

### **EVALUATION CRITERIA**

CRP certification will be based on a comprehensive evaluation program. An examination will be conducted on the last day for duration of 3 hrs. Participants will be evaluated on their conceptual understanding of the various Reliability techniques and overall involvement during the five day program. Candidates who qualify to the requisite percentage of marks will be awarded the CRP certificates.

### **NOTE**

Participants are requested to **bring Scientific Calculator** for the training programme. Comprehensive Course notes will be provided to the participants. Working lunch, Tea and Snacks will be provided.

Participants have to make their own arrangements for accommodation.

### **SCHEDULE**

Training program duration - 5 days (10.00 AM to 05.30 PM)  
Registration (DAY ONE) - 09.45 to 10.00 A.M.

### **VENUE:**

**CENTRE FOR RELIABILITY, CHENNAI**  
**LANDMARK: SRP TOOLS Junction & Bus Stop, RAJIV GANDHI SALAI (OMR)**

### **COURSE FEE**

**Rs.20,650/- (17,500/- Plus 18% GST Rs.3150/-) per participant which can be paid through Bharat Kosh in the first instance. In case it fails, payment can be made by way of NEFT/EFT/RTGS funds transfer.** 10% concession will be offered, if 3 or more participants are nominated from the same organization. Centre For Reliability (CFR) being a Govt. of India organization, Our GSTIN is 33AAAGC0894D1ZV and SAC Code is 998349.

### **IMPORTANT NOTICE**

**NO INCOME TAX shall be deducted at source for any payment made to it, in terms of SECTION 196 OF INCOME TAX ACT, 1961.**

### **ORGANIZATIONS PARTICIPATED**

BEL, HPCL, MRPL-ONGC, IGCAR, C-DAC CRL, IOC, HAL, MECON, RDSO, DRDO, NIOT, NPOL, NSTL, NTG, DGQA, NPCIL, Konkan Railway, Pricol, NLCL, LMW, SAC, NRSA, VSSC, , DRDL, DLRL, TCS, ECIL, IIPM, NTPC, L&T, ISPAT, HCL Technologies, Emerson Power, ECDS-Venture Lighting, HBLNIFE, Kernex Microsystems, Merlinhawk Aerospace Industries, Mahindra & Mahindra, Whirlpool, Crompton Greaves, FAIVELY, Cummins, TAFE, TVS Electronics, INTEL, Luminous Power Tech. Ltd., Centum Electronics, Individual Professionals, Quality and Reliability Consultants from India and Abroad have also participated in this program.

## **5-Day Training Program**

# **CERTIFIED RELIABILITY PROFESSIONAL (CRP)**

**Date: 02-06 December 2019**

**at Centre For Reliability, Chennai  
(105<sup>th</sup> Batch)**

**Conducted by**

**CENTRE FOR RELIABILITY**  
**STQC Directorate, Government of India**  
**Ministry of Electronics & Information Technology (MeitY)**  
**VSI Estate, Near Lattice Bridge, Thiruvanniyur**  
**Chennai – 600041.**  
**Landmark: SRP Tools Junction in OMR**  
**Phone: 24547797/98/99, 24543792 Fax: 24543713**  
**Email: [cfr@stqc.gov.in](mailto:cfr@stqc.gov.in)**  
**Web site: <http://www.stqc.gov.in>**

## **INTRODUCTION**

Reliable products and services prioritize customer's choice which is the direct outcome of informed decisions and systematic application of state of the art tools and techniques right from the conceptual stage. Reliability analysis and defining scope for improvement is essential for very survival of the Organization. Continuous improvement in product's reliability earns good will and enhances customer base. Thus there is a strong need for a work force proficient in the principles and practices of reliability engineering in order to create a brand image for the products and services.

Proficiency in application of Reliability Tools and Techniques is a key to the progress of any organization. A Certified Reliability Professional will frame and supervise the implementation of the activities to achieve the Reliability goals set by the Organization using the tools and techniques learnt in this training programme. Certification is an investment in the career of the employees and in the future of the organization.

Centre For Reliability (CFR) has designed a five-day exhaustive training program on Reliability Engineering Tools and Techniques focusing on all the essential topics such as Reliability Prediction, Design Reliability Assessment & Improvement, Reliability Testing & Screening and Maintainability & Availability of the product. **The body of knowledge is based on the Certified Reliability Engineer (CRE) program of American Society for Quality (ASQ), USA.** An examination will be conducted at the end of the program and successful candidates will be issued Certified Reliability Professional (CRP) Certificate.

## **OBJECTIVE**

- To impart knowledge to the participants in the field of Product Reliability, Availability, Maintainability and Safety.
- To certify the expertise of professionals in the area of Reliability Engineering.

## **BENEFITS TO THE PARTICIPANTS AND ORGANISATION**

A CRP is an asset to the organization  
Certification is a mark of Excellence  
Widens customer base  
Reduction in warranty cost  
Improves reputation and market value  
Will have an edge over other companies

## **TOPICS**

### **1. Design Reliability Techniques**

1. Reliability Engineering- Overview
2. Reliability Prediction (Parts Count and Parts Stress Method)
3. Failure Mode Effects & Criticality Analysis (FMEA & CA)
4. Fault Tree Analysis (FTA)

### **2. Reliability Statistics**

1. Reliability Statistics
2. Life Time Distributions
3. Reliability Characteristics - Estimation

### **3. Reliability Testing**

1. Design Reliability Development Testing (HALT, HASS, Burn-in, FRACAS)
2. Reliability Demonstration Testing (Compliance, Determination, MTBF Range Determination)

### **4. Accelerated Reliability Testing**

1. Accelerated Reliability Test Models
2. Reliability Parameter Estimation
3. Accelerated Life Test and Analysis

### **5. Life Data Analysis**

1. Field failure Data Analysis
2. Warranty determination and Analysis

### **6. Maintainability and RCM**

1. Maintainability Prediction
2. Reliability Centered Maintenance

## **FACULTY**

Faculty are from CFR Chennai, who are professional scientists/engineers trained in India & abroad. Each faculty has rich experience in handling projects for more than 28 years. The faculty is Certified Reliability Engineers (CRE) from ASQ, USA.

## **WHO SHOULD ATTEND**

System & Design Engineers, Quality & Reliability Professionals, Production & Maintenance Managers, freelance Quality & Reliability consultants, budding Engineers and Research scholars can participate in this program.

## **METHODOLOGY**

Intensive Lectures, highly interactive sessions and case studies on various topics on Reliability Engineering