

VEGA 1/0388/12 Quantitative safety integrity appraisal of control systems for railway applications

Safety functions and the related intensity of tolerable dangers are defined based on risk analysis as technical measures for decreasing of risk related with the particular dangers. To achieve an acceptable safety related control system it is not sufficient to state that the safety measures have been adopted, but it is necessary to approve that the adopted measures decreased the risk at least to the tolerable level. The risk beard by an individual while utilising railway transport for example, should be the same independently on current country location. The objectification of risk analysis and the related definition of safety requirements on control system is currently highly problematic.

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Some of publications:

1. RÁSTOCNY, K. – RASTOCNY K. Jr: UML – A Part of an Interlocking System Development Process. Telematics in the Transport Environment. Communications in Computer and Information Science, Springer-Verlag, Vol. 329, pp. 293-300, 2012, doi: 10.1007/978-3-642-34050-5_33
http://link.springer.com/chapter/10.1007%2F978-3-642-34050-5_33
2. RÁSTOCNY, K. – FRANEKOVA, M. – ZOLOTOVA, I. – RASTOCNY, K. Jr.: Quantitative assessment of safety integrity level of message transmission between safety-related equipment. Computing and Informatics, Vol. 33, pp. 343–368, 2014 <http://www.cai.sk/ojs/index.php/cai/article/view/1727/628>
3. ILAVSKY, J. – RASTOCNY, K.: Considerations of the recovery in 2-out-of-3 safety-related control system. IFAC Proceedings Volumes, Volume 45, Issue 7, pp. 157-162, 2012
<http://www.sciencedirect.com/science/article/pii/S1474667015350813>