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A STUDY ON THE CUSTOMER SATISFACTIONS ABOUT CASTING OF R.K FOUNDRIES

A PROJECT REPORT

Submitted by

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Reg. No. 0820400039

In partial fulfilment of the requirements

For the award of the degree

Of

MASTER OF BUSINESS ADMINISTRATION

JUNE-2010

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Coimbatore – 641 006

DEPARTMENT OF MANAGEMENT STUDIES

KUMARAGURU COLLEGE OF TECHNOLOGY (AUTONOMOUS)

COIMBATORE

BONAFIDE CERTIFICATE

Certified that this project titled "**A STUDY ON THE CUSTOMER SATISFACTIONS ABOUT CASTING OF R.K FOUNDRIES**" is the bonafide work of **Mr.N.RAJKUMAR** who carried out this project under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

Mrs. R.HEMANALINI

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Evaluated and viva-voce conducted on 14.06.10

Examiner I

Examiner II

R.K FOUNDRY

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TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr **.N. RAJ KUMAR (0820400039)** a student of KCT Business School, (a Group of Kumaraguru College of Technology, Coimbatore) has undergone three months project and training from 9th March, 2010 to 10th June, 2010. During his project work he exhibited high level of discipline and was sincere at his work.

We wish him success for his future.

For R.K FOUNDRY,

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DECLARATION

I hereby state that the dissertation report entitled "**A STUDY ON THE CUSTOMER SATISFACTIONS ABOUT CASTING OF R.K FOUNDRIES**" submitted in partial fulfillment for the award of **MASTER OF BUSINESS ADMINISTRATION** to the Anna University, is a record of independent research work carried out by me under the guidance of Mrs.R.Hemanalini, Lecturer Department of Management Studies, Kumaraguru College Of Technology, Coimbatore. I also declare that this dissertation report is result of my own effort and has not been submitted earlier for the award of any other Degree / Diploma / Associate ship and prize by Anna University or any other university.

Place: Coimbatore

N. Rajkumar

Date: 14-06-2010

N.RAJKUMAR

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EXECUTIVE SUMMARY

In this project, an attempt has been made to study of the customer satisfaction about the castings of R.K Foundries. This study has been conducted to analyze the customer opinion and satisfaction level with special reference to R.K castings. Customer satisfaction includes quality, delivery, cost, service, response time etc. There are large numbers of customers in Karnataka, Andhra Pradesh, and also in overseas, but this study has been conducted with special reference to satisfaction level of customers in Coimbatore district.

The research design used for the study was descriptive research design. It includes survey and fact-finding enquires of different kinds. The major purpose of descriptive research is description of the state of affairs, as it exists at present. The main characteristic of this method is that the researcher has no control over the variables; he can only report what has happened or what is happening.

The study is conducted by survey method using structured questionnaire with five point rating scale. Data was analyzed using simple percentage, cross tabulation and chi-square test. The questionnaire is based on multiple choices, close-ended and open-ended questions. The Secondary sources of data were collected through company profile, organization Website and journals.

The difficulty encountered while conducting the survey was time constraint and difficulty in getting appointments with customers, this study will constitute the entire population. Here the entire population is considered for my study because the population is limited, total population size is 70.

The study reveals that the customer's opinion about the overall service of the company is normal. A few areas of dissatisfaction are also identified and relevant suggestions are also made to improve sales.

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CHAPTER 1

1.1 BACK GROUND OF STUDY

For an organization the customer will plays a vital role ,this study which says like the customer satisfaction is one of the important strategy which make the organization healthy, from this study how the RK foundry which give customer satisfaction in terms of quality, price, and in customer growth and this ways analyzed from this study

1.1 LITERATURE REVIEW

If your customer is in trouble, then you're in trouble too." This message, relayed by **Richard Donnelly**, **GM Powertrain Div.**, tied in with the theme of this year's annual Foundry Educational Foundation (FEF) College-Industry Conference, "Engineering for Customer Satisfaction."

"Customer satisfaction is our whole reason for existence," said **Peter Carney**, Superior Graphite Co., one of 12 speakers at the conference. More than ever, customer satisfaction is the driver of business because there are more and better suppliers of castings worldwide, he said.

The contest will go to the metal casters who offer the technical expertise to develop new, cost-effective products, Carney concluded.

Customer satisfaction, according to **Gene Muratore**, QIT America, is defined as: meeting specifications; guaranteeing on-time delivery; providing value, not just price; and making a commitment to the industry's future.

Asking if tomorrow's foundry leaders are prepared for the challenge ahead of them, **Donnelly said**, "The first step is to believe in the crisis. Then join

in and tackle it head-on. Embrace change, be persistent and learn to operate in a system with a clear aim of adding value to the customer.

The standards for customer satisfaction keep changing," says **Warness**, "which makes customer satisfaction a moving target. What meets expectations today may not measure up tomorrow."

Warness says that constant change drives the aluminium casting operation to focus on three objectives internally. Pursuit of these objectives helps the organisation stay abreast of change and makes sure workers have the training and tools to respond to customer expectations. Warness says the three objectives are customer focus, customer expectation and customer satisfaction.

1.2 OBJECTIVES OF THE STUDY

This study is undertaken with the following objectives.

Primary Objectives

- To identify the satisfaction level of customers in Coimbatore district about the castings of R.K Foundries.

Secondary Objectives

- To identify the frequency of purchase, mode of purchase by the customer.
- To identify the customer opinion about quality of the R.K castings.
- To identify the competitors level.
- To find out the customer expectation from R.K castings.
- To identify the customer opinion about the price of R.K castings.
- To suggest the strategies for increasing the turnover of R.K Foundries.

1.3 SCOPE OF THE STUDY

Customer satisfaction is mainly achieved through two components:

1. **Product Features**

   The quality of design.

2. **Freedom from deficiencies**

   It has a major effect on costs through reduction in scrap, rework, and product complaints.

- A study on customer satisfaction helps the organization to understand each and every need of the customer.
- It assesses the preference of customers in choosing R.K casting.
- Helps the company to understand the efficiency of the service provided to the customers, so that it can create the basis for further improvement.
- The study helps to assess the real opinion and mindset of customers and aids to meet out their expectation in future. This in turn will increase the volume of sales.

1.4 LIMITATIONS OF THE STUDY

The study was carried out a over a period of three months in coimbatore district.

The study has the following limitations.

- The study was conducted only in Coimbatore district. This may not give a generalized conclusion.
- The respondents were less interested in answering the questionnaire, as they felt that it was an interruption to their regular work.

- The number of respondents was limited to 70 only.
- The analysis is based on the data provided by the respondents. The views of those who did not participate in the survey is not included.
- The conclusions are based on the opinions expressed by the customers. Hence they cannot be assured to unbiased or true representation of reality.

RESEARCH METHODOLOGY

Business research is of recent origin and is largely supported by business organizations that hope to achieve competitive advantages. Research methodology lays down the various steps that are generally adopted by a researcher in studying the problem.

Research methodology is a way to systematically solve the research problems. It may be understood as a science of studying how research is done scientifically. It includes the overall research design, the sampling procedure, data collection method and analysis procedure.

1.5 RESEARCH DESIGN

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.

There are three types of research designs. They are,

- Exploratory research design.
- Conclusive research design.

- Descriptive research design.
- Causal research design.
- Performance monitoring research.

The Research design used in this study was descriptive research design. It includes surveys and fact-finding enquiries of different kinds. The main characteristic of this method is that the researcher has no control over the variables; he can report only what has happened or what is happening.

1.6 SAMPLING DESIGN

POPULATION

The customers of R.K Foundries will constitute the entire population. Here the entire population is considered for my study because the population is limited. Censes method is adopted.

1.7 DATA COLLECTION

Data is recorded measure of phenomena. While deciding about the method of data collection, the researcher should keep in the mind about two types of data. They are,

- Primary Data
- Secondary Data

1.7 PRIMARY DATA

Primary data is the first hand information, which the researcher gets from the population. The tool for collecting primary data is "**Questionnaire**". These data are collected directly from the customers of R.K Foundries.

1.7.1 SECONDARY DATA

Secondary data has been collected from the journals, Magazines, Internet etc.

1.8 TOOLS USED

The tool used for collecting the primary data is "Questionnaire". The questionnaire was used to collect the bulk of data. Questionnaire is the set of questions put forward for the customers to answer. The required data was collected by using both open-ended and close-ended questions. This is a preferred technique for collecting the primary data.

1.9 PROFILE OF THE QUESTIONNAIRE

• OPEN ENDED QUESTION		3
• CLOSE ENDED QUESTIONS	❖ Multiple Choice	17
	Total questions	20

Format of the questionnaire can be seen in Appendix 1.

1.10STATISTICAL TOOLS

This researcher has used the following statistical tools:

1. Simple Percentage
2. Chi–square.

CHAPTER 2

INTRODUCTION

2.1 COMPANY PROFILE

R.K Foundries in short known as ' R.K.F ' was established in the year 1991. It is a large Ferrous Foundry setup located in Southern part of India, at a distance of 15 kilometers from the city of Coimbatore.

R.K.F went in to commercial production to meet the growing need for intricate castings of the region and of the country as a whole. The company is committed to high technology from the very start.

R.K.F over the years has grown to become the largest Jobbing Ferrous Foundry in Southern India, with production capabilities to turnout large volume castings of Grey Iron and Ductile. iron to the tune of 12000 metric tones per annum.

Today, the Foundry caters to the requirements of various segments ranging from Automotive, tractor, valve, Motor and Pump, Textile and General Engineering Industries. Apart from serving domestic market, R.K.F has gone global and has a strong international presence.

In its quest for excellence R.K.F continuously absorbs new technologies, adapts to changing customer Focus. This has made it ' the most dependable Foundry 'in Southern India.

Apart from the above, R.K.F today has a strong managerial man power heading various functional areas of Foundry operations and motivated employees on the whole to engineer the growth of the Foundry.

2.2 COMPANY HISTORY

- 1991 - Company constituted
- 1994 - Production started with a meager production of 100 Tons / month.
- 1996 - Rotary furnace installed, sand plant erected and production raised to 300 T/month.
- 1999 - Quality Management System certified to ISO 9002.
- 1999 - 1.5 T induction furnace and semiautomatic molding machines installed and production raised to 600 T/month.
- 1999 - Full fledged chemical / metallurgical lab developed.
- 2000 - Green belt developed for the betterment of environment.
- 2003 - Production increased from 600 T to 1000 T per month R.K.Fter installing of additional 1.5 T induction furnaces and molding machine.
- 2003 - Q M S certified to ISO/TS 16949 Automotive Standard.
- 2004 - Spectrometer installed.
- 2006 – Sufficiency in power achieved.

2.3 AWARDS

- R.K Foundries had bagged the '**BEST FOUNDRY AWARD**' for the year 2003 **'BEST PRODUCTIVITY AWARD'** for the year 1996 and 2004, instituted by the Institute of Indian Foundry men.
- It also bagged **'STATE LEVEL BEST OUTSTANDING ENTREPRENEUR AWARD'** for the year 1997 and 1998 from the Government of Tamilnadu, India.

- The foundry has bagged the **'ACCIDENTS FREE AWARD'** from the Government of Tamilnadu, India for the year 2002-03.

2.3 QUALITY POLICY

R.K Foundries desires to increase volume of production to meet customer requirements and achieve customer satisfaction through improved quality products, timely delivery and continual improvement of the quality management system.

2.4 FACILITY

Salient Features on the Facilities

- Installed capacity to produce castings to the tune of 12000 Metric Tones per annum.
- Total investment in the plant. (US$ 2 Million).
- Equipped with most modern George Fischer DISA make ARPA 300/450 simultaneous Jolt Squeeze molding machines to produce 100 moulds per hour in each machine.
- Size of molding boxes under production.
  a) 520mm X 400mm X 120mm / 200mm
  b) 520mm X 520mm X 120mm / 200mm
  c) 700mm X 650mm X 150mm / 300mm
- Equipped with Cold Box Core Shooting machines.
- Equipped with modern medium frequency induction melting facility
- Equipped with modern Testing facilities including physical, mechanical and Metallographic Check arrangements.
- Equipped with battery of Shot Blasting machines, Fettling and finishing facilities.

- Equipped with a sound pattern shop, having facilities to produce Metallic/Wooden Patterns/Core boxes to meet intricate requirements.
- The Foundry has required sophistication to meet Rigid Pollution Control Standards.

Laboratory and Testing Facilities

- Spectrometer and Wet analysis
- Physical and Mechanical testing like U.T.M., Hardness testing machine and Tensometer check machines.
- Metallography check arrangements
- Standards room for calibration of equipment and measuring instruments.
- Well equipped Sand Laboratory for checking various parameters of Molding sand during production.
- Digital equipment, predicting Liquid metal chemistry on the melt platform.

2.4.1 PRODUCT RANGE

Material Range in Production

- **Grey Iron: -** From low tensile to high tensile strength grades.
- **Ductile Iron:-**Pearl tic Ductile Iron to various ranges of Ferritic Ductile Irons.

Product categories

- R.K.F has the following range in their production line Automotive items like Brake Drums, Brake Discs, Hubs, Flywheels, Timing case, Oil sump and Gear Box Housings.
- Housings, castings for tractor application
- Valve body assembly castings

- Motor and pump castings
- Compressor part castings
- Castings for General Engineering Industries

Manufacturing capability

Line	Material	Piece Wt. Min/Max.	Minimum Order Quantity
Hand Molding	Grey / Ductile Iron	100 Kg to 1000 Kg	10 to 100 Nos / Month
Machine Molding	Grey / Ductile Iron	150 gms to 100 Kg	500 Nos to 1000 and above in large volume per month

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CHAPTER 3

ANALYSIS AND INTERPRETATION

3.1 ANALYSIS OF DATA

TABLE 3.1.1

FREQUENCY OF PURCHASE PER YEAR

S.No.	Frequency	No. of Respondent	Percentage
1.	More than once in a month	0	0
2.	Once in a month	16	22.9
3.	Once in two months	44	62.9
4.	Once in three months	9	12.9
5.	Once in three to six months	1	1.4
6.	Only once	0	0
	Total	**70**	**100.0**

From the analysis it is found that 22.9% of the respondents purchased once in a month, 62.9% of the respondents purchased once in two months , 12.9% of the respondents purchased once in three months and 1.4% of the respondents purchased once in three to six months per year, because the customers of the R.K foundries are medium based company and so the frequency of getting the project is most often for once in two months.

TABLE 3.1.2

MODE OF PURCHASE

S.No.	Mode of purchase	No. of Respondents	Percentage
1.	100% advance	1	1.4
2.	Partial advance	6	8.6
3.	Payment against delivery	32	45.7
4.	Documents through bank	14	20.0
5.	Open credit	17	24.3
	Total	**70**	**100.0**

It is found from the above analysis that 1.4% of the respondents purchased in the mode of 100% advance, 8.6% of the respondents purchased in the mode of partial advance, 45.7% of the respondents purchased in the mode of payment against delivery, 20.0% of the respondents purchased in the mode of documents through bank and 24.3% of the respondents purchased in the mode of open credit, because the damages are being verified by the customers and depending upon the damages the payment will be made and so mode of payment is against delivery.

TABLE 3.1.3

YEARS OF ASSOCIATION

S.No.	Years of association	No. of Respondent	Percentage
1.	Below 5 years	27	38.6
2.	5 to 10 years	38	54.3
3.	Above 10 years	5	7.1
	Total	**70**	**100.0**

From the analysis it is clear that 38.6% of the respondents have been purchasing since less than 5 years from the company, 54.3% of the respondents have been purchasing from 5 yrs to 10 yrs from the company and 7.1% of the respondents have been purchasing for more than 10 years from the company, because the development of pump motors companies are being increased in the last 10 years.

TABLE 3.1.4

TIME TO SUPPLY FIRST SAMPLE

S.No.	Period	No. of Respondents	Percentage
1.	Below 15 days	11	15.7
2.	16 days to 1 months	57	81.4
3.	1 month to 2 months	2	2.9
4.	Above 2 months	0	0
	Total	**70**	**100.0**

It is inferred from the above table that 15.7% of the respondents have received the first sample with in 15 days, 81.4% of the respondents have received the first sample from 16 days to 1 month, and 2.9% of the respondents have received the first sample between 1 month and two months from the date of supply of blue print, because R.K foundries is medium based company and there are lagging with advanced technology.

TABLE 3.1.5

NUMBER OF SAMPLES BEFORE APPROVAL

S.No.	Period	No. of Respondent	Percentage
1.	One	57	81.4
2.	Two	13	18.6
3.	Three	0	0
4.	Above three	0	0
	Total	**70**	**100.0**

From the above analysis that it is found that 81.4% of the respondents get only one sample before the approval for bulk supplies and 18.6% of the respondents get two samples before the approval for bulk supplies, because the cost requiring for making a single sample is huge so more number of samples could not be made out.

TABLE 3.1.6

SUPPLIES MADE

S.No.	Opinion	No. of Respondent	Percentage
1.	Always	5	7.1
2.	Most often	40	57.1
3.	Normally	22	31.4
4.	Not very often	3	4.4
5.	Rarely	0	0
	Total	**70**	**100.0**

It is found from the above table that 7.1% of the respondents stated that the company always supplied as per promised, 57.1% of the respondents stated that the company most often supplied as per promised, 31.4% of the respondents stated that the company normally supplied as per promised and 4.4% of the respondents stated that the company did not very often supplied as promised.

TABLE 3.1.7

OPINION ABOUT THE PRICE OF R.K CASTINGS

S.No.	Opinion	No. of Respondent	Percentage
1.	Very High	0	0
2.	High	3	4.3
3.	Normal	67	95.7
4.	Low	0	0
5.	Very low	0	0
	Total	**70**	**100.0**

It is clear from the above table that 4.3% of the respondents think that the price of R.K castings is high and 95.7% of the respondents think that the price of R.K castings is normal, because R.K casting is in the penetration stage so for meeting the competitive edge they have to set price as much as low, by this they can penetrate easily into the market.

TABLE 3.1.8

NUMBER OF OTHER CASTING SUPPLIERS

S.No.	No. of casting Suppliers	No. of Respondent	Percentage
1.	1 to 2	6	8.6
2.	3 to 5	27	38.6
3.	6 to 10	15	21.4
4.	Above 10	22	31.4
	Total	**70**	**100.0**

It is inferred from the above table that 8.6% of the respondents purchase from 1 to 2 other casting suppliers, 38.6% of the respondents purchase from 3 to 5 other casting suppliers, 21.4% of the respondents purchase from 6 to 10 other casting suppliers and 31.4% of the respondents purchase from more than 10 other casting suppliers.

TABLE 3.1.9

PERCENTAGE OF SHARE OF R.K FOUNDRIES AMONG CASTING PURCHASE

S.No.	Percentage of Share	No. of Respondent	Percentage
1.	0 to 10%	10	14.3
2.	11 to 25%	40	57.1
3.	26 to 50%	18	25.7
4.	51 to 75%	2	2.9
5.	76 to 100%	0	0
	Total	**70**	**100.0**

It is noted from the above table that R.K Foundries has, less than 10% share among 14.3% of responder, between 11 to 25% share among 57.1% responder, between 26 to 50% share among 25.7% responder, between 51 to 75% share among 2.9% responder, there are no customers where R.K Foundries enjoys the share of more than 76%,since because the amauran foundries is in the penetration stage and so percentage lies between 11 to 25%.

TABLE 3.1.10

SATISFACTION WITH QUALITY OF THE PRODUCT

S.No.	Opinion	No. of Respondent	Percentage
1.	Always	0	0
2.	Most often	19	27.2
3.	Normally	43	61.4
4.	Not very often	8	11.4
5.	Rarely	0	0
	Total	**70**	**100.0**

From the analysis it is noted that 27.2% of the respondents are most often satisfied with the quality of the product, 61.4% of the respondents are normally satisfied with the quality of the product and 11.4% of the respondents are not very often satisfied with the quality of the product.

TABLE 3.1.11

TYPE OF DEFECTS COMMONLY OBSERVES IN THE PRODUCT

S.No.	Type of defects	No. of Respondent	Percentage
1.	Blow hole	32	45.7
2.	Crack	33	47.2
3.	MNC	4	5.7
4.	Hard spot	1	1.4
5.	Others	0	0
	Total	**70**	**100.0**

It is inferred from the above table that 45.7% of the respondents have observed the defect of blow hole in the product, 47.2% of the respondents have observed the defect of crack in the product, 5.7% of the respondents have observed the defect of MNC in the product and 1.4% of the respondents have observed the defect of hard sport in the product, because they are lagging with advance technology so they are lagging with quality precision.

TABLE 3.1.12

REJECTION AT FIRST INSPECTION

S.No.	Type of Problem	No. of Respondent	Percentage
1.	Very often	40	57.2
2.	Often	28	40.0
3.	Not very often	1	1.4
4.	Rarely	1	1.4
	Total	**70**	**100.0**

From the analysis it is found that 57.2% of the respondents very often rejected the castings at first inspection, 40.0% of the respondents rejected the castings often at first inspection, 1.4% of the respondents rejected the castings at first inspection is not very often, and 1.4% of the respondents rarely rejected the castings at first inspection, because they are lagging with advance technology so they are lagging with quality precision.

TABLE 3.1.13

THE PERCENTAGE OF REJECTION OF CASTINGS

S.No.	Opinion	No. of Respondent	Percentage
1.	1 to 2%	3	4.3
2.	3 to 5%	32	45.7
3.	6 to 10%	35	50.0
4.	Above 10%	0	0
	Total	**70**	**100.0**

It is stated from the above table that 4.3% of the respondents rejected 1 to 2% of casting supplied by R.K foundries, 45.7% of the respondents rejected 3 to 5% of casting supplied by R.K foundries, 50.0% of the respondents rejected 6 to 10% of casting supplied by R.K foundries.

TABLE 3.1.14

RESPONSIVENESS TO MAJOR QUALITY PROBLEM

S.No.	Opinion	No. of Respondent	Percentage
1.	Immediately	20	28.6
2.	2 to 5 days	37	52.8
3.	6 to 10 days	13	18.6
4.	Above 10 days	0	0
	Total	**70**	**100.0**

It is observed from the above table that 28.6% of the respondents have felt that the company responds immediately to the quality problem, 52.8% of the respondents felt that the company responds with in 2 to 5 days and 18.6% of the respondents felt that the company responds with in 6 to 10 days to the quality problem.

TABLE 3.1.15

TIME TAKEN TO CORRECT PROBLEMS

S.No.	Opinion	No. of Respondent	Percentage
1.	1 Week	4	5.7
2.	2 weeks	42	60.0
3.	3 weeks	23	32.9
4.	Above 3 weeks	1	1.4
	Total	**70**	**100.0**

From the analysis it is found that 5.7% of the respondents feel that the company correct the quality problem within a week, 60.0% of the respondents feel that the quality problem is corrected within two weeks, 32.9% of the respondents feel that correcting the quality problem takes three weeks and 1.4% of the respondents feel that correcting the quality problem takes more than three weeks.

TABLE 3.1.16

SATISFACTION WITH THE OVERALL SERVICE PROVIDED BY THE COMPANY

S.No.	Opinion	No. of Respondent	Percentage
1.	Very highly satisfied	0	0
2.	Highly satisfied	7	10.0
3.	Satisfied	59	84.3
4.	Dissatisfied	4	5.7
5.	Highly dissatisfied	0	0
	Total	**70**	**100.0**

It is inferred from the above table that 10.0% of the respondents are highly satisfied with the service of company, 84.3% of the respondents are satisfied with the service of company and 5.7% of the respondents are dissatisfied with the service of company.

TABLE 3.1.17

READINESS TO RECOMMEND THE COMPANY

S.No.	Opinion	No. of Respondents	Percentage
1.	Definitely yes	0	0
2.	May be	70	100.0
3.	Definitely no	0	0
	Total	**70**	**100.0**

It is seen that no respondent is definitely willing either to recommend the company or avoid recommending the company to other. All the seventy respondents have given a neutral response saying that they may recommend the company to others.

3.2 CHI - SQUARE ANALYSIS

TABLE 3.2.1

PERIOD OF TAKING THE FIRST SAMPLE OF BLUE PRINT AND PERIOD OF RESPONSE WHEN PROBLEM OCCURS

(TWO-WAY TABLE)

S.No.	Period of taking first sample	Period of Response			
		Immediately	2-5 days	> 5 days	
1	< 15 days	2	8	1	11
2	16 days to 1 month	18	29	10	57
3	> 1 months	0	0	2	2
	Total	20	37	13	70

Null Hypothesis (H_0) - There is no significant relationship between period of taking the first sample from blue print and period of response when problems occur.

Alternative Hypothesis (H_1) - There is a significant relationship between the period of taking the first sample from blue print and period of Response when problems occur.

CHI-SQUARE (χ^2) CALCULATION:

Calculated χ^2 value	=	10.794
Degree of freedom	=	4
Table value	=	9.488
Significant result	=	Significant at 5% level

INFERENCE

From the above analysis, we find that the calculated value of $\chi 2$ is greater than the table value and hence, the null hypothesis rejected. So, there is a significant relationship between Period of taking the first Sample of Blue Print and Period of Response when Problem Occurs.

The period for making the first sample and the period of response when a quality problem occurs are both measures of the technical ability and customer focus of the organization. It is to be expected that these two factors are significantly related. This is confirmed by the $\chi 2$ test result.

TABLE 3.2.2

NUMBER OF SAMPLES AND RESPONSE PERIOD

S.No.	Number of Samples	Period of Response				Total
		1 week	2 weeks	3 weeks	>3 weeks	
1	One	3	39	14	1	57
2	Two	1	3	9	0	13
	Total	4	42	23	1	70

Null Hypothesis (H_0) - There is no significant relationship between the number of sample taken before approval for bulk supplies and period of response when major problems occur.

Alternative Hypothesis (H_1) - There is a significant relationship between number of sample taken before approval for bulk supplies and period of response when major problems occur.

CHI-SQUARE (χ^2) CALCULATION:

Calculated χ^2 value	=	10.393
Degree of freedom	=	3
Table value	=	7.815
Significant result	=	Significant at 5% level

INFERENCE

From the above analysis, we find that the calculated value of $\chi 2$ is greater than the table value and hence the null hypothesis is rejected. So, there is a significant relationship between number of samples before bulk supplies and period of response when problems occur.

Both the parameters are indicators of the technical capability of the organization. Hence it is to be expected that the responses are significantly related. This is confirmed by the $\chi 2$ test.

TABLE 3.2.3

SATISFACTION LEVEL AND REJECTION LEVEL

S.No.	Extent of satisfaction	Percentage of Rejection			Total
		< 5%	6-10%	>10%	
1	Satisfied	3	12	4	19
2	Moderately satisfied	0	18	25	43
3	Dissatisfied	0	2	6	8
	Total	3	32	35	70

Null Hypothesis (H_0) - There is no significant relationship between extent of satisfaction and percentage of rejection of all castings.

Alternative Hypothesis (H_1) - There is a significant relationship between extent of satisfaction and percentage of rejection of all castings.

CHI-SQUARE (χ^2) CALCULATION:

Calculated χ^2 value	=	14.962
Degree of freedom	=	4
Table value	=	9.488
Significant result	=	Significant at 5% level

INFERENCE

From the above analysis, we find that the calculated value of $\chi 2$ is greater than the table value and hence the null hypothesis is rejected. So, there is a significant relationship between extent of satisfaction and percentage of rejection of all castings.

It is to be expected that the satisfaction level of the customer with regard to the quality of the supplies depends on the percentage of rejection of supplies. This fact is confirmed by this $\chi 2$ test which concludes that is a significant relationship between the two factors.

TABLE 3.2.4

SATISFACTION LEVEL AND RESPONSE PERIOD

S.No.	Extent of satisfaction	Response period			Total
		Immediately	2-5 days	Above 5 days	
1	Satisfied	6	11	2	19
2	Moderately satisfied	12	21	10	43
3	Dissatisfied	2	5	1	8
	Total	20	37	13	70

Null Hypothesis (H_0) - There is no significant relationship between the extent of satisfaction and the response period for quality problems.

Alternative Hypothesis (H_1) - There is a significant relationship between the extent of satisfaction and the response period for the quality problems.

CHI-SQUARE (χ^2) CALCULATION:

Calculated χ^2 value	=	1.795
Degree of freedom	=	4
Table value	=	9.488
Significant result	=	Not Significant

INFERENCE

From the above analysis, we find that the calculated value of $\chi 2$ is less than the table value and hence, the null hypothesis is accepted. So, there is a no significant relationship between the extent of satisfaction and the response period for the quality problems.

It is seen from this $\chi 2$ analysis that the customers perceive quality problems as distinct from the speed of response to quality problems.

Taking in to consideration the previous analysis about satisfaction level and rejection rate, it can be inferred that the satisfaction level with respect to quality is influenced by rejection rate and not by the response period.

TABLE 3.2.5

SUPPLY AS PROMISED AND OVERALL SATISFACTION (SERVICE)

S.No.	Opinion	Level of satisfaction			Total
		Highly satisfied	Satisfied	Dissatisfied	
1	Always	2	3	0	5
2	Most often	2	35	3	40
3	Normally	3	18	1	22
4	Not very often	0	3	0	3
	Total	7	59	4	70

Null Hypothesis (H_0) - There is no significant relationship between respondent's opinion about the supply as promised by the company and the level of satisfaction about the overall service.

Alternative Hypothesis (H_1) - There is a significant relationship between respondent's opinion about the supply as promised by the company and the level of satisfaction about the overall service

CHI-SQUARE (χ^2) CALCULATION:

Calculated χ^2 value	=	7.327
Degree of freedom	=	6
Table value	=	12.592
Significant result	=	Not Significant

INFERENCE

From the above analysis, we find that the calculated value of $\chi 2$ is less than the table value and hence, the null hypothesis is accepted. So, there is a no significant relationship between respondent's opinion about the supply as promised by the company and the level of satisfaction about the overall service.

TABLE 3.2.6

PRICE AND OVERALL SATISFACTION

S.No.	Opinion about the price level	Level of satisfaction with service			Total
		Highly satisfied	Satisfied	Dissatisfied	
1	High	1	2	0	3
2	Normal	6	57	4	67
	Total	7	59	4	70

Null Hypothesis (H_0) - There is no significant relationship between the opinion about the price and the level of satisfaction about the overall service.

Alternative Hypothesis (H_1) - There is a significant relationship between respondent's opinion about the price and the level of satisfaction about the overall service.

CHI-SQUARE (χ^2) CALCULATION:

Calculated χ^2 value	=	2.001
Degree of freedom	=	2
Table value	=	5.991
Significant result	=	Not Significant

INFERENCE

From the above analysis, we find that the calculated value of $\chi 2$ is less than the table value and hence, the null hypothesis is accepted. So, there is a no significant relationship between opinion about the price and the level of satisfaction about the overall service.

TABLE 3.2.7

SATISFACTION ABOUT QUALITY AND OVERALL SERVICE

S.No.	Extent of Satisfaction with quality	Level of satisfaction with overall service			Total
		Highly satisfied	Satisfied	Dissatisfied	
1	Satisfied	2	15	2	19
2	Moderately satisfied	5	38	0	43
3	Dissatisfied	0	6	2	8
	Total	7	59	4	70

Null Hypothesis (H_0) - There is no significant relationship between the extent of satisfaction with quality and the level of satisfaction about the overall service.

Alternative Hypothesis (H_1) - There is close relationship between respondent's extent of satisfaction with quality and the level of satisfaction about the overall service.

CHI-SQUARE (χ^2) CALCULATION:

Calculated χ^2 value	=	9.585
Degree of freedom	=	4
Table value	=	9.488
Significant result	=	Significant at 5% level

INFERENCE

From the above analysis, we find that the calculated value of $\chi 2$ is greater than the table value and hence, the null hypothesis is rejected. So, there is a significant relationship between extent of satisfaction with quality and the level of satisfaction about the overall service.

CHAPTER 4

FINDINGS, SUGGESTION AND CONCLUSIONS

4.1 FINDINGS OF THE STUDY

- From the analysis it is found that 62.9% of the respondents are purchased once in two months per year.
- It is found from the analysis that 45.7% of the respondents are purchased in the mode of payment against delivery.
- From the analysis it is clear that 54.3% of the respondents are purchasing from 5 yrs to 10 yrs from the company.
- It is inferred from the analysis that 81.4% of the respondents have received the first sample of blue print from 16 days to 1 month.
- From the analysis that it is found that 81.4% of the respondents needed only one sample before the approval for bulk supplies.
- It is found from the analysis that 57.1% of the respondents stated that the company most often supplied as promised.
- It is clear from the analysis that 95.7% of the respondents think that the price of R.K castings is normal.
- It is inferred from the analysis that 38.6% of the respondents purchase from 3 to 5 other casting suppliers.
- It is noted from the analysis that 57.1% of the respondents had 11 to 25% of share in R.K casting.
- From the analysis it is noted that 61.4% of the respondents are normally satisfied with the quality of the product.
- It is inferred from the analysis that 47.2% of the respondents have observed the defect of crack in the product.
- From the analysis it is found that 57.2% of the respondents very often rejected the castings at first inspection.

- It is stated from the analysis that 50.0% of the respondents rejected 6 to 10% of casting supplied by R.K foundries.
- It is observed from the analysis that 52.8% of the respondent's felt that the company responds with in 2 to 5 days to the quality problem.
- From the analysis it is found that 60.0% of the respondents feel that the quality problem is corrected within two weeks.
- It is inferred from the analysis that 84.3% of the respondents are satisfied with the service of company.
- It is stated from the analysis that all the respondents have given a neutral response saying that they may recommend the company to others.
- There is a significant relationship between period of taking the first sample of blue print and period of response when problem occur.
- There is a significant relationship between number of samples before bulk supplies and period of response when problem occur.
- There is a significant relationship between extent of satisfaction and percentage of rejection of all castings.
- There is a no significant relationship between the extent of satisfaction and the response period for the quality problems.
- There is a no significant relationship between respondent's opinion about the supply as promised by the company and the level of satisfaction about the overall service.
- There is a no significant relationship between opinion about the price and the level of satisfaction about the overall service.
- There is a significant relationship between extent of satisfaction with quality and the level of satisfaction about the overall service.

4.2 SUGGESTION AND RECOMMENDATIONS

- The management needs to pay attention to the fact that 61.4% of the respondents feel that the quality of the product is normal. The management should take steps to increase the quality of the product.

- Care should be taken to improve the service efficiency that aids to retain the existing customers.

- The organization can also give more importance to increase the share of purchase by the customer.

- Company has to get periodical feedback from all its customers and it can track them constantly to know their queries.

- Efforts to be taken to popularize the product, product variants, product prices, product differentiation, service through appropriate publicity measures.

- The most of the respondents have observed the defect of blow hole and crack in the product, so the organization should take proper action to avoid this type of defects in the product.

- Nearly 40% of the customers rejected the castings often at first inspection, so the organization should take efforts to decrease the rejection through appropriate measures.

- Nearly 60% of the respondents felt that the organization can take two weeks to correct the quality problem, so the company can take care to minimize this response period.

- The responses of the respondents regarding the level of satisfaction of overall service are clustered in the satisfactory region. The management may take steps to convert these into highly satisfactory.

4.3 CONCLUSION

It is concluded that the satisfaction level of the over-all service does not depend on response time or price but depends on the level of satisfaction with quality. It is therefore clear that the customer's perception about service level depends on their perception about quality. It is also seen that satisfaction level with quality depends on the rejection rates experienced by the customers. Therefore the company should make efforts to ensure that the rejection level at the customer end is minimized. This will improve the customer's perception about quality as well as service level. Since the period of response and price levels do not influence perception about service level, it is adequate if the company maintains the present level but concentrate its effort in reducing rejections experienced by the customer.

APPENDIX

QUESTIONNAIRE

A STUDY ON CUSTOMER SATISFACTION ABOUT CASTINGS OF R.K FOUNDRIES, Coimbatore.

1. Name of the respondent :_____

2. Name of the company : _____

3. Frequency of purchase per year from R.K Foundries?

   ☐ More than once in a month ☐ once in a month
   ☐ Once in three months ☐ once in three to six months
   ☐ Only once

4. Mode of purchase?

   ☐ 100% advance ☐ Partial advance ☐ Payment against delivery
   ☐ Documents through bank ☐ Open credit

5. How long are you purchasing from this company?

   ☐ < 5 years ☐ 5 to 10 years ☐ > 10 years

6. How long do they take to give the first sample of your blue print?

   ☐ < 15 days ☐ 16 days - 1 month
   ☐ 1 month - 2 months ☐ > 2 months

7. How many times samples have to be supplied before approval for bulk Supplies?

   ☐ One ☐ Two ☐ Three ☐ > Three

8. Do you feel that the company makes supplies as promised?

   ☐ Always ☐ Most often ☐ normally ☐ Not very often ☐ rarely

9. What is your opinion about the price of R.K castings?

   ☐ Very high ☐ High ☐ Normal ☐ Low ☐ Very low

10. Other than R.K Foundries, how many other casting suppliers do you have?

    ☐ 0 ☐ 1 – 2 ☐ 3 – 5 ☐ 6 – 10 ☐ > 10

11. What is share of R.K Foundries among all your casting purchases?

☐ 0-10% ☐ 11 – 25% ☐ 26-50% ☐ 51-75% ☐ 76-100%

12. To what extent you are satisfied with the quality of the product?

☐ Highly satisfied ☐ satisfied ☐ moderately satisfied ☐ dissatisfied
☐ Highly dissatisfied

13. What type of defects you commonly observe in the products supplied by R.K Foundries?

☐ Blow hole ☐ Crack ☐ MNC ☐ Hard spot ☐ Others

14. How often the supplies from R.K Foundries are rejected at first inspection?

☐ Very often ☐ Often ☐ Not very often ☐ Rarely

15. What is the % of rejection of all castings supplied by R.K Foundries at various stages?

☐ 0% ☐ 1 – 2% ☐ 3-5% ☐ 6-10% ☐ >10%

16. Whenever a major quality problem is reported, how quickly R.K Foundries respond?

☐ Immediately ☐ 2 – 5 days ☐ 6-10 days ☐ >10 days

17. Whenever you report major quality problem in a product, how soon does R.K Foundries correct the problem?

☐ 1 week ☐ 2 weeks ☐ 3 weeks ☐ > weeks

18. Are you satisfied with the overall service of the company?

☐ Very highly satisfied ☐ Highly satisfied ☐ Satisfied
☐ Dissatisfied ☐ Highly dissatisfied

19. Will you recommend this company's products to others?

☐ Definitely yes ☐ May be ☐ Definitely no

20. What is your further expectation form this company?

From product: _____
From service: _____

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