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## Key Note Address

*By*

Engr. E.I. Johri

*Convener*

### **Evaluation of Mortar/Concrete Mix-Ratio Analysis Methods**

*by*

**Dr. Irshad Ahmad**

Methods have been explained for estimating the cement content in a mix. Relative advantages of different methods have been given.

### **Quality Control and Construction Materials**

*by*

**Mr. M. Afzal Bhatti**

Quality Control for industrial and technical activities is essential. Q.C. activities are contributing towards reducing the probabilities of failures. He says Quality Function is the entire collection of activities through which we achieve "fitness for use" and its advantages are numerous.

### **Material Prospection for Dams**

*by*

**Dr. Izhar-ul-Haq**

Detailed procedure is given for Prospecting the materials. After preliminary exploration, different materials are tested and necessary tests have been given.



## **Quality Control in Pakistan Industries—Present Situation**

*by*

**Engr. Anwar Saleem**

He has discussed the historical background of quality control. The concepts of Statistical Quality Control and Total Quality Control have been elaborated. American & Japanese approaches towards TQC have been discussed. Three types of QC systems have been explained.

Creating corporate culture through TQC and role of three tiers of management have been spelled out.

He recommends holdings of seminars, training in Q.C. procedures and built in incentives to achieve minimum level of Q.C.

## **Quality Control Programme in the Construction of a Nuclear Facility**

*by*

**Mr. M. Shafqat Rabbani**

Construction of nuclear facility should have highest quality controls with an assurance to have safe operations. The documentation, procedures, tests, equipment and inspection procedures have been explained in detail.

## **Effectiveness of Pakistan Steel's Slag in Controlling Alkali-Silica reaction**

*by*

**Mr. Ghulam Hassan**

Sometimes siliceous rocks and minerals react with cement alkalies and then damage concrete. One method to control this deleterious reaction is use of blast furnace slag. It has been recommended that Alkali silica reaction could be controlled by partial replacement of cement with Pakistan Steels' slag at the cost of a slight decrease in compressive strength of concrete/mortar.

## **Improved Cast Irons in the Service of Engineers**

*by*

**Mr. J. K. Jaffri**

The paper reviews the recent developments for modification and strengthening of Cast Iron. By carefully controlling the shape and form of flakes of graphite major improvements in the properties of Cast Irons could be made. About 90% parts of automobiles and tractors could be manufactured out of gray cast iron and ductile iron castings with trained manpower, laboratory facilities, process control and attention to details.