

# **Seismic qualification of electrical cabinet (in Times New Roman, sentence case, font size 14 bold, single column, centred)**

**R. Panneer Selvam\* and R. Ramesh Babu\*\* (in Title case, Times new Roman, bold, font size 12, single column, centered, sentence case)**

*The abstract should be clear, descriptive, self-explanatory and no longer than 200 words. It should also be suitable for publication in abstracting services. Do not include references or formulae in the abstract (in Times New Roman, Italics, normal, font size 12, single column, cente, sentence case)*

**Keywords:** *maximum 8 words ( in, Times New Roman, Italics,normal, font size 12, single column, centered , sentence case)*

## **1 INTRODUCTION (in Times New Roman, normal, font size 12, double column, upper case, bold)**

An earthquake is the sudden, (in Times New Roman, normal, font size 12, double column, justify, sentence case, single line spacing, and double line spacing between paragraphs.)

## **2 TRI-AXIAL SHAKER SYSTEM AT CPRI (in Times New Roman, normal, font size 12, double column, justify ,upper case, Bold)**

Earthquake engineering laboratory.(in Times New Roman , normal, font size 12, double column, justify, sentence case, single line spacing, and double line spacing between paragraphs.)

In equation editor only.

$$P = \frac{E \times V_s}{Z} \times \cos(\theta_z - \delta) - \frac{E^2}{Z} \cos(\theta_z) \dots (1)$$

Where,

$$Z = \sqrt{R^2 + X^2}$$

$$\theta_z = \tan^{-1} \frac{X}{R}$$

P=Power (W)

$V_s$  = Voltage(V)

Z=Impedance( $\Omega$ )

## **SEISMIC QUALIFICATION OF ELECTRICAL CABINET. (In Times New Roman, normal, font size 12, double column, justify ,upper case, bold)**

Electrical cabinets are widely used in power control systems.

### **3.1 Mounting**

At most care is taken to ensure that mounting .



**FIG.1 ELECTRICAL CABINET MOUNTED ON TRI-AXIAL SHAKE TABLE**

\*Designation, department, address, pin code, e-mail id, contact number.(in title case, normal, font size-12,centered)

### 3.2. Recommended Test Procedure

The steps involved in the seismic qualification. (in Times New Roman, normal, font size 12, double column, justify, sentence case, single line spacing, and double line spacing between paragraphs.)

### 3.3 Resonance Search Test (Before Seismic Test)

The electrical cabinet is mounted on the shake table.

TABLE 1		
RESONANT FREQUENCIES RECORDED BEFORE SEISMIC TEST		
Sl. No.	Axis	Resonance frequencies, Hz
1	longitudinal	5.0
2	transverse	6.5
3	vertical	41.0

### 3.4 Seismic Qualification Test

The Electrical cabinet with critical equipments (in Times New Roman, normal, font size 12, double column, justify, sentence case, single line spacing, and double line spacing between paragraphs.)

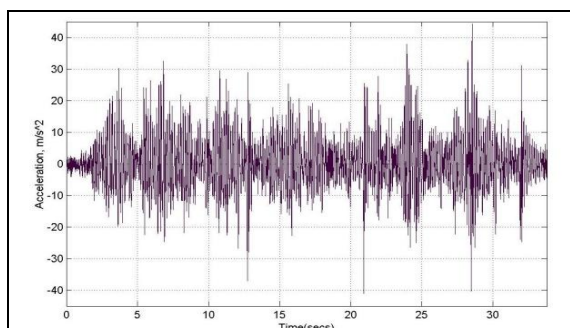


FIG.3 TIME HISTORY OF ACCELERATION RECORDED DURING SEISMIC TEST, PEAK VALUE = +44.311 AND -41.022  $m/s^2$

## 3 CONCLUSIONS

The main conclusions are, (in Times New Roman, normal, font size 12, double column, justify, sentence case, single line spacing, and double line spacing between paragraphs)

- 
- 

## 4 ACKNOWLEDGEMENT

The authors gratefully acknowledge the encouragement of Shri. N. Murugesan, Director General, CPRI in bringing out this technical paper.

## 5 REFERENCES

### Articles in Journals:

- [1] R S Gorur, G G Karady, A Jagota, M Shah and A M Yates, Ageing in Silicone Rubber used for Outdoor Insulation, IEEE Trans. PD, Vol 3, pp. 525-526,1992.

### Working Papers and Thesis:

- [2] R S S Aradhya, Studies of pollution performance of Metal Oxide surge Arresters, PhD dissertation, Indian Institute of Science, Bangalore,1993.

### Books:

- [3] S Penn and TT Chiao, Epoxy resins, in Handbook of Epoxy resins, Ed by Lee H and Neville K, McGraw Hill, New York, p. 69 (1967)
- [4] Conger, A Jay, and R N Kanungo, 1988, Charismatic Leadership in organisations, Thousand Oaks, California: Sage Publications, p. 430-436

### Websites:

- [5] Gerwig K, and R Carlson, 2001, AT&T Comcast: Dividing their businesses to conquer, Current Analysis, Dec.20

<http://www.currentanalysis.com/currentcomplete/everview.cfm?reportid=6744&nav=1>. Last accessed on Jan 24, 2004.

**Biographical information must be a separate word file and not part of the file containing the main paper:**

High resolution digitally clicked photograph (not scanned) in Jpeg format and 40 to 50 word information about author(s).