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CONSTRUCTION INDUSTRY SURVEY AWARENESS REGARDING SIX SIGMA

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ABSTRACT

This study aims to determine the outcome of implementing Six Sigma in construction Industry. A survey of 30 construction companies in Nasik was conducted. And from that survey awareness regarding Six Sigma has been checked by Questionnaire Survey. Primary data were collected regarding Six Sigma. The questionnaires were collected and calculated based on Relative Importance Index methodology. The finding of the survey indicated that ignorance on planning and building regulations are critical variables which influence unauthorized siting of building. It is recommended that the contractors should be given regular public education on land use planning and the building regulations of Nasik.In future work on this concept is to be taken for the implementation to the real construction process.

Keyword: Construction industry, relative importance index, six sigma, Survey.

I. INTRODUCTION

In India construction industry in improving the social economic and environmental indicators of sustainability.Quality control in construction means ensuring the overall quality in construction with less effective materials and good workmanship in order to ensure the performance of the facility of building according to the design.Six Sigma has been implemented in the manufacturing and other services industries, it is still a relatively new concept in the building industry. Six sigma is a statistical problem solving methodology which reduces defects by ensuring the quality. Six Sigma is a quality improvement technique based on statistics was used firstly by Motorola in 1980s by Bill Smith of Motorola to decrease cost, increase quality by improving process and reduce the production time.

II. METHODOLOGY:

Analysis Method:

The aim of this present work is to find out the important factors affecting the construction techniques ie. Social economic and environmental aspects. The questionnaire interview was carried out among 30 construction companies in Nasik region of Maharashtra. The survey was carried out over a 2 months period between Novembers to December 2016 and each lasted approximately half hour. The questionnaire consisted of 15 questions related to Six Sigma and also the general information about their construction firms. These interviews was carried through face to face. This survey has attempted to cover site and office based operations of

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construction projects. The questions were related to cost, quality, time, customer satisfaction and need of six sigma and average ratings are calculated using RII methodology and then by the scour computed ranking will be done.

III. RII METHOD:

Relative Importance Index is a regression based index which summarizes the magnitude of socio economic status. RII is useful because it takes into account the size of the population and relative disadvantage experienced by different groups.

Relative importance index (RII) analysis is based on qualitative analysis. It is employed to measure the ordinal scale. In this study, five scale rating is used and weight is given below:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

Formula for calculating RII is;

$$RII = \sum W / (A \times N)$$

W= weight of scale

A= height weight

N= total number of respondents

IV. RESULT

Result shows that:

Questions	RII	Ranking
1. Do you think quality management is important in construction industries?	0.96	1
2. Do you think customer satisfaction is essential?	0.96	2
3. Labors in your industries have awareness of quality?	0.866667	3
4. Do you think skill labor is important in six sigma?	0.793333	4
5. Do you have awareness of six sigma in your company?	0.52	9
6. Which rank you will give for DMAIC used in six sigma?	0.453333	10
7. At what scale leadership is essential in six sigma for achieving positive results?	0.573333	6
8. When to considering employing participation in six sigma? How much employee participation in six sigma is important for getting positive result?	0.533333	7
9. At what scale leadership is essential in six sigma for achieving positive results?	0.58	5
10. Do you consider six sigma as a part of management system?	0.526667	8
11. Is six sigma more expensive than any other methods?	0.48	9

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V. CONCLUSION

From the overall survey carried it can be concluded that the entire survey needs to be focused and for the same experts opinion and views for the same should be taken into consideration, and also use of sustainable materials should be increased and social awareness should be create. From this survey it is seen that most of the construction firms are not aware of six sigma methodology and thus affects the quality and customer satisfaction.

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