

QUALITY AWARENESS INCREASE WITH DMAIC APPROACH: A CASE STUDY IN AUTOMOTIVE PART MANUFACTURING IN INDONESIA

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ABSTRACT

Quality is very important at this time, particularly in the manufacturing industry. Continuous improvement of the quality greatly affects production. The purpose of the increase of quality awareness is setting ground rules, establish structures to prevent the outflow of defects to the market, build a structure to prevent the outflow defects to the next, keeping a job and standardized skills. Issues raised in this study were quality issues with some components of the production, which will focus on issues makure, Red Mark and Deform. The method used in this research is to use the approach of DMAIC (Define, Measure, Analyze, Improve and Control). From these studies can be concluded that there are two solutions obtained to overcome this problem is temporary and preventive action. For temporary customer that is reject part in exchange for good part and reject part of the internal customer and repair. And for preventive, one solution is the addition of the oil application standard stamping process and set forth in OPL (one point lecture).

Keywords: *quality, production, improvement, DMAIC*

I. INTRODUCTION

Indonesia is a country that has a lot of manufacturing companies that could be considered quite advanced with different kinds of products. Based on data released by the United Nations Statistics Division in 2016, Indonesia was ranked fourth out of 15 countries world manufacturing industry contributes to the Gross Domestic Product (GDP) of more than 10 percent. Indonesia is able to contribute up to 22 percent after South Korea (29 percent), China (27 percent), and Germany (23 percent) [1]. When viewed from the side of the growth of manufacturing value added (MVA), Indonesia occupies the highest position among the ASEAN countries. MVA Indonesia is able to reach 4.84 %, while in the ASEAN ranges from 4.5 %. At the global level, Indonesia is currently ranked 9th in the world [2]. It requires each company to benefit demonstrated not to compete with other companies.

These capabilities can be seen through the products and production activities undertaken [3].

Production activities should be carried out efficiently and effectively which considering the quality, cost, and time. Good quality, minimum cost and short lead times provide many benefits to the company. But of all the most important thing is the customer satisfaction with the products requested. Customer satisfaction depends on the quality of the products offered. Quality as a measure of the suitability of the products produced by the standards set companies in achieving the needs of consumers [4].

According to Crosby [5] quality is the ability of an organization to adapt to the requirements or its suitability for covering availability, delivery, reliability, maintainability and cost effectiveness of. Quality is an entity that can be achieved, measurable, profitable, commitment and understanding, as well as be prepared for hard work. Improvements made by the company to improve the quality of their products, especially the manufacturing industry. As one example of the improvements is to reduce product defects or defects and improve delivery performance. Reduce or even eliminate the defect (target zero defect) and performance delivery on the product very influential on customer satisfaction, because it proves our commitment to the customer. Targeted at the automotive industry is quality without compromise, the main focus is to make products according to customer expectations [6].

Each production activities do not always run smoothly as desired companies including the company we are going to research. The company is a manufacturing company engaged in the production of industrial components for the Automotive of Metal Parts. The problems of quality in the manufacturing industry, especially in the automotive sector is very diverse. Just as happened in company.

In figure 1 can be seen the total number of parts from several suppliers defect claimed by Toyota as a customer. Number of part defect in company in 2016 is 195 pcs. In the graph below it can be seen the trend of the number of spare defect during 2017.

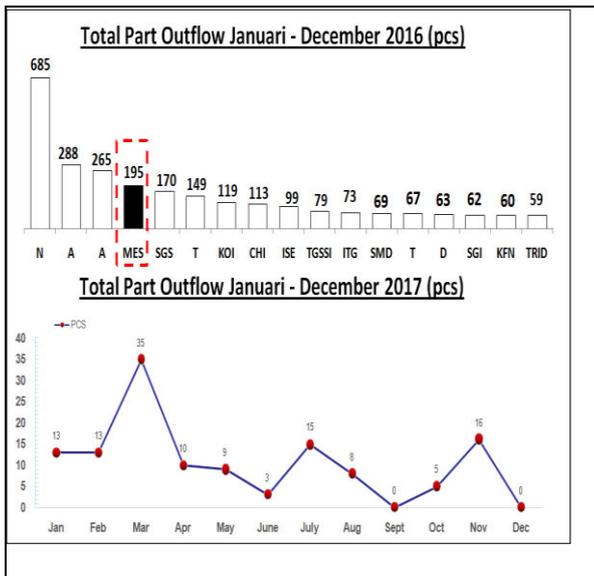


Figure 1. Part Outflow 2016 and 2017 (Source: Automotive part manufacturing in Indonesia)

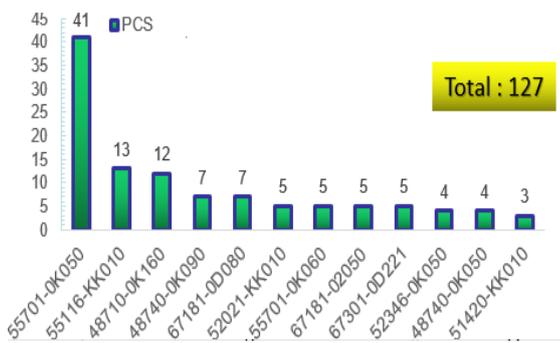


Figure 2. Trend Problem in 2017 (Source: Automotive part manufacturing in Indonesia)

In Figure 2. it can be seen that in 2017 there claims customers in terms of quality of product that is as much as 127 pcs for parts of one customer. With a spare part with the highest claim No. 55 701-OK050 with the claim amount as much as 41 pcs for 2017.

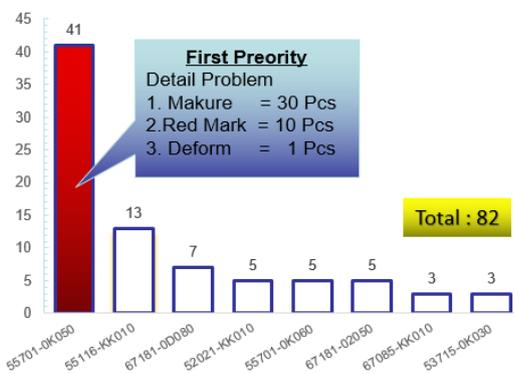


Figure 3. Number of Problem Details (Source: Automotive part manufacturing in Indonesia)

Problem part can be at the break down into three types, namely quality problems makure (uneven surface), red mark, and deform (dents). For more details can be seen in Figure 3. For makure problem as much as 30 pcs, problem red mark by 10 pcs and deform as much as 1 pcs.

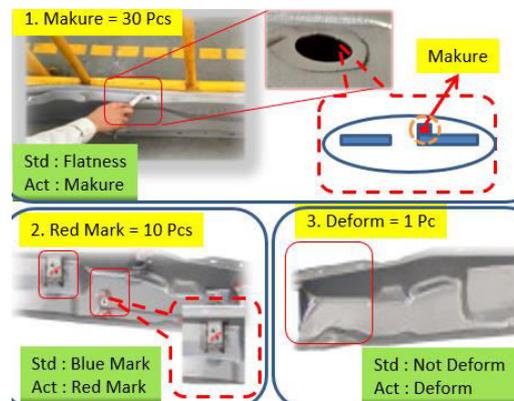


Figure 4. Part Problem (Source: Automotive part manufacturing in Indonesia)

Quality issues such as makure (uneven surface), red mark, and deform (dents) very annoying company to meet consumer demand. Therefore we need a quality control of the problems that occur in order to minimize the problems generated. The method used is DMAIC.

II. LITERATURE REVIEW

2.1 Quality

The term is often spoken in the quality of everyday life. But in practice, the notion of quality can be diverse. The quality is usually judged on appearance, performance, or compliance with the requirements or standards. For example, the products are considered qualified if exclusive, expensive, have higher accuracy than others, durable, more powerful, attractive or convenient to use. Examples of such understanding is not to blame, although it is subjective. Quality is based on the notion of individuals vary greatly depending on the angle of view of each. Likewise, according to the viewpoint of the quality of consumer and producer also different. Consumers are more oriented towards compliance while more manufacturers look conformity with the standards established [7].

Expectation term is defined as stated in the contract specifications and criteria should be defined in advance [8].

Quality is characteristic of the products and services that include marketing, engineering, manufacture, and maintenance, where such products and services in usage according to the needs and expectations of customers [4]. Control is direct activity, influence, verify, and repair to ensure the acceptance of specific products according to the design and specifications. According to this opinion can be seen that the quality control and management of engineering activities that are used to measure the quality

characteristics of the product and compare it with the specifications / standards have been set, if there is a difference between the actual specification of these characteristics with the appropriate corrective action [3]. Quality control (quality control) involves several activities, namely [9]: (a) Evaluating the actual performance (actual performance), (b) Comparing the actual target or targets, and (c) Taking action on the difference between actual and target.

Quality was assessed by multiple dimensions, according to David A. Garvin [10] the quality of the product can be measured with an 8-dimensional quality of the product, 8-dimensional quality of the product consists of: (1) Performance, the conformity of products with the main function of the product itself or the operating characteristics of a product. In connection with the functional aspects of the product and is the main characteristic that customers consider when you want to buy a product, (2) Feature, which is characteristic of a product that differentiates it from other products that are complementary characteristics and capable of causing a good impression for customers. A second aspect of the performance that adds value to the basic function, associated with piliha-choice development, (3) Reliability, namely customers confidence in the product because of reliability or because of the possibility of damage is low. In connection with the possibility of a product to function successfully in a certain period of time under certain conditions. Thus reliability are characteristics that reflect on the possible level of success in the use of a product, (4) Conformance, the conformity of products with specific requirements or the size or extent of the design and operating characteristics meet established standards. Conformity reflects the degree of product design characteristics and operating characteristics meet the standards that have been established, and is often defined as conformity to requirements (conformance to requirements). This characteristic measuring the amount or percentage of products that fail to meet a set of standards that have been established and therefore needs to be done reset or repaired, (5) Durability, namely the level of resistance / or long lasting product life of the product. These characteristics associated with the durability of a product, (6) Service ability, the ease of the product when it will be repaired or the ease of obtaining the product components, (7) Aesthetic, which is characteristic of the beauty that is subjective and personal consideration pertaining to or reflection of preferences or individual choice. Thus, the aesthetics of a product have more to do with personal feelings and includes certain characteristics, such as elegance, smoothness, melodious voice, and others, (8) Perception, that fanaticism consumers will brand a particular product because the image or reputation of the product itself. In connection with the customer's feelings by consuming products, such as improving

self-esteem. It can also be associated with the reputation characteristics.

According to Purnomo [11] stage in quality control activities contains the principles as follows: (1) Setting standards, taking into account the fulfillment of quality standards of price, quality, appearance, quality of product safety and quality confidence, (2) Observation of the performance of the product or process, (3) Comparing the performance displayed by the applicable standards, (4) Take measures where there are deviations that are significant, and if need be made of measures to correct the problem and its cause through the factors of marketing, design, machine, manufacture, treatments that affect customer satisfaction, (5) Improvement plans, by developing an ongoing effort to improve the standard of price, performance, security and trust.

2.2 Quality Perspective

Once known dimensions of quality, to know how a quality perspective, the approach used to realize the quality of a product. Garvin [10] identify their five alternative commonly used quality perspective, is as follows: (1) Transcendental Approach: According to this approach the quality can be felt or known, but it is difficult operationalized. Production planning functions and services of a company is difficult to use this definition as a basis management quality because it is difficult to design the product accordingly, (2) Product Based Approach: This approach considers quality as a characteristic or attribute that can be quantified and measured. The difference in quality reflect differences in the number of elements or attributes of the product. Because of this view is very objective, then it can not explain the differences in tastes, needs and individual preferences, (3) User Based Approach: This approach is based on the premise that the quality depends on the people who use them and the most satisfactory products a person's preference is a product of the highest quality. Subjective perspective and oriented demand is also stated that different customers have different needs and desires as well. Thus the quality of the person is the same as the maximum decision he felt: (1) Manufacturing Based Approach: This perspective is supply-based and especially pay attention to the practices of engineering and manufacturing, as well as defining the same quality with the requirements (conformance to requirements), (2) Value Based Approach: This approach views quality in terms of value and price. Taking into account the trade off between performance and price of products, quality is defined as "affordableexcellence". Quality in this perspective is relative to the product that has the highest quality product is not necessarily the most valuable [10]. However, the most valuable is the product or service that is most appropriate and purchased (best buy).

Basically modern quality system can be divided into three parts, as follows: (a) The design quality, that have the desire and expectations of customers and is economically feasible to produce, (b) Quality conformity

(conformance), which meets predetermined specifications, (c) Quality marketing and after-sales service.

2.3 Interest Quality Control

Support management, employees, and the government for the improvement of quality is essential for effective competition in the global market. To maintain consistency in the quality of products and services produced and in accordance with the demands of the market, it is necessary to control the quality (quality control) over the activity undertaken. Quality requires a process of continuous improvement (continuous improvement process) with measurable individual, corporate, and national performance objectives. The orientation of the company as a manufacturer in its quality policy is to customer satisfaction (customer satisfaction). By carrying out quality control as well as possible, the many advantages obtained by the company in this case, among others [12]: (1) Adding a level of efficiency and productivity, (2) Reducing losses (losses) in the process of the work done such as reducing product waste or eliminating time unproductive time, (3) Pressing charges (save money), (4) Keeping sales (sales) will still be increased so that the profit fixed obtained (increasing the potential competitiveness), (5) Adds to the reliability of the product, and (6) Fixing employee morale remains high.

Companies that have implemented quality control, and produce a quality product or service, will receive the title as an organization /company that prioritizes quality. Therefore, the company is well known by the public and get more value in the eyes of the public. Thus the level of trust of customers and society in general will grow and will be much appreciated. This will give rise to fanaticism of consumers against any of the products offered by these companies [12]. The purpose and benefits of controlling the quality: (1) to know what defects are the most happen; (2) to know how big the capability of the current production process to fulfill the criteria of the size of the goods demanded by the consumer; (3) know what factors are causing long defects; (4) find out the best solution to reduce the occurrence of long defects; (5) find out how much profit to be gained from implementation of recommended solutions [13].

2.4 D-M-A-I-C

Define-Measure-Analyze-Improve-Control (DMAIC) is one of the widely used in-house troubleshooting procedures issues of quality improvement and process improvement [14]. DMAIC is always associated with six sigma activity, and almost all six sigma applications use the DMAIC approach [13].

There are five steps called DMAIC (Define, Measure, Analysis, Improve, Control) [15]: (a) Define

(Definitions), the first operational step in a six sigma quality improvement program. Before defining the key processes and their customers in six sigma project. This phase is the phase of determining the problem, define customer requirements and build a team, (b) Measure (Measurement), a second operational steps in six sigma quality improvement program. This stage is to measure the level of disability and level of performance, (c) Analyze (Analysis), is the third step in a six sigma quality improvement program. This stage is the stage of looking for and determine the cause of a problem. Furthermore, the main root of a problem can be analyzed using cause and effect diagram / Ichigawa/ Fishbone and Failure Models and Effect Analysis (FMEA), (d) Improve, after the root cause of quality problems identified, it needs to be done to implement the action plan setting quality improvement. This stage is the stage of improving processes and eliminating the causes defects. In the stage Measure has been set variable factors for each response. At the stage of improve improvement strategies choose variable factors, (e) Control, is the last operational phase of the project six sigma quality improvement. At this stage the results documented and disseminated quality improvement, best practices successful in improving standardized processes and guidelines used as standard, as well as the ownership or the person in charge of the process, which means six sigma end at this stage. Phase Control is the phase control process performance and ensure defects do not appear. The most important tool used is a control diagram. The main function of the control diagram is as follows:

2.5 A3 Report

Troubleshooting tools come in many shapes and sizes. A3 report is based on the Plan-Do-Check-Act, a high-level problem-solving algorithms pioneered by Walter Shewhart in 1930 and later adopted by W. Edwards Deming in the year [16]. According Sobek [17], A3 Results (A3) is a tool that Toyota Motor Corporation is used to propose a solution to the problem, give a status report of ongoing projects, and report the results of information gathering activities. Toyota uses it to systematically guide the troubleshooter through a rigorous process, document the key outcomes of the process and propose improvements. This tool is used to form the key in the continuous improvement program the world-famous Toyota. Toyota calls this tool is A3. A3 report so named because it is written on A3 size paper (the metric equivalent of 11 "x 17"). Toyota has developed several types of A3 for different applications. We have adapted troubleshooting report for use by health care workers, who mostly do not have the technical or business background. A template for our version of problem solving A3 report can be obtained from the author. The report flows from top to bottom on the left side, then top to bottom on the right side. Explanations for A3 as follows [18]:

a. Theme & Background

Each report starts with a "theme" or the title. Scene shows the problem being addressed, and quite descriptive. The theme should focus on the problem, and does not advocate a particular solution. Next, the authors report A3 describes relevant background information that is important to understand the extent and significance of the problem. Items that may be included in this section is how the problem was discovered, why this issue is important for organizational purposes, the various parties involved, the symptoms of the problem, past performance or experience, organizational structure, and so on.

b. Current Conditions

This section is probably the most important part in the A3. The authors draw a diagram that illustrates how a system that generates problems while working. Problems highlighted in the diagram. Also, the author must measure the extent of the problem (eg, disability percent, hours of downtime, etc.), and display this information graphically or numerically somewhere in its current condition. Should be neatly drawn diagram will, and understandable to the reader knowledgeable. The data used to develop the current condition diagram is collected through direct observation. Deep and detailed understanding of the current process as it was actually done, not how it should be done or how someone says it's done, is really important. Workers and supervisors are often able to explain how the process usually works, or how it should work, but deviations from this general conception or hypothetical usually holds the key to addressing the problem. So the direct observation is needed. Data to illustrate the extent of the problem must also be the actual data, may be collected in a notebook if necessary, the allegations are not educated. Objectives diagram and measuring some problems:

- First, the act of drawing diagrams enable a deeper understanding of the help writers organize knowledge and lessons learned from the observations of the compact.
- Second, the diagram quickly and effectively communicate the core issues to others. Graphic media can contain very dense amount of information, but readers can pick it up quickly because of a pictorial representation.
- Third, the system diagram, problem-solving efforts focused on systems rather than people. The result is a more objective approach with less defensiveness and finger-pointing.

c. Root Cause Analysis

to analyze the root causes of problem occur.

d. Conditions Target

Toyota calls the improvement countermeasures (not everywhere "solution") because it implies that:

- we are against a particular issue
- that is what we will use now until we find a better reply. The goal is to move the organization closer to the ideal state delivers exactly what customers need, secure, if necessary, exactly the right amount, and without waste.

e. Implementation Plan

The implementation plan outlines the steps that must be done in order to realize the target condition.

f. Follow-up

This should include realistic and measurable predictions about how the new system will do.

g. reports the results of

This section adaptation system Toyota A3 report. Toyota troubleshooter prepare A3 status report for reporting the results of follow-up. It is quite extensive, including a list of shortcomings and plan to address them.

2.6 Definition of Quality Assurance and the factors (4M-1E)

Determine factors that cause defects in products, where the variables used Based on the provisions of 4M (Man, Material, Machine, and Environment) [18]:

1. Man, that is a factor:

- Discipline : discipline in the work that is in accordance with the labor standards that have been set.
- Attitude: responsible for what is done.
- Skill: the ability / skills possessed accordance with the field.

2. Facilities / Engineering, namely factors:

- Jig / Equipment: support tools to simplify the production process with good results and fast.
- Machine: the machine has a quality and advanced technology that will speed up the production process with quality results.

3. Methods / Method, which is a factor:

- Labor Standards: rules created as a guideline in the work.
- Quality Control: a control activities carried out in the production process to avoid larger deviations in the subsequent process.
- Treatment: scheduling maintenance on tools (machines, jigs and tools) on a regular basis.

4. Materials / Ingredients, namely factors:

- Direct Material Good: material / raw material in accordance with the standards.
- Indirect Material Good: The support material in accordance with standard

5. Environment / Environmental, ensuring quality by:

- Lay Out: layout of the work area a good, secure and comfortable makes it work.

III. METHODOLOGY

3.1 Scope of the Study

To focus the research efforts, the scope of the study is limited by the objects of research as follows:

Research Object

The object of this study is the data of the output. Characteristics of the quality of products for the automotive component defect characteristics that is limited to only three Makure, Red Mark and Deform.

3.2 Analysis Method

The method used is DMAIC is to make the A3report. A3 report provides a summary of the story of a system, or process problem. Generally A3 report is divided into:

1. Define
How a problem is identified and why it is said to be a problem.
2. Measure
Beginning of the current condition of a problem(current condition).
3. Analyze
How can these problems be investigated and what solutions are offered.
4. Improve
A plan of action to take for solving and preventing the repetition of the problem.
5. Control
How and when action follow-up will be performed.

IV. RESULT AND DISCUSSION

From A3 report research using the obtained results are as follows:

1. Phase Definition (Define)
 - a. Statement of the Problem
The company has set some standard specifications for product quality automotive components, in order to meet customer satisfaction. However, from a predetermined standard specification is still no production of the company has a disability or in other words do not meet the quality standards that have been set.
 - b. Objective
To ensure customer satisfaction for products produced while maintaining the quality, or even increase it and can reduce product defects that occur so that later losses due to defective products can be addressed by the company.
- Claim customer occurs because thefound part by problems in these areashole makure (sticking) number 30 pcs.
2. Phase Measurement (Measure)

In thephase Measure is determined Critical To Quality (CTQ) characteristics as a potential effect on the quality as well as directly related to satisfaction.

 - a. Determining Critical To Quality (CTQ)

The company have characteristics in product quality or Critical To Quality (CTQ) generated for disability automotive components, this study is limited to three characteristics, namely Makure, Red Mark and Deform.

- b. Knowing the sequence of potential CTQ



Figure 5. Example problem Makure

Table 1. The Critical To Quality Potential

No .	Defects Type	Num ber	Percentage of Total (%)	Cumulative Percentage (%)
1	Makure	30	73.2	73.2
2	Red Mark	10	24.4	97.6
3	Deform	1	2,6	100

Problem Description	
Standar	Actual

Figure 6. Comparison between Actual Image and Standar

In this point the current condition is described as the actual condition of the standard condition. In figure 7 it can be seen that actual products made by the company do not conform to the standards set by the customer.

3. Phase Analysis (Analyze)

The analysis is done by making the why-why analysis until the root of the problem for further improvement. Bringing the root of the problem is very important to get the right target solution.

Table 2. Analysis Using Why - Why Analysis

WHY OCCURRED (1)	<p><i>Why-why analysis</i> Part cowl hole macure is made ↓ when piercing process, hole pulled by punch ↓ Condition of piercing punch is rude ↓ Oil polishing application when piercing process isn't done consistently ↓ Standard of oil polishing not yet written in Work Instruction</p>	<p><i>Illustration</i></p> 
	<p><i>Why-why analysis</i> Part cowl hole macure detected at customer ↓ Not checked 100% appearance process stamping results ↓ The stamping process only checks at the beginning, middle and in the end.</p>	<p><i>Illustration</i></p>
<p>Root / Primary Causes of Problem</p> <p style="text-align: center;">Application of Use of Consistent and Consistent Oil in WI/Work Standard</p>		

From the why-why analysis in table 2, it is obtained root cause (root of problem) that is the application of inconsistent oil usage and not yet stated in work instruction or work standard.

4. Phase Improvement (Improve)

At this point the counter counter measure of the makure problem which includes temporary action and preventive action with the person in charge and time.

Table 3. Problem Analysis with 4M + 1E Checklist method

5A. INVESTIGATION OF PROBLEM (OCCURRED) (Man, Machine, Methode, Material, Environment)					
Factor	Subject	Point Check	Standard	Actual	STATUS
Method	WI	Oil polishing application in process	Penggunaan minyak pada proses camp pie setiap 20 pcs teruang di standard proses / WI	Use oil in the piercing process every 20 pcs is stated in standard process / WI.	✘
Machine / Tool	Punch proses camp pie	Condition Piercing Punch	Conditions of punch piercing should not have any scratches / rough	Piercing punch is rough	⚠
Material	Oil of material	Oil polishing application in process	Oil polishing application is done consistently	Oil polishing application isn't done consistently	⚠
Man	Operator	skill mapp	75%	75%	●
Env	n/a	n/a	n/a	n/a	n/a

Table 3. Problem Analysis with 4M + 1E Checklist method (continued)

5B. INVESTIGATION OF PROBLEM (FLOW OUT) (Man, Machine, Methode, Material, Environment)					
Method	Subject	Point Check	Standard	Actual	STATUS
Method	WI QC	point check	Check the stamping process results are done by the beginning, middle and in the end of process	Check the stamping process results are done by the beginning, middle and in the end of process	●
			Final Inspection do the point check Stamping/Welding	Check final inspection process only control at welding point	⚠
Machine / Tool	n/a	n/a	n/a	n/a	n/a
Material	n/a	n/a	n/a	n/a	n/a
Man	operator	skill mapp	75%	75% [at checking welding point]	●
Env	n/a	n/a	n/a	n/a	n/a

Information :

●	OK
⚠	Potentially Problem
✘	NG

Cause and effect analysis is done by observation related to this research, among others operators, maintenance department and responsible person of production To get result of analysis appropriate with research purpose, need data which have been collected in order to facilitate identify it then will be formulated improvement to overcome the root of the problem further. The cause is a factor of 4M, namely:

a. Human

Operators' disability will result if it is inconsistent in applying the oil to the sheet (sheeting).

b. Machine

The age of the machine is too old causing the machine condition cannot be predicted appropriately. Treatment must be often done by the engineering department, especially maintenance department at least once a week done in every day off work. Late in the provision of engine oil, especially on the conveyor is very influential on the decrease in engine speed, while checking the engine temperature must be maintained because it affects the quality of the product.

c. Method

The procedure for performing an appropriate action is inseparable from the management itself, the absence of a clear SOP on the rules of oil giving to the material and the implied omission in this case.

d. Material

Good and quality products depend not only on the ability and reliability of the engine to produce the desired output dimensions, but in terms of good material specifications coupled with engine reliability then quality product targets can be achieved. The company must be good at selecting material vendors so that the products are produced according to the specifications desired by the customer.

Table 4. Improve performed by the Operator

COUNTERMEASURE OF PROBLEM			PIC	Date
A. Temporary Action				
1. Replacement Part	: 1. Defect part in customer is exchanged with Part OK	Eris Logistic	3/3/2017	
2. Check stock at Factory	: 2. Defect Part from customer and internal findings in Repair. Quantity 100 pcs (OK) -> Quantity defect part in repair	Rory QC	03/03/2017	
B. Preventive Action				
1. The addition of standard oil applications to the stamping process and set forth in OPL (One Point Lecture)	# Oil polishing standart is every 20 pcs.	Eko P. Tulus Stamping	13/3/2017	
2. Tightening check point at problem positions from beginning, middle and the end to every 10 pos.		Eko P. Tulus Stamping	13/3/2017	
3. For item parts that often occur problem, done checking BCE (Beginning, Continue, End) @10 pos/BCE		Stamping QC	13/3/2017	

Improve Results

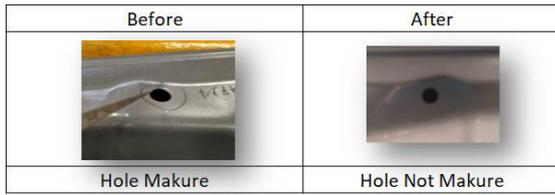


Figure 7. Comparison Before and After Improve

From Figure 7. it can be seen that after consistent oil feeding is poured in the process work standard and done consistently, the result of the process on the hole area appears to be flat (not sticking).

5. Control

Follow-up and monitoring are conducted on the basis of the person in charge (PIC) and the targets to be achieved. The leader group must ensure that its operators act according to the SOP (standard work process).

V. CONCLUSION

From the research can be concluded that there are two solutions obtained to overcome the problem is temporary and preventive action.

A. Temporary action:

1. Part NG in customer exchanged with OK part.
2. Part NG from customer and in internal should be repair.

B. Preventive Action

1. The addition of standard oil applications to the stamping process and set forth in OPL (One Point Lecture).
2. Tightening checkpoint checks in problem positions from Start, Middle, End to every 10 pcs.
3. For item part that often happened problem, done checking ACA (Beginning, Continue, End) @ 10 pcs / ACA.

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