Asigurarea Calităţii – Quality Assurance, ISSN 1224–5410
Vol. XVI, Issue 64, October-December 2010
Pages 30 - 32

Utilizarea analizei defectărilor la construirea și evaluarea fiabilității componentelor și sistemelor electronice

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Abstract
Failure analysis (FA) is the process of determining the cause of failure, collecting and analysing data, and developing conclusions to eliminate the failure mechanism (FM) causing specific device or system failures. Why it is so important to use FA, i.e. to know the cause of product failure, this is what we intend to describe in this paper. Reliability analysis is not at all the only 'customer' of FA. Other fields, such as business management and military strategy are using this term. In order to offer to the reader a more complete picture, we identified the possible applications of FA in various fields (industry, research, etc.), which are detailed in the paper.

Keywords: failure analysis, reliability, failure mechanisms, physics of failure.

References:

[1] T. Băjenescu, M. Bâzu, Component Reliability for Electronic Systems, Artech House: Boston and London, 2009.
[2] S. Venkataraman, „Diagnosis Meets Physical Failure Analysis: What Is Needed to Succeed?“, Proceedings of IEEE ITC International Test Conference 2004, pp. 1442-1445.
[3] D.P. Dennies, „The Organization of a Failure Investigation“, Journal of Failure Analysis and Prevention, Vol. 2, No. 3, June 2002.
[4] M. Bâzu, T. Băjenescu, „About Reliability Modelling of Electronic Components and Systems“, Quality Assurance, Anul XVI, No. 61, Ianuarie-Martie 2010.
[5] W. Kuo, H. Oh, „Design for Reliability“, IEEE Trans. on Reliability, Vol. 44, No. 2, June 1995, pp. 170-171.
[6] M. Bâzu, „A Combined Fuzzy Logic and Physics–of–Failure Approach to Reliability Prediction“, IEEE Trans. on Reliability, Vol. 44, No. 2, June, 1995, pp. 237-242.