

BUREAU OF INDIAN STANDARDS

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**मसौदा भारतीय मानक
मूल कारण विश्लेषण (आरसीए)**

Draft Indian Standard
Root cause analysis (RCA)

ICS 03.120.01

Dependability of Electronic, Electrical
Components, Equipment and Systems
Sectional Committee, LITD 02

Last Date for Comments: 20 October 2023.

NATIONAL FOREWORD

(Formal clauses will be added later)

This draft Indian Standard which is identical with IEC 62740:2015 ‘Root cause analysis (RCA)’ issued by the International Electrotechnical Commission (IEC) will be adopted by the Bureau of Indian Standards on the recommendations of the Dependability of Electronic, Electrical Components, Equipment and Systems Sectional Committee and approval of the Electronics and Information Technology Division Council.

The text of IEC Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions and terminologies are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words ‘International Standard’ appear referring to this standard, they should be read as ‘Indian Standard’, and
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their respective places, are listed below along with their degree of equivalence for the editions indicated. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

International Standards	Corresponding Indian Standard	Degree of Equivalence
IEC 60050 (all parts) International Electrotechnical Vocabulary	IS 1885 (all parts) Electrotechnical vocabulary	Identical

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2:1960 ‘Rules for rounding off numerical values (*revised*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Scope of IEC 62740:2015 is as follows:

This International Standard describes the basic principles of root cause analysis (RCA) and specifies the steps that a process for RCA should include.

This standard identifies a number of attributes for RCA techniques which assist with the selection of an appropriate technique. It describes each RCA technique and its relative strengths and weaknesses.

RCA is used to analyse the root causes of focus events with both positive and negative outcomes, but it is most commonly used for the analysis of failures and incidents. Causes for such events can be varied in nature, including design processes and techniques, organizational characteristics, human aspects and external events. RCA can be used for investigating the causes of non-conformances in quality (and other) management systems as well as for failure analysis, for example in maintenance or equipment testing.

RCA is used to analyse focus events that have occurred, therefore this standard only covers a posteriori analyses. It is recognized that some of the RCA techniques with adaptation can be used proactively in the design and development of items and for causal analysis during risk assessment; however, this standard focuses on the analysis of events which have occurred.

The intent of this standard is to describe a process for performing RCA and to explain the techniques for identifying root causes. These techniques are not designed to assign responsibility or liability, which is outside the scope of this standard.

NOTE– The Technical content of this document has not been enclosed as these are identical with the corresponding IEC Standard. For details please refer IEC 62740:2015 or kindly contact.

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