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A Multicriteria Approach to Assessment Risk Professionals in the Industry of Gas Treatment

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Abstract
In their competitiveness's research, and facing an uncertain environment, the firms search more and more to attain again objective. For that, it is necessary to minimize risks and unforeseen in their systems give complexes by the assessment risks; this one has been envisaged a long time of the technical point of view, as a first tentative to minimize risks and accidents. Then, the adoption of the analysis on the flat engineering only for the risks elimination endures to run out of him taken in account different demonstrated variability by the human operator. The human operator as the basic postulate of events appearance of catastrophes and failures; however issuing finders of diverse currents have to apply different methods to minimize risks of human errors, some have used combined methods taking counts him personals factors and engineering, others himself are supported on estimations probabilities to calculate trials of workers. This paper uses to assessment the risks produced by the human with application of multicriteria method: Promethee methods and AHP (Analytical Hierarchy Process) methods to help the decision for to assessment human errors and to make firm a level of improvement of the long-term security. The applications of the multicriteria approach in the treatment Gas industry in order to visualize his importance level.

Keywords: Human risk; Risk assessment; multicriteria approach; methods Promethee, methods AHP

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Identification des défauts par la méthode de l'analyse de la signature

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Abstract
The high complexity of systems, the reduction of their fabrication and exploitation costs makes their utilization more and more important. Therefore, the assurance of functionality is nowadays a vital domain in the development of systems in the industrial field. Faults generation methods are, in general, by analog nature – the "V/I" test – or by logical nature – a succession of bits where is applied a rule: AND, OR, XOR (OR exclusive) etc. – generated under the form of a state or a parametric signature.

Keywords: fault, signature, testability, maintenance, diagnostic.

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Nanodevices and Reliability

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Abstract
The paper takes a fresh look at lessons learned and where things stand today, along with prospects for a bright future. The MEMS industry is currently at a much more vulnerable position than it appears, regardless of how wonderful its future may look like. A full understanding of the physics and statistics of the defect generation is required to investigate the ultimate reliability limitations for nanodevices. Biggest challenge: cost effective, high volume production.

Keywords: Carbon nanotubes (CNT), CMOS, defect rate, fabrication, failure analysis, MEMS/MEOMS, nanodevices, NEMS, packaging, reliability.

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