CONDITION IDENTIFICATION FOR DEFINED SAMPLING PLAN

FINAL REPORT

This is Submitted to Fulfill Pre-Requirements of Industrial Engineering of International S-1 Program

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INDUSTRIAL ENGINEERING DEPARTMENT
FACULTY OF INDUSTRIAL TECHNOLOGY
ATMA JAYA YOGYAKARTA UNIVERSITY
YOGYAKARTA
2006
APPROVAL

Final Report of International S-1 Program
Title:

CONDITION IDENTIFICATION FOR DEFINED SAMPLING PLAN

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March 9, 2006

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INTERVIEW WITH GOD

I dreamed I had an interview with God.

"So you would like to interview me," God asked.

"If you have time," I said.

God smiled.

"My time is eternity...."

"What questions do you have in mind for me?"

"What surprises you most about humanity?"

God answered....

"That they get loved with childhood, they rush to grow up, and then long to be children again."

"That they love their health to make money, and then lose their money to restore their health."

"That they think anxiously about the future, they forget the present, and just live in neither the present nor the future."

"That they live as if they will never die and die as though they had never lived."

God's hand took mine and we were silent for awhile.

And then I asked.

"As a parent, what are some of life's lessons you want your children to learn?"

"To learn they can not make anyone love them."

"All they can do is let themselves be loved."

"To learn that it is not good to compare themselves to others."

"To learn to forgive by practicing forgiveness."

"To learn that it only takes a few seconds to open wounds and wounds in those they love, and it can take many years to heal them."

"To learn that a rich person is not one who has the most, but is one who needs the least."

"To learn that there are people who lose their hearts but simply do not know how to express or show their feelings."

"To learn that two people can look at the same thing and see it differently."

"To learn that it is not enough that they forgive one another, but they must also forgive themselves."

"Thank you for your time," I said humbly.

"Is there anything else you'd like your children to know?"

God smiled and said....

"Just know that I'm here."

"Always."
This final report is dedicated to:
Jesus Christ, my almighty God
My mom and dad, the best parents in the world
My beloved, Valentius Christian Susanto
My brothers and sisters
Tasha and Vania, my cute nieces
My best friends, Erna, Fani, Betzy, and Lolita
All of people I've ever known
I've been blessed to meet you all in this world
ACKNOWLEDGEMENT

Thanks to Jesus Christ, my Almighty God, for directing the best way for me and making everything beautiful in His time.

This final report is one of the pre-requirements to finish the undergraduate study program in Industrial Engineering Department, Industrial Technology Faculty, Atma Jaya Yogyakarta University.

I've been blessed to have so many people helping me on doing the research and finishing this final report. In this good opportunity, I would like to say thanks to:

1. Mr. Paulus Mudihartono, S.T., M.T., as the Dean of Industrial Technology Faculty, Atma Jaya Yogyakarta University.
2. Mr. Baju Rawano, S.T., M.T. as the Head of Industrial Engineering Department, Industrial Technology Faculty, Atma Jaya Yogyakarta University.
3. Mr. Parama Kartika Dewa Sf, S.T., M.T., as the Coordinator of International Program of Industrial Engineering Department, Industrial Technology Faculty, Atma Jaya Yogyakarta University. Thanks for the guidance and suggestions, especially on the topic idea.
4. Mr. Dra. Tgn. Luddy Indra Purana, M.Sc., as the adviser, who has spent his valuable time and effort to give guidance and directions during the research and final report.
5. Mr. V. Ariyono, S.T., M.T., as the cc adviser, who has spent his valuable time and effort to give guidance and directions during the research and final report.
6. Mr. Muzakki, as the Head of Quality Control Department of P.T. Mekar Armada Jaya, who has given opportunities for the writer to learn a lot about Quality Control.

7. My mom and dad, for sacrificing a lot of things to let me come in this way. Thanks for your unlimited love and support. Hopefully, I can make you proud and happy.

8. Engkong Ony Dhiam Hien, who has supported my tuition fee. I wouldn't come to this way if I don't have you.

9. My beloved Valentinus Christian Susanto, for your love, patience, and support. Thank’s for accompanying me in both good and bad times. Finding you is the best thing ever happened in my life.

10. My big family, brothers, sisters, and nieces. Your smiles and laughter encourage me in my hard times.

11. Oom Yayang, for riding me in from Jogja-Semarang (Back & forth) for many times. I owe so much to you.

12. All teachers, lecturers, laborants, and assistants who have given valuable lessons for my life. Thanks for helping me grow up.

13. My classmates, TIKI Batch 01 - 03, that I can't mention one by one. My special thanks to Lai pok pok (Kak Laifar), Cle Amanda, Three Mustkent's (Ronny, Alvin, Christian), Basketball-Pingpong-KS mania (Kichi, Arya, Yona, William, Doddy), the beautiful Putri, Weland, and 03 girls Gak (Princa, Betzu-Maru, Anna, Citra). Thanks for accompanying me during my study.

14. My partners in SNI Laboratory, Mr. Heri, Mr. Yudi, Mr. Iwan, Mr. Brillienda, Mr. Rudi, Mas Leo, Mas Agus, Vanny, Erika, Cle Wenny, Ko Marco, Mas Eko, Cle Rika, Mas Budi, Mbak Lia, Riccy, Freddy, Princa, Melia.
Ayung, Callista, and Febby. Thanks for sharing beautiful moments during 3 semesters I worked there.

15. Teater Lilin Family. I will miss you all.

16. My partners in Miracle Wedding Organizer, especially Cie Vivin, Cie Lia, Karina, Astrid, Van-Van, and Silvy. Thank’s for the great togetherness that we had.

17. My partners in Amour Party Planner, Ko Lingga, Ko Benti, Ko Ridwan, Ko Anri, Ko Boedan, Gembul, Christian, Lala, Budi ‘Mandarin Sedih’, Suke, and Tika. We’re indeed a great team.


19. Oom Keik and family, as the owner of my boarding house. Mbak Siti, Mbak Par, Mbak Tri, and Ibu Tum who has taken care of me for almost four years. My boarding house friends, Betzypute, Lolicutu, Ci Novy Gumbung, Erika, Nila, Dewi, Ci Vina, Tiia, Cindy, Ci Yoan, Ci Made, Ci Merry, Ratih, Ruth, Ci Ing, Lidya, Mia, and Ci Novy Sorong. All of you has made me feel like home.

20. My long distance-best friends, Erna Sardjono and Stefani Octavia, who has supported me via internet from Melbourne and Bali. Thank’s for remembering me always.

21. My best friends in Jogja, Lolicutu “the angel” and my gain-sharing mate Betzu-maru zy_zypute. Thanks for sharing everything with me (except boyfriend ^__^).

Hopefully, this report is useful for the readers. Critic’s and suggestion from the readers are very expected.

Yogyakarta, February, 11, 2006
The writer
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LIST OF SYMBOLS

1. AQL = Acceptable Quality Level.
2. LQL = Limiting Quality Level.
3. N = the lot size.
4. n = the sample size.
5. c = acceptance number.
6. sp = obtained from Grubb's Table, the nominator for calculating n in producer's stipulated plan.
7. sp = obtained from Grubb's Table, the nominator for calculating n in consumer's stipulated plan.
8. \( p_2 / p_1 \) = the ratio of LQL toward AQL.
9. \( \alpha \) = the expected producer's risk.
10. \( \beta \) = the expected consumer's risk.
ABSTRACT

The Stamping Production Division of P.T. Mekar Armada Jaya Magelang produces various kinds of car components. One of them is Reinforcement Rocker-Outer Left Handed (Y 2021), a component of Xenia, a car produced by P.T. Astra-Daihatsu Motor Jakarta. P.T. Mekar Armada Jaya has experienced in applying inappropriate sampling plan. The inappropriate sampling plan has caused invalid inspection result. P.T. Mekar Armada Jaya is changing the sampling plan with the new one, but considering the client's regulation to decrease the LQL value gradually until reaching zero level, the new sampling plan can not be the final solution. At a certain level of LQL, the sampling plan will be obsolescent and in turn will give invalid inspection result.

In order to avoid repeating the bad experience, the writer wants to find the affordable LQL limit for the current sampling plan through this research. The objectives of the research are finding the affordable LQL limits for the current sampling plan, alerting the obsolescence of sampling plan in order to avoid invalid inspection result, and preparing the factory to face the possibility of quality standard changing from the client. The method of the research is trial and error method.

It is found from the research that the current sampling plan will be valid for LQL value of 4.9% - 6.51%. For LQL value below 4.9%, P.T. Mekar Armada Jaya must start to do screening with acceptance number at least equal to 3.