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**RESEARCH ARTICLE**

## Implementation Audit Internal of Quality Management System Iso 9001:2015 in the Purchasing Activities Technical Department at Pt Sango Indonesia

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**ABSTRACT**

This study analyzes of implementation audit internal of the quality management system ISO 9001:2015 in the purchasing activities technical department at PT Sango Indonesia. The aims of this study are to understand the quality standard and quality improvement of PT Sango Indonesia, analyze ISO 9001:2015 quality management standard operational procedure (SOP) in purchasing activities and determine the impact of implementing ISO 9001:2015 internal quality management systems on product quality. This research uses a qualitative descriptive method; the population in this research is all employees at PT Sango Indonesia is 103 employees. The sample in this study was taken from 55 employees who are related to variable research. Meanwhile, the technique of research uses observation, interviews, questionnaires and documentation. Besides that, they analyze data using internal control questionnaire (ICQ), Likert scale and uji statistics. The results of this research show that the implementation of the internal audit quality management system ISO 9001:2015 uses internal control questionnaire (ICQ) in the standard operational procedure (SOP) of purchasing activities at PT Sango Indonesia for each department obtained good strength where department user get percentage middling effective, leadership gets effective, engineering middling effective, purchasing effective, supplier middling effective and accounting effective. In order to support of purchasing activities continuity, In order to support of purchasing activities continuity, it is necessary to create an information system that can provide convenience for purchasing activities process so that the information produced is accurate and appropriate. Then, the average achievement of implementation internal audit for each indicator at PT Sango Indonesia is very effective on internal audit competency and scope internal audit, besides other indicators achievement results are effectiveness. Meanwhile, the result of the statistical test showed that internal audits had a significant effect on product quality with the indicators used by researchers. Thus, the company must disseminate information related to certification ISO 9001:2015 that it carries out activities according to established procedures.

**KEYWORDS**

Quality management system ISO 9001:2015, Internal Audit, Purchasing

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**1. Introduction**

The era of globalization has caused the world of business and the economy to face high competition; this is also faced by PT Sango, which produces motorized vehicle spare parts. PT Sango is one of the Toyota and AHM Vendors and has approx 20 competing companies that produce the same goods and do not sell their products directly to the public. In order to survive as a vendor for PT Toyota and AHM, this company must produce spare parts that must meet the quality standards set by PT Toyota and AHM.

In order to continue to meet quality standards, PT Sango has made various efforts, including implementing a quality management system. Quality Management System (QMS) is a system that aims to increase customer satisfaction and enable continuous

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improvement. This is applied so that the organization maintains the quality of the services or goods produced (BSN, 2018). Furthermore, the efforts of PT Sango Indonesia (SID) are trying to implement ISO 9001: 2015, which replaces the previous version, namely ISO 9001: 2008.

The ISO 9001: 2015 quality management system is an international standard for quality management system certification or quality management system certification and is the latest standard from ISO 9001. The ISO 9001: 2015 standard was developed in more detail and rigorously compared to previous versions (Brugger-Gebhardt, 2016).

According to Ibrohim & Gunastara (2015), ISO 9001: 2015 is a quality management system standard that uses three integrated principles, including the plan, do, check, action (PDCA) principles, risk-based thinking and process approach. The quality of the products produced is influenced by many factors, including management, employees, raw materials, money and machinery and equipment (Wijaya, 2018, p. 13). While the factors that can affect quality control include the operator's perspective, namely the skills and expertise of the people who handle the product, from raw materials supplied by suppliers and machine aspects, namely the type of machine and machine elements used in the production process (Munjati, 2015).

According to Sailendra (2015), the application of standard operating procedures (SOP) for purchasing in production activities will ensure that the resulting production is according to predetermined standards so that quality is guaranteed. The application of standard operating procedures (SOP) should be implemented for every procedure in producing a product, including the SOP for purchasing raw materials. The application of standard operating procedures (SOP) should be implemented for every procedure in producing a product, including the SOP for purchasing raw materials. Purchasing raw materials that are not in accordance with standards will result in low product quality and will reduce customer loyalty Kotler and Keller (2016, p. 37). Therefore it is necessary to establish purchasing procedures, starting from SOPs for selecting suppliers, purchasing, receiving goods, releasing goods to the production department, the production process, transferring production results to the finished goods warehouse, handing over finished goods to customers and others (Mulyadi, 2016, p. 244).

Supplier selection procedures will reduce the risk of increasing the number of defective products, unstable delivery, or storage costs (Chen et al., 2008; Sarinah & Djatna, 2015). Implementation of the Material Purchase Procedure will reduce fictitious purchases, delays in ordering time, and the acquisition of raw materials as well as raw material prices that do not match the quality of raw materials and others (Merdiana & Sukarno, 2020). Determination and implementation of production procedures reduce the risk of defective products, waste, delays in delivery of orders and others (Aprilia, 2019). Thus, purchasing activities are routine activities carried out by companies, including PT Sango Indonesia. This company already has purchasing SOPs that have been adjusted to ISO 9001: 2015 quality management standards and has implemented one of the requirements to ensure whether or not SOPs are implemented, namely through the implementation of internal audits.

Through the implementation of an internal audit conducted at PT Sango Indonesia (SID) in the 2019-2021 period, it was found that there was material that was corroded because the material had expired which was used to produce the product, but the product did not meet QC (quality control). The type of material that has expired is Material S45C, with a diameter of 7.95 which is used to produce automotive components (bolts). The following provides information on one of the product findings returned by PT Boltz Indonesia:



Figure 1.1. Diagram of Product Quality Findings for Bolts using Material S45C diameter 7.95 for the 2019-2021 Period

Resource: Primary Data (PT Sango), (December 2021)

Based on the diagram above, the product quality of PT Sango Indonesia is still relatively unstable; if conditions like this continue, it can have an impact on bankruptcy because customers will lose trust and customers move to the company's competitors. Then in 2020, the number of Ng was the highest, with a total of 2009 pcs, meaning that the quality of the product was very low. This can affect the loss cost in sales/revenue earned will be reduced.

ISO 9001 is a standard that sets out the requirements for a quality management system. These standards will help companies and organizations become more efficient and improve customer satisfaction. ISO 9001 is based on the idea of continuous

improvement. The quality management system is designed to be flexible enough to be used by various types of organizations, not only aiming at "quality" but the main thing is "meeting customer needs". The organization must determine the goals to be achieved and try to carry out a continuous improvement process to achieve the goals that have been set. Once these targets are achieved, they must reassess in an effort to continuous improvement (Fonseca et al., 2019).

If a company that has obtained an ISO 9001: 2015 quality management system certificate is automatically registered with the agency with that standard, if a potential customer wants to find a certified vendor, they will contact him and make an offer to work together (Andini et al., 2020). This is in accordance with the quality goals and objectives that to obtain a quality product requires continuous improvement and improvement through the implementation of a quality management system which aims to ensure the conformity of a process and product to needs or requirements (Gaspersz, 2012; Iman et al., 2021).

PT Sango Indonesia is a manufacturing company engaged in the automotive sector by producing spare parts products such as bolts for Toyota and Honda and exhaust manifolds (muffler) for Nissan and Mitsubishi cars in one of the Karawang areas, which already has a system. In running production, the criteria for the quality of the product produced are said to be good if the product meets the standards approved by product samples and customer specifications. While the assessment of the good or bad quality of a product is based on 8 dimensions of product quality, namely performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality. customer/consumer impression) (Tjiptono, 2016, p. 134). One of the systems implemented in this company is a quality management system that has received ISO 9001:2015 certification. PT Sango Indonesia applies the concept of ISO 9001:2015 regarding quality standardization and quality improvement.

The quality standardization that is carried out is to ensure that every product that is made/produced meets the standard that has been determined by the company and appointed by the customer by carrying out quality control/quality control and quality improvement that is carried out to evaluate the products produced so that they can compete with the company's competitors by working in accordance with existing SOPs and to ensure that the quality management system has been complied with. Therefore, PT Sango Indonesia conducts regular internal audit activities. For example, conducting an audit of the purchase of raw materials or consumable goods to improve the quality of these products.

Based on the explanation above, I am interested in conducting a research entitled "Implementation of Internal Audit of the ISO 9001: 2015 Quality Management System in Purchasing Activities in the Technical Department of PT Sango Indonesia". Meanwhile, based on the description of the phenomena above, the formulation of the research problem is as follows:

- How to determine quality standards and quality improvement in purchasing activities technical department at PT Sango Indonesia?
- What is the standard operational procedure (SOP) for purchasing activities technical department at PT Sango Indonesia?
- How is the implementation of the internal audit quality management system ISO 9001: 2015 in purchasing activities technical department at PT Sango Indonesia?
- What is the impact implementation of a quality management system in ISO 9001:2015 internal audit of product quality?

## **2. Literature Review**

### **2.1 Internal Auditing**

According to Sudarwan & Rozzi (2017, p. 11) are, independent, objective assurance and consulting activities designed to add value and improve organizational operations. Meanwhile, according to Wisnu (2015), that internal audit is a professional activity that helps organizations to achieve their respective goals by analyzing key processes, procedures and operations, identifying controls in each operating procedure & process, evaluating the adequacy of compliance testing controls for the control of each transaction, results of the evaluation of controls and compliance testing of transaction reporting provide recommendations for controls when needed, Suggest methods to improve compliance with core controls as well as the follow-up of the actions taken on the recommendations made in the previous report.

Thus, an internal audit is an inspection or assessment activity carried out by internal parts of a company, both government and private, on financial reports and accounting records objectively and independently and provides reliable information produced by the company for decision making.

Internal audit objectives, according to IIA in Riddle et al. (2017, p. 30), are to help organizations achieve their goals, evaluate and improve the effectiveness of risk management, control and governance processes, assurance and consulting activities designed to add value and improve operations, independence and objectivity as well as a systematic and disciplined approach (especially process attachment).

The audit mechanism generally has 5 stages, namely planning the audit schedule, planning the audit process, conducting the audit, reporting on the audit and following up on issues or improvements found (Hammar, 2015). Whereas Mulyani (2018, p. 5), the stages of internal audit are "examination activities must include planning inspections, testing and evaluating information, notification of results and following up (follow up)". Meanwhile, according to Riska (2017), there are several factors that influence the quality of internal audits, namely independence, objectivity, work experience, knowledge and integrity.

**2.2 Purchase**

Purchasing is a very important activity for a company, namely as the main part of the procurement function for the needs of the company. Service companies are no exception; purchases are also very important so that companies can provide services to customers. Therefore, the purchasing company must be effective. According to Mulyadi (2016, p. 243), purchasing is an effort made to procure goods needed by the company. So from the explanation above, purchasing is an activity in meeting the need for goods and services needed by the company by looking at the quality or quality quantity of goods sent as well as the price and exact delivery time.

According to Heizer & Render (2015, p. 414), the purchase means the acquisition of goods or services, and the purpose of purchasing is to help identify products and services that can be obtained externally. As well as developing, evaluating, and determining the best suppliers, prices and delivery for these goods and services.

Documents used in the purchase accounting system, according to (Mulyadi, 2016, p. 246), include purchase requests, quotations, purchase orders, receiving reports and proof of cash out.

**2.3 Product Quality**

Kotler & Amstrong (2015, p. 224) says that product quality is how the product has a value that can satisfy consumers both physically and psychologically, which shows the attributes or characteristics contained in an item or product. Meanwhile, according to Kuspriyono (2016) that "product quality is quality which includes efforts to meet or exceed customer expectations, quality includes products, services, people and environmental processes and quality is a condition that is always changing." From the definition above, it can be concluded that product quality is a character or trait possessed by a product that can meet the needs or desires of a person.

According to Laksana (2019), the dimensions of product quality consist of form, product features, performance, durability, conformance, reliability, style and design (design). And according to (Wijaya, 2018, p. 5), in terms of the quality of a product produced by a company sometimes experiences diversity. This is because the quality of a product is influenced by several factors, where these factors can determine whether a product can meet predetermined standards or not, these factors are management, raw materials, money, machinery and equipment, and people ( employee).

**2.4 Quality Control (QC)**

Quality control, in general, can be defined as a system that maintains the desired level of quality, through feedback on product/service characteristics and implementation of corrective actions, in case of deviation of these characteristics from the specified standards (Amitava, 2016, p. 38). This general area may be divided into three main sub-areas, namely off-line quality control, statistical process control and acceptance sampling plans. Quality control (qc) is needed in various industrial sectors and in a business. The general task is to be able to check if a product can take place before, during and after the process of production. Quality control in its implementation is carried out by setting appropriate standards for a product or service. Meanwhile, three aspects of quality (Amitava, 2016, p. 38) are as follows:

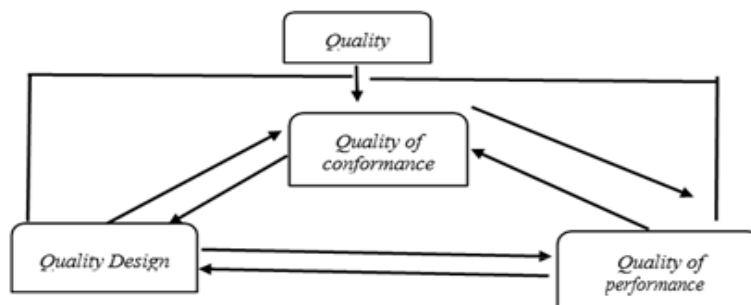


Figure 2.1 Chart of Three Quality Aspects  
Source: Amitava (2016)

Design quality, according to (Amitava, 2016, p. 36), relates to the stringent requirements that a product or service must have to meet customer needs at a minimum. This implies that the product or service must be designed to at least meet the needs of consumers.

Quality conformance implies that manufactured products or services provided must meet the standards selected in the design phase (Amitava, 2016, p. 37). While the quality of performance is related to how well the function of the product or service performance when used. It measures the degree to which the product or service satisfies the customer. This is a function of design quality and conformance quality (Amitava, 2016, p. 37).

### 2.5 ISO 9001:2015 Quality Management System

Genau (2016) says that the ISO 9000 series is a first and foremost quality management system, a global system for optimizing the quality effectiveness of an organization or company by creating a framework for continuous quality improvement. The ISO 9000 series includes several standards, namely ISO 9001, ISO 9004, and ISO 19011. Based on ISO 9000:2015, a quality management system can be defined as follows:

1. The system (Clausal 3.5.1) is a set of integrated or interacting elements (a collection of interrelated or interacting elements).
2. Management (Clause 3.3.3) is coordinated activities to direct and control an organization (coordinated activities to direct and control an organization).
3. The management system (Clausal 3.5.3) is a set of interrelated or interacting elements of an organization to establish policies and objectives, and processes to achieve those objectives that purpose).
4. Quality (clausal 3.6.2) is the degree to which a set of inherent characteristics of an object fulfills requirements.

According to Sugian (2015), the seven main principles of ISO 9001: 2015 quality management are customer focus, leadership, engagement of people, process approach, improvement, evidence based decision making and relationship management. The seven main principles of quality management in ISO 9001:2015 are as follows:



Figure 2.2. The Seven Principles of Quality Management

Source: Sugian (2015)

The process of a company or organization wishing to obtain ISO 9001:2015 certification (Gaspersz, 2012; Siswanto, 2019), namely the existence of a commitment from the leadership (top management), forming an ISO steering committee or coordinator, understanding and studying the requirements of the ISO 9001:2015 quality management system, implementing the ISO 9001:2015 quality management system, conducting internal audits in companies or organizations, selecting auditors and certification bodies and carrying out the registration to carry out company certification.

### 2.6 Theoretical Framework and Hypothesis Development

According to Hery (2017, p. 238), an Internal audit is an assessment function that is developed freely within the organization to test and evaluate service activities within the company organization. The purpose of an internal audit is to control the controls in the organization's processes, help the organization achieve goals and objectives efficiently and economically and assess the accuracy of financial information (Island in Abuhav, 2015, p. 375). Meanwhile, ISO 9001:2015 is a quality management system standard that uses three integrated principles, including the plan, do, check, action (PDCA) principles, risk-based thinking and process approach (Ibrohim & Gunastara, 2015). Where the internal audit process plays an important role in the implementation of

ISO 9001: 2015, and internal audit is one of the requirements for the implementation of ISO 9001: 2015. Therefore, with companies conducting internal audits, it will be known what problems are often experienced by each division, including which division has the most problems, for example, auditing the activity of purchasing raw materials. The audit process has been carried out and reported in the form of an audit report, and recommendations have been given in the form of improvements to weaknesses that occur in the purchase of raw materials, with the mayor's findings being evaluated at least 5 times in 5 years. From the explanation above that:

H1: Implementation of internal audit has been effective

ISO 9001: 2015 is a standard that contains requirements for a quality management system that assists companies in supervising and guaranteeing all operational activities that will affect the quality of the products provided (Abuhav, 2015, p. 375). Suppose the purchase of raw materials that are not according to standards will result in low product quality and will reduce customer loyalty (Kotler & Keller, 2016, p. 37). Based on previous research conducted by Shakhov (2021), it was found that an efficient QMS will help to control the quality of products and services at the required level. An efficient quality management system will help to control product and service quality at the required level. Based on the explanation above, the implementation of ISO 9001: 2015 is measured from the ICQ of purchasing activities for each department to obtain effective results.

According to Sukrisno (2017, p. 238), an internal audit is an examination carried out by the internal audit section of a company or organization on the company's financial reports and accounting records, as well as compliance with government regulations and the provisions of applicable professional associations. Meanwhile, product quality is how the product has a value that can satisfy consumers both physically and psychologically, which shows the attributes or characteristics contained in an item or result (Kotler & Amstrong, 2015, p. 224). In this case, an internal audit has a function to examine and evaluate the merits of controls over financial accounting and other operations, such as control over product quality. If the quality of the product produced is not good, it will have an impact on the company's saving costs weakening. The research conducted by Shakhov (2021) found that an efficient QMS will help to control the quality of products and services at the required level. Based on the explanation above, the implementation of an internal audit on product quality can be carried out effectively in accordance with the procedures set by the company.

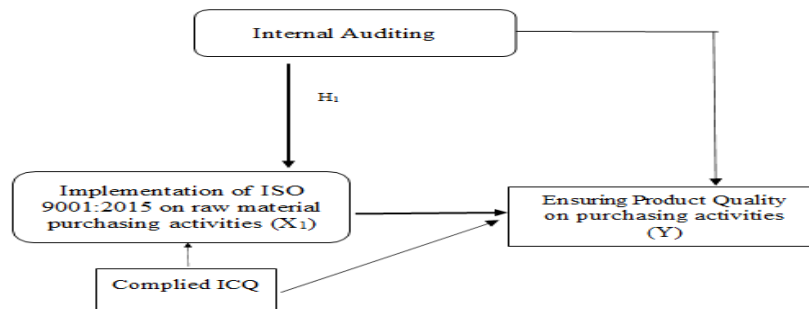


Figure 2.3 Thinking Framework

### 3. Methodology

In this research, the writer uses descriptive qualitative research. According to Sugiyono (2016, p. 9), the qualitative descriptive method is a research method based on the post-positivism philosophy used to research natural object conditions (as opposed to experiments) where researchers are the key instrument of data collection techniques carried out in triangulation (combined), data analysis is inductive/qualitative in nature, and the results of qualitative research emphasize meaning rather than generalization.

Qualitative descriptive research aims to describe, describe, explain, explain and answer in more detail the problems to be studied by studying as much as possible an individual, a group or an event. Thus, the research object used to describe this research is the implementation of an internal audit of the ISO 9001:2015 quality management system in purchasing activities in the technical department of PT Sango Indonesia.

The data sources used in this study are primary data and secondary data. Sugiyono (2018, p. 456) says that primary data is a data source that directly provides data to data collectors. In this study, the primary data was obtained from the relevant informants (PIC of the technical department and employees related to the object of this research). Meanwhile, according to Sugiyono (2018, p. 456), secondary data is data sources that do not directly provide data to data collectors, for example, through other people or through documents. In addition, secondary data was obtained from the company's official website or from previous research

journals. The secondary data collection is done manually by photocopying or copying reports or books from related companies. Data collection techniques used by the authors in this study include:

### 3.1 Observation

According to Sugiyono (2018, p. 229), observation is a data collection technique that has specific characteristics when compared to other techniques. Observation is also not limited to people but also other natural objects. Through observation activities, researchers can learn about behavior and the meaning of this behavior. The data collection technique was carried out by direct observation of the object under study in order to obtain primary data directly from the respondents who were the research sample, such as purchasing, technical section, production, Production control (Pc) & ISO section. The data obtained from the results of these observations are then analyzed in order to obtain a clear picture of the problem under study.

### 3.2 Interview

It is a research technique in which researchers communicate directly with parties related to this research, namely the production foreman, technical leaders and supervisors, purchasing staff, ISO staff, inspection leaders, as well as pc and marketing staff. According to Arikunto (2016, p. 199), The purpose of this interview is to obtain information relevant to research. In this research, the authors used open questions based on the internal control questionnaire (ICQ).

### 3.3 Documentation

Documentation techniques are looking for data regarding matters in the form of notes, agendas, books, minutes, meetings and so on. In this study, this technique was used to obtain data regarding the implementation of an internal audit of the ISO 9001:2015 quality management system for purchasing activities in the technical department of PT Sango Indonesia. These documents or records were obtained from departments related to this research, namely purchasing documents, ISO documents, production documents, technical documents and management documents.

### 3.4 Questionnaire

According to Sugiyono (2018, p. 199), a questionnaire is a data collection technique that is carried out by giving a set of questions or written statements to respondents to answer. This questionnaire has 2 parts, including the first part is about the respondent's data, such as name, gender and age. The second part is a list of questions that was filled in by respondents. Questionnaires were distributed in the form of Google Forms and distributed to respondents through a private network (japri). The respondents who filled out the questionnaire included 55 respondents. The respondents were foremen and leaders as well as production operators, inspection leaders, supervisors & technical staff, ISO staff, HR staff, purchasing staff, assistant managers, leaders and production control staff (PC).

### 3.5 Population and Sample

The population is all elements or research units that have certain characteristics, where these elements are used as research objects, while the sample is part of the population taken according to certain procedures to be able to represent the population (Saleh, 2017). In this study, the population was PT Sango Indonesia, totaling 103 people, and the sample was employees related to purchasing activities at PT Sango Indonesia, totaling 55 people.

### 3.6 Data analysis

The analysis of data of this research used internal control questionnaire (ICQ); the researcher uses ICQ with formula in the below:

Table 3.6a Indicator of effectiveness assessment

No	Indicators	Assessment
1	81-100%	Very effective (VE)
2	61-80%	Effective (E)
3	41-60%	Medium (M)
4	21-40%	Less effective (LE)
5	0-20%	Not effective (NE)

Source: Riduwan (2015)

The second uses the parameter Likert scale, the following Likert scale:



Table 3.6b Category of Likert scale

No	Type of answer	Score	Code
1	Very agree	5	VA
2	Agree	4	A
3	Doubtful	3	D
4	Not Agree	2	NA
5	Very not agree	1	VNA

Source: Sugiyono (2016)

Meanwhile, the researcher uses statistical tests like descriptive statistics, validity tests, reliability tests, and simple linear regression.

**4. Results & Discussions**

**4.1 Determination of Quality Standards and Quality Improvement in Purchasing Activities in the Technical Department of PT Sango Indonesia**

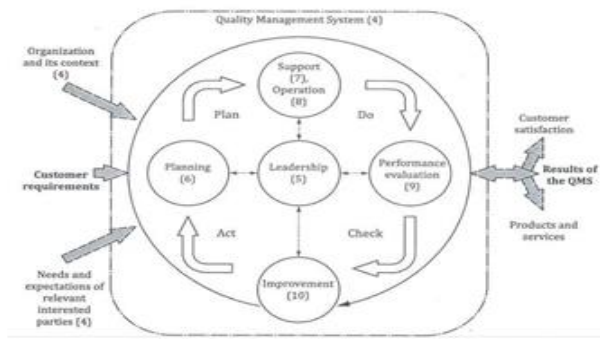
PT Sango Indonesia (SID) was established in 2013 as an automotive industry originating from a Japanese foreign manufacturing company (PMA) located in Karawang. The company from 2013-2017, all policies still follow the regulations of the mother company (central company). When a customer conducts an audit, it is suggested that PT Sango Indonesia (SID) establish an ISO 9001:2015 standard in accordance with the provisions of that customer. Therefore, management and related departments have discussed suggestions from the results of customer audits, namely PT Sango Indonesia carried out stages such as forming an ISO team, making commitments, conducting ISO training to certification bodies, preparing documents, and implementing ISO by conducting internal audits. monitored by certification bodies, review management and ISO certification audits by the United Registrar of System (URS). Thus, PT Sango Indonesia was officially certified with the ISO 9001: 2015 quality management system on March 21, 2017, and re-certify on December 2022.

**4.1.1 Implementation of ISO 9001:2015 PT Sango Indonesia (SID)**

After obtaining ISO 9001:2015 certification, PT Sango Indonesia implemented several rules to be used as parameters in all departments of the company. The provisions are like standard operations formal procedure (SOP), check sheet, one point lesson (OPL), and work instruction (WI). In addition, in setting quality standards, PT Sango Indonesia establishes several policies and principles that must be implemented by all employees, such as:

1. Setting General Standards & Quality Improvement

Efforts to establish general standards for ISO 9001: 2015 certification PT Sango Indonesia carried out the stages including forming an ISO team, making commitments, conducting ISO training to certification bodies, preparing documents, implementing ISO by conducting internal audits monitored by certification bodies, reviewing management and ISO certification audit by URS. Thus, PT Sango Indonesia was officially certified with the ISO 9001: 2015 Quality Management System on March 21, 2017. The PICs involved in setting quality standards, especially in the purchasing system, include the technical department, inspection, purchasing & exim, marketing, HR, accounting production and maintenance. The quality system standards at PT Sango Indonesia (SID) are in the form of standard operational procedures (SOP), check sheets, one point lesson (OPL), and work instructions (WI). In addition, in setting quality standards, PT Sango Indonesia establishes several policies and principles.



**Figure 4.1** Principles of ISO 9001: 2015 Quality Standards at PT Sango Indonesia

Source: Primary data QMS ISO 2015 PT Sango Indonesia



In the chart above, PT Sango Indonesia establishes the PDCA method (plan, do, check, act) in controlling the quality of its products, where Plan means planning to identify problems and design appropriate steps to be taken in finding solutions to problems. Do is the stage of the trial process and as evaluation material. Check checks every activity in the company, and act means taking action from all aspects that have been planned by the company.

As for the description of the provisions for internal NG classification, if rank S is a problem that impacts the next process if it is continued, then rank A is a problem that does not affect the next process but needs special control. While rank B is a problem that can still be overcome to proceed to the next process.

Whereas for the NG classification in the customer that if the s rank is a special defect, a material pressure defect, normal material and other than that according to customer demand, the market and concerns important matters in the company such as damaged products and affects the environment. Rank a is different goods, mixed goods and defects which must be carried out by all employees because of safety considerations, while rank b is, in addition to the above, defects in general.

In addition to setting product quality policies and product targets, PT Sango Indonesia carries out quality improvements using methods such as fishbone diagrams, scatter diagrams, control charts, and check sheets and selecting and prioritizing the problems to be solved/resolved. The following is the standard operating procedure (SOP) for improving the quality of PT Sango Indonesia through the corrective action request response form. This form is used when there is a discrepancy in each division. The function of this form is to distribute information on findings (discrepancies) and respond by handling what is appropriate for discrepancies that occur. If the depart that occurs abnormally has answered & handled it, it is considered that this discrepancy is closed.

In addition, with the quality standards set by the company, product quality will be well controlled. The following is an example of implementing product quality at PT Sango Indonesia.

Table 4.1 SCM35-SID-B Reject Data Dia. 7.82 of 2020

Bulan	Intermediate / INT (Ton)	Finish (Ton)	Cumulative (Ton)	Qty NG (Kg)
Januari	9	1	10	1985
Februari	11	0	21	1863
Maret	5	3	29	1878
April	0	1	30	472
Mei	0	0	30	0
Juni	0	0	30	0
Juli	1	0	31	130
Agustus	1	1	33	314
September	2	1	36	371
Oktober	4	3	43	1164
November	1	1	45	645
Desember	4	0	49	778
Total	38	11		9600

Source: Primary Data (processed by the author)

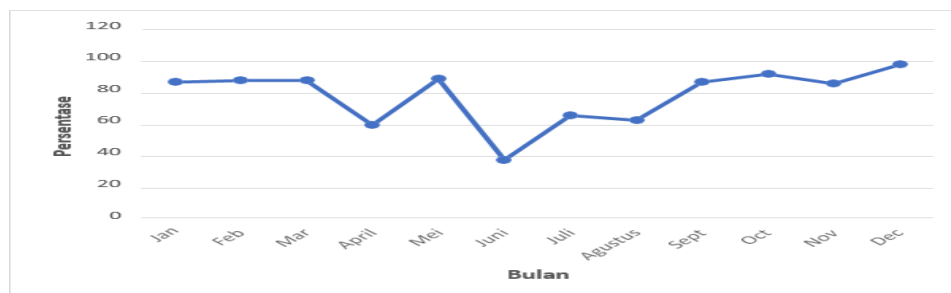


Figure 4.2 Graph of Production Realization of PT Sango Indonesia in 2022  
Source: Primary Data (processed by the author)

From the explanation in Figure 4.2 above, Pt Sango Indonesia’s production realization monthly has not reached the maximum target, where the highest percentage in December is 98%. Whereas in June, there was a very significant decrease of 38%, it was due to the pandemic covid-19 and the decreased demand from customers. Meanwhile, this realization did not reach the maximum target, only obtaining and average product realization of 78.5%.

**4.2 Standard Operating Procedures (SOP) for Purchasing Activities**

PT Sango Indonesia, in carrying out purchasing activities, refers to the existing SOP at the company. In the standard operating procedure (SOP) for Purchasing of PT Sango Indonesia, there are several sections involved in purchasing activities, including department user, leader, purchasing, supplier, and accounting.

1. Relationship between Standard Operating Procedures (SOP) for Purchases and Product Quality at PT Sango Indonesia  
 Standard operating procedures (SOP) within the company play a very important role where SOPs can control all activities in each department, and SOPs are a parameter for assessing the company's service quality and maintaining product quality. Pt Sango Indonesia, in making purchases to produce a product of 50 tons, makes 1 purchase of raw materials. However, delivery activities are carried out partially in accordance with production needs and customer requests. Thus, PT Sango Indonesia, in its purchasing activities, has referred to the existing SOP so that the raw materials obtained are of good quality and no returns occur when receiving these raw materials, but when they become finished goods, the material does not match the amount of raw materials, p. This is a discrepancy or abnormality. As for repairing discrepancies that occur in PT Sango Indonesia, it can be done by analyzing the problem through root cause analysis (RCA) using a fishbone diagram.

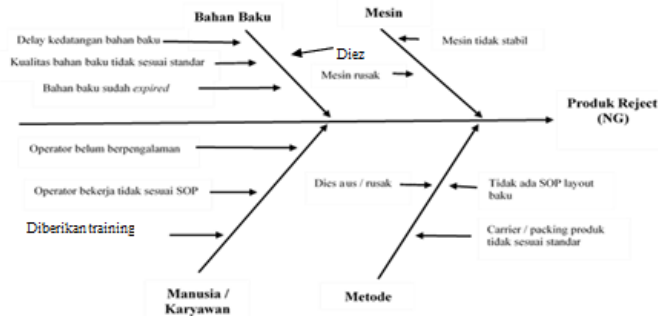


Figure 4.3 Fishbone Root Cause Analysis (RCA) diagram of PT Sango Indonesia

Based on the fishbone diagram 5.3, the most effective fix for rejected product SCM35-SID-B Dia. 7.82, namely by using a double die because by using this method, the product does not experience abnormal or reject (NG). In addition, SOPs or provisions that exist in the company must be carried out and instilled in all relevant departments so that they are implemented; purchases run neatly and systematically and can improve product quality.

2. Evaluation of Purchase SOP Implementation

In evaluating the implementation of purchasing SOPs, the author describes the results of the internal control questionnaire (ICQ) that has been distributed to respondents. The results are as follows:

Table 4.2 Respondents by Gender

Respondent	Amount	Persentase (%)
Male	48	87.27
Female	7	12.72
Total	55	100

Source: Primary data processed, 2022

Based on table 5.2 shows that the respondents consist of men and women. The results of the respondents showed that the majority of respondents were male, with a total of 48 respondents and a percentage of 87.27%, while only 7 female respondents, with a percentage of 12.72%, because the company has more dominant male employees so the percentage of woman is lower.

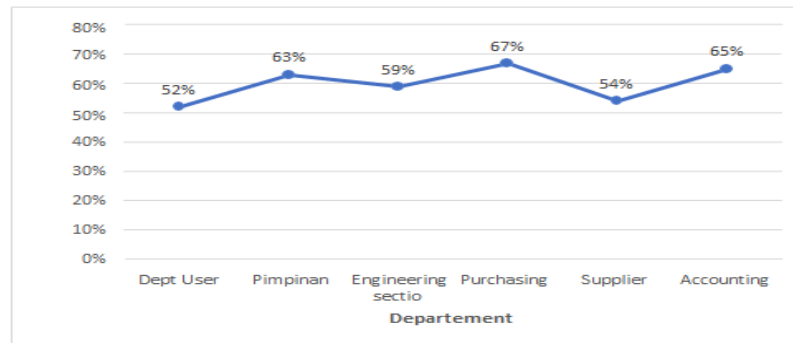


Figure 4.4 Average ICQ SOP Effectiveness Achievement for Each Department of PT Sango Indonesia

Source: Data output, excel (processed by the author)

Based on figure 4.4 shows that the implementation of purchasing activities at PT Sango Indonesia (SID) has been carried out properly, and the results of achieving effectiveness for each department are above the company's policy standards. From the user department, it reaches 52%, leadership 63%, engineering section 59%, purchasing dept 67%, suppliers 54% and accounting 65%. Thus the ICQ SOP Purchasing results are effective, meaning that each department concerned with purchasing SOPs has implemented them properly.

#### 4.3 Internal Audit Implementation

##### 1. Implementation of ISO 9001:2015 Quality Management System

The implementation of the ISO 9001: 2015 Quality Management System at PT Sango Indonesia is a company effort to improve its unstructured management system. This is done so that the management of the company is neater so that the achievement of its goals is easier. But in fact, the company has not maximized in implementing the ISO 9001: 2015 Quality Management System based on the results of the ICQ implementation of the Purchasing SOP.

The initial step taken by the company is to provide awareness to employees of the importance of maintaining product quality so that the company's existence is maintained. The awareness of each individual involved in understanding the importance of a management system makes the work procedures and responsibilities of each part of the company's organizational structure clearer.

There are seven principles in the ISO 9001:2015 Quality Management System that must be applied to PT Sango Indonesia, namely customer focus, leadership, people involvement, process approach, improvement, evidence-based decision making, and relationship management.

##### 2. Implementation of Internal Audit at PT Sango Indonesia

The application of internal audit (internal audit) is an examination carried out by the internal audit section of PT Sango Indonesia on the purchase records of PT Sango Indonesia as well as adherence to management policies that have been determined in the company PT Sango Indonesia and internal audits are carried out to evaluate activities that exist within the company that have been organized. Meanwhile, the company must conduct an internal audit at planned intervals every semester (once every 6 months) to provide information on whether the quality management system is in accordance with the company's requirements for quality management or international standard requirements. The stages of implementing an internal audit at PT Sango Indonesia include the scope of the audit, audit program, audit implementation, audit report and follow-up (evaluation) of discrepancies that exist within the company.

##### 3. Evaluation of Internal Audit Implementation at PT Sango Indonesia

The implementation of the internal audit at PT Sango Indonesia can be seen from the results of the distribution of questionnaires by measuring the achievement of effectiveness using the Likert scale parameter 1-5; the data analysis is as follows:

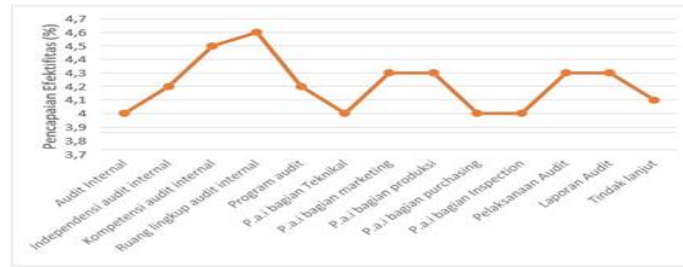


Figure 4.5 The average achievement of the effectiveness of each dimension at PT Sango Indonesia

Source: Data output, excel (processed by the author)

Based on Figure 4.5, the average achievement of the effectiveness of internal audit implementation for each indicator at PT Sango Indonesia is an internal audit of 4, internal audit independence 4.2, internal audit competence 4.5, the scope of internal audit 4.6, audit program 4.2, internal audit program technical section 4.0, internal audit program marketing section 4.3, internal audit program production section 4.3, internal audit program purchasing section 4, internal audit program inspection section 4, audit implementation 4.3, audit report 4.3 and follow-up 4.1.

#### 4. The Impact of Internal Audit Implementation of the ISO 9001: 2015 Quality Management System on Product Quality

As the results of the evaluation of the internal audit implementation at PT Sango Indonesia, it was found that the internal audit implementation for each indicator reached the effective and very effective categories. Furthermore, the researcher conducted a statistical test to see the magnitude of the influence of internal audits on product quality. Based on the results of statistical tests, it was found that internal audits had a significant effect on product quality with the indicators used as described in the research methodology chapter. The simple regression model equation obtained is as follows:

$$Y = 4.843 + 0.122X + e$$

The above equation implies that if  $X = 0$  (no internal audit), then the quality of the product is 4.843. Whereas if  $X$  is greater, the implementation of internal audit is getting better as well as the product quality is getting better too. The results of the evaluation of the implementation of internal audit show that the implementation of internal audit is very effective only on the dimensions of internal audit competence and the scope of internal audit, while the others only obtain effective results.

This is related to the explanation of the SOP for the purchasing department, which states that the results of the ICQ in the user department, engineering section and suppliers are quite effective, then for other departments, the ICQ is effective. However, defective products reached 19.56%, meaning that even though the SOP has been carried out, it still results in a high percentage of defective products, then based on the results of the above equation, the company PT Sango Indonesia must continue to improve the implementation of SOPs to be very effective and effective so that the implementation of internal audits with internal audit dimensions, independence internal audit, audit program, internal audit program for technical department, internal audit program for the marketing department, internal audit program for the production department, internal audit program for purchasing department, internal audit program for inspection department, audit implementation, reports and follow-up to be very effective.

#### 4.4 Discussions

From the research phenomenon raised by the author that there is production realization that is not in accordance with predetermined standards; this is in accordance with the reject data in table 5.1.1.2.2 that the material SCM35-SID-B Dia. 7.82 at PT Sango Indonesia in 2020, the production target is 50 tons, but the material process is abnormal with reject (NG) products in the INT process 38 pcs, and after finishing, there are 39 pcs or 9600 kg (9.6 tons) or the equivalent of IDR 5,779. 200, - so that the product that complies with quality standards is only 40.4 tons. The above phenomenon is supported by Wirtz & Lovelock (2018), that product quality is a condition of an item based on an assessment of its non-compliance with established measurement standards.

Suppose the purchase of raw materials that are not according to standards will result in low product quality and will reduce customer loyalty (Kotler & Keller, 2016, p. 37). This concept is shown from the ICQ results of purchasing activities at PT Sango Indonesia that in the purchasing procedure section, the average achievement level of effectiveness of ICQ SOP purchases in the purchasing department is 67%, meaning that the department has implemented it effectively. While the implementation of the internal audit of the ISO 9001: 2015 quality management system at PT Sango Indonesia obtained an average achievement of the effectiveness of each indicator in the highly effective and effective category. This is supported by Rudhani et al. (2017) that expected

internal audit effectiveness has contributing factors such as the competence of the internal audit team, management support and audit quality.

Meanwhile, based on the results of statistical tests, it was found that internal audits had a significant effect on product quality with the indicators used by the author. The simple regression equation produced by the author is  $Y = 4.843 + 0.122X + e$ . Where this equation can be interpreted as a constant of 4.843, that is, if there are no internal audit variables that affect product quality, then the product quality variable is 4,843 units and  $b_1 = 0.122$ , meaning that if the internal audit variable increases by one unit, product quality will increase by 0.122 assuming the independent variable another fixed. Thus, even though PT Sango Indonesia has implemented SOPs, there are discrepancies (abnormal) in the form of defective products of 19.56% or 9.78 tons of the total production target of 50 tons.

## 5. Conclusion

The conclusions of this research are in setting the ISO 9001:2015 general certification standard; PT Sango Indonesia carried out the stages including forming an ISO team, making a commitment, conducting ISO training to certification bodies, preparing documents, implementing ISO by conducting internal audits monitored by certification bodies, review management and ISO certification audit by URS. Thus, PT Sango Indonesia was officially certified with the quality management system ISO 9001:2015 on March 21, 2017, and re-certify in December 2022. The PICs involved in setting quality standards, especially in the purchasing system, include the technical department, inspection, purchasing & exim, marketing, HRD, accounting production and maintenance. The quality system standards at PT Sango Indonesia (SID) are in the form of standard operating procedures (SOP), check sheets, one point lesson (OPL), and work instructions (WI). In addition, in setting quality standards, PT Sango Indonesia establishes several policies and principles that must be implemented by all of its employees. Then to make improvements to PT SID using the fish bone method and active form correction.

Based on the results of the ICQ SOP, purchasing activities at PT Sango Indonesia for each department obtained a good proportion of effective policies for user departments reaching 52%, leadership at 63%, engineering section at 59%, purchasing department at 67%, suppliers 54% and accounting 65%.

The average marketing intent of internal audit implementation effectiveness for each indicator at PT Sango Indonesia is an internal audit of 4, internal audit independence 4.2, internal audit competence 4.5, the scope of internal audit 4.2, audit program 4, internal audit program technical section 4.3, marketing department internal audit program 4.3, production department internal audit program 4, purchasing department internal audit program 4, inspection internal audit program 4, audit implementation 4.3, audit report 4.3 and follow-up 4.1, Thus the average category of audit effectiveness reporting the internal indicators for each are at an effective and very effective level.

A simple linear regression equation using program statistics found that internal audit had a significant effect on product quality with the indicator has been used, with equations  $Y = 4.843 + 0.122X + e$ , from the above equation that if  $X = 0$  (no internal audit) then the quality of the product is 4.843. Whereas if  $X$  is greater, the implementation of internal audit is getting better as well as the product quality is getting better too.

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