QUALITY ASSURANCE FOR CONCRETE CONSTRUCTION

INTRODUCTION

- Maintenance of standards of quality of manufactured goods
- It is a management system
- It increases the confidence that a material used in construction

NEED FOR QUALITY ASSURANCE

- To promote next generating scheme
- For reputation & professional satisfaction
- Quality of work for future sales
- To procure future contracts
- Trouble free use & low maintenance cost
- Good performance & appearance

DESIGN FAULTS IN CONCTERE CONSTRUCTION

- Misinterpretation of the client's needs
- Lack of good communication between members of the design team
- Misinterpretation of design standards or codes of practice
- Use of incorrect or out-of-date data
- Imprecise specification

CONSTRUCTION FAULTS IN CONCRETE CONSTRUCTION

- Misinterpretation of design drawings or specifications
- Lack of effective communication with suppliers & subcontractors
- Inadequate on-site supervision
- Poor workmanship due to inadequate skills
- Failure to understand the design principles

REASONS FOR POOR QUALITY CONSTRUCTION

- Poor materials
- Poor architectural or structural design
- Poor detailing of reinforcement
- Poor workmanship
- Cement content – It should be minimum of 300 kg per cubic meter of concrete
- Excess water to cement ratio – It should not exceed about 50% of the weight of cement.
- Inadequate compaction of concrete
- Inadequate curing of concrete
- Inadequate cover to reinforcement
- poor or no supervision
- Lack of technical knowledge of the building contractor and his supervising team
- Poor maintenance

PREMATURE DETERIORATION OF CONCRETE

- Freezing & thawing
- Aggressive chemical exposure
- Abrasion
- Corrosion of steel
- Chemical reactions of aggregates