maintenance, culture organization, maintenance.

INTRODUCTION

Total Productive Maintenance (TPM) is an integrated maintenance system developed from preventive and corrective maintenance systems and involves the participation of all parties, especially operators as users of equipment in carrying out maintenance on production machines (Borris, 2016). According to Borris (2016), Total Productive Maintenance (TPM) is influenced by various factors. such as standardization, organizational culture, maintenance practices, and production management. Organizational culture is an important factor in Total Productive Maintenance (TPM) practices. Lycke's research (2013) explain that Total Productive Maintenance (TPM) influenced by initiation management in providing maintenance policies and a sustainable organizational vision. Total Productive Maintenance (TPM) aims to maximize equipment effectiveness (overall effectiveness) and form a comprehensive maintenance for the company's resilience (Borris, 2016).

Total Productive Maintenance (TPM) is implemented by various departments (management) organization, engineering, production, and maintenance) by involving every employee from top management to workers on the factory floor. Shah's research (2012) explains that maintenance in Total Productive Maintenance (TPM) through 'motivating management', namely small group activities carried out individually. Organizational culture can improve the practice of implementing Total Productive Maintenance (TPM) in the production process of a manufacturing machine, a good organizational culture creates high performance in operators and management to commit to developing Total Productive Maintenance (TPM) efficiently and effectively (Lycke, 2013).

Seiichi Nakajima in Borris (2016) defines Total Productive Maintenance (TPM) as an innovative approach to maintenance by optimizing the level of equipment effectiveness, reducing/eliminating breakdowns, and conducting autonomous operator maintenance. The practice of Total Productive Maintenance (TPM) requires good operational management quality with an organizational culture. Which men- support, remember TPM must done in a way continuous and periodic as well as with special treatment according to the specifications of the equipment. Research by Pradhani & Senapati (2014) explains that Total Productive Maintenance (TPM) in manufacturing companies is carried out based on the awareness of operators and production employees, as well as management's ability to minimize risks. Furthermore, Pradhani & Senapati (2014) found that 84% of machine and production operators in manufacturing companies carry out Total Productive Maintenance (TPM) steps on machines. production to prevent risks. Pradhani & Senapati (2014) explain that employee awareness to consistently deliver optimal performance is shaped by organizational culture. Total Productive Maintenance (TPM) is needed to address the Six Big Losses in a company's production process. This practice seeks to ensure that production equipment has optimal durability (Render & Heizer, 2011). Total Productive Maintenance (TPM) is carried out to restore production equipment to its optimal condition for use in the production process. It is necessary to increase operator involvement in production equipment maintenance. Render & Heizer (2011) explain that the policy management men and factor managerial influence ki- performance operator in maintenance Production equipment in manufacturing companies. The development of Total Productive Maintenance (TPM) requires a commitment from top management to organize training and improve the work skills of operators and production employees. Developing employee and operator capabilities is a commitment to a good organizational culture (Render & Heizer, 2011). Total Productive Maintenance (TPM) aims to achieve significant benefits by utilizing the close correlation between product quality and predictive maintenance of productive machinery, involving all sectors, including production, development, administration, and all employees, from senior management to operators and administrative staff. The company's TPM policy is to achieve world-class status through empowering and improving the entire

workforce involved in TPM.

According to Sweeney (2012), organizational culture is essentially the values believed by organizational members for the advancement of an organization. Organizational culture encompasses broader and deeper aspects and is actually the basis for creating an ideal organizational climate. Sweeney (2012) explains that culture organization affect performance employee within the organization business, this includes production operators in manufacturing companies. The issue of organizational culture is a very interesting review, especially in uncertain working conditions. Moreover, many cases occur in the production division where maintenance is more reactive (Render & Heizer, 2011). Machines are repaired when they break down and breakdowns occur frequently. A large amount of spare parts inventory piles up in the warehouse and becomes obsolete because operators often ignore early signs of potential damage. Operators also lack the competence to maintain the machines they operate every day. More and more manufacturing facilities are implementing Lean methodologies, but most of them forget the importance of equipment and machine maintenance (Render & Heizer, 2011). In fact, performance machine will very determine strong litas and productivity from A process manufacturing. A strong organizational culture is needed to improve the performance of operators and production divisions to implement Total Productive Maintenance (TPM) practices. This journal will discuss how organizational culture influences the 8 pillars of TPM in improving the practice and implementation of Total Productive Maintenance (TPM) in manufacturing companies.

Total Productive Maintenance (TPM) is a system or culture that takes the abilities and skills of each individual in an organization (Ismanto, 2014). Total Productive Maintenance (TPM) produces an important strategy in manufacturing organizations in meeting customer demands in price, quality and delivery time. Total Productive Maintenance (TPM) can also help maintain the company and equipment at the highest level of productivity through collaboration throughout the organization. part in organization (Ismanto, 2014). Total pro- ductive maintenance (TPM) is a production process-directed improvement methodology designed to optimize equipment reliability and ensure efficient plant asset management through empowering employee involvement, thus linking production, maintenance, and engineering functions (Borris, 2016).

TPM describes a relationship between production and maintenance in an effort to continuously improve product quality, operational efficiency, capacity, quality assurance, and safety (Borris, 2016). The main idea of TPM is that production and maintenance work together in small groups to do exchange skills and direct take action special moment facing problems. There are three main concepts of TPM that have been introduced by Nakajima in Borris (2016), namely improving equipment so that it can achieve the highest level of performance, maintaining equipment at its highest performance and providing new equipment according to the specified performance with low lifecycle costs.

Organizational culture in a company or business organization plays a role as a social controller and regulator. the way organ- nization on base mark and beliefs that are adhere together, so that become the norm of group work, and in a Operationally, it is called work culture because it is guidelines and direction for employee work behavior (Sweeney, 2012). From this definition, it can be understood that organizational culture encompasses broader and deeper aspects and is the foundation for creating an ideal organizational climate. Organizational culture is the shared values and beliefs that underlie an organization's identity, including perspectives on performance, policies, regulations, compliance, and measurement (Sembiring, 2012). Thus, it can be understood how culture can provide an identity and direction for the organization's survival, especially through the performance and views of employees and other members of the organization (Sembiring, 2012). Organizational culture cannot simply be captured and seen by outsiders, but can be understood and felt through the behavior of its members and the values they embrace (Sembiring, 2012).

METHOD

The type of research used in this journal is a qualitative research type using a descriptive approach and comprehensive literature study analysis. Qualitative research methods attempt to see and analyze research results, theories, income and research performance as well as recommendations of previous research to be linked to a particular theme and descriptive analysis (Moleong, 2009). A qualitative approach is used to produce descriptive data in the form of theories, previous research, and expert opinions as secondary data sources. This research is included in the literature study research by referring to expert opinions, previous research journals, research recommendations and theories related to Total Productive Maintenance (TPM) and organizational culture management. Descriptive because in this study it is expected to obtain a comprehensive and systematic picture of the research focus. While analytical because the data obtained will be analyzed (Moleong, 2009). Initial data reduction is carried out as a process of selecting data and information to obtain a picture of the focus of the problem, the data is presented descriptively.

RESULTS AND DISCUSSION

Influence Culture Organization on Practice Total Productive Maintenance (TPM) in Company Manufacturing companies that are able to survive in the global market are partly due to their ability to increase productivity, production efficiency, and product quality. According to Borris (2016), efforts to increase productivity can be carried out by evaluating the company's production performance. Ismanto (2014) explains that the factors key success of every organization is on ability- its deep measuring performance its members in reach vision organization. Manager No capable determine How An organization will do something well without measuring performance properly, good performance is built through an organizational culture that is in line with the organization's vision. Borris (2016) added that productivity Which ren- done reflect performance Which not enough Good, so also on the contrary. Effort one way to improve a company's production performance is by implementing Total Productive Maintenance (TPM). TPM plays an important role in improving production performance. The company's main goal, TPM, is to achieve zero breakdown and zero defects. The company's efforts to achieve zero breakdown and zero defects are carried out by carrying out comprehensive maintenance activities, both independently by production operators and by the maintenance department. Maintenance activities This intended so that machine- machine production in condition which always well maintained and ready to support production activities, as well as to avoid the emergence of defective products. Boris (2016), Ismanto (2014) and Lycke (2013) stated that the concept of Total Productive Maintenance (TPM) is a combination of organizational culture development and

measurement practices. The concept of Total Productive Maintenance (TPM) is implemented in a company, the company must meet certain conditions, as follows (Boris (2016); Ismanto (2014); and Lycke (2013):

a. Sorting Out. This means summarizing/sorting. In this situation, operators and other employees in the production division and those related to production must have assessment and measurement skills. to determine which goods or production tools are needed in the work area. A good organizational culture will provide employees and operators with the opportunity to take the necessary actions (Lycke, 2013).

b. Arranging efficiently. This means neatness/organization, namely arranging the production area to support production efficiency and effectiveness. The right arrangement can make it easier for operators and production employees to work. Identification and initiation of operators and production division employees are needed to arrange production equipment efficiently. Culture An organization that emphasizes discipline and the use of best practices in every job provides operators and employees with the ability to place and ensure all production equipment is in accordance with its function and place (Lycke, 2013). This also includes every item and its storage area having a standardized mark or identity and everyone complying with storage rules. Compliance with the identification of goods and production equipment is part of practice Total Productive Maintenance (TPM), culture organization support practice this identification and compliance (Shah, 2012).

c. Checking through cleaning. This means cleaning and inspecting, eliminating sources of dirt, and maintaining optimal conditions. Production equipment maintenance involves cleaning and maintaining optimal conditions for machines and other production equipment. Shah (2012) found that in preventive maintenance, cleanliness is a very important part of ensuring the prevention of the risk of work accidents.

d. Neatness. This means maintenance or stabilization, namely implementing standardization in the workplace, maintaining optimum conditions, and creating an error-free workplace. Organizational culture ensure that the entire organization is aware of organizational regulations, values This is very important for operators and production division employees who are involved in production equipment (Ismanto, 2014). The Total Productive Maintenance (TPM) concept is supported by the standardization of care and maintenance of production equipment to ensure the continued productivity of manufacturing companies.

e. Discipline, namely obeying the rules, implementing work standards, developing positive habits and adhering to maintenance standards that support Total Productive Maintenance (TPM). Wickramasinghe & Asank (2016) in their research found that there are discipline problems for manufacturing machine operators in developing countries that result in workplace accidents. Wickramasinghe & Asank (2016) stated that developing compliance with regulations and a strong organizational culture can be done to improve discipline variables to reduce workplace accidents in the production division.

Influence Culture Organization in Pillar Total Productive Maintenance (TPM): Borris (2016) and Ismanto (2014) stated that the concept of Total Productive Maintenance (TPM) was built in 8 pillar Which each other support. Total Productive Play- tenancy (TPM) No only It is not related to techniques and practices but is an effort of good planning, organizing, monitoring and controlling through a unique methodology that involves an organizational culture approach. The influence of organizational culture is seen in the eight pillars as suggested by the Japan Institute of Plant Maintenance – JIPM to optimize Total Productive Maintenance (TPM) (Borris (2016) and Ismanto (2014):

a. Autonomous Maintenance, assigning routine maintenance responsibilities to operators such as machine cleaning, lubrication/oiling, and machine inspections. Organizational culture influences autonomous maintenance practices in Total Productive Maintenance (TPM). This is related to the quality and commitment of operator performance. A good organizational culture ensures that operators or workers have a high sense of ownership and adherence to work and maintenance standards. Top management that has a sustainable vision have a strong influence in increase knowledge worker to equipment The Autonomous Maintenance pillar requires that machines or production equipment be kept clean and well-lubricated and that potential damage can be identified before more serious damage occurs. Research by Almeanazel (2010) explains that a well-created organizational culture will provide more opportunities for Workers, including operators, can improve their knowledge through training. Autonomous maintenance is supported by knowledge development for operators and employees, enabling them to work easily and assume strong responsibility for production equipment.

b. Focused Improvement. Forming a work group to proactively identify problematic machines/work equipment and provide solutions or improvement suggestions. Organizational culture has a positive influence on the development of work group capabilities within the organization, including recruitment and performance development (Borris, 2016). Working groups implementing Focused Improvement are expected to resolve problems and establish standardization of production equipment care and maintenance; this must be supported. by the performance of employees and production operators (Fahmi, Rahman, & Efranto, 2013). Planned Maintenance. The Planned Maintenance pillar schedules maintenance tasks based on the level of damage ratio that has occurred and/or the level of predicted damage, this pillar functions to reduce sudden damage and can better control the level of component damage. Research by Fahmi, Rahman, & Efranto (2013) stated that there were problems with employee and production operator discipline in carrying out maintenance on production equipment which caused work accidents. Fahmi, Rahman, & Efranto (2013) found that this was due to an organizational culture that did not work well and a poor managerial system from top management so that there was no maintenance scheduling to prevent risks.

c. Quality Maintenance. This pillar addresses quality issues by ensuring production equipment or machinery can detect and prevent errors during production. This error detection capability ensures the production process is sufficiently reliable to produce products according to specifications the first time, thereby controlling product failure rates and lowering production costs (Borris, 2016). Research by Livia & Fewidarto (2016) states that quality maintenance is influenced by the manager's recruitment ability in placing operators and employees. Detection ability is closely linked to work experience and knowledge.

d. Education and Training. The Training and Education pillar is needed to fill the knowledge gap when implementing TPM (Total Productive Maintenance). An organizational culture built with a sustainable vision will focus on developing employee work experience and knowledge (Render & Heizer, 2011). Lack of knowledge about tools or machines that wear it can cause damage on equipment said and cause Low work productivity ultimately harms the company. Assad & Yusoff's (2013) findings explain that with sufficient training, operator skills can be improved so they can perform basic maintenance activities, while technicians can be trained

to improve their ability to perform preventive maintenance and analyze machine or work equipment damage. There needs to be managerial and top management commitment to a sustainable vision (Assad & Yusoff, 2013). Training at the managerial level can also improve managers' abilities in guiding and educating their workforce (mentoring and coaching skills) in implementing TPM (Assad & Yusoff, 2013).

e. Safety, Health, and Environment. Workers must be able to work and perform their functions in a safe and healthy environment. Under this pillar, companies are required to provide a safe and healthy environment free from hazardous conditions. The goal of this pillar is to achieve the target of an "accident-free" workplace, where the workplace is free from all accidents (Assad & Yusoff, 2013).

f. Administration. The administration function in TPM aims to ensure that all parties within the organization (company) have the same concepts and perceptions, including administrative staff (purchasing, planning, and finance). Production efficiency can be achieved if administration, starting with planning, practice, and evaluation of all aspects of production and the organization, is optimal (Render & Heizer, 2011).

g. Development Management is a TPM pillar that uses a collection of experiences from activities. repair and maintenance previously for ensure machine just got it reach optimal performance. The goal of this pillar is for new production machines or equipment to achieve optimal performance in the shortest possible time (Render & Heizer, 2011).

CONCLUSION

A company's ability to increase productivity and production efficiency, as well as product quality, is a prerequisite for a business organization to compete in the market. One way to improve a company's production performance is by implementing Total Productive Maintenance (TPM). The concept of Total Productive Maintenance (TPM) is a combination of organizational culture development and measurement practices. An employee or production operator must have a strong organizational culture to be able to develop the practices of Sorting Out, Arranging Efficiently, Checking Through Cleaning, Neatness, and Discipline. The concept of Total Productive Maintenance (TPM) is built on eight mutually supporting pillars. These pillars are not only related to techniques and practices but also represent efforts to plan well, organize, supervise, and control through a unique methodology that involves an organizational culture approach. Organizational culture influences all pillars of Total Productive Maintenance (TPM).

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