

RAMI Analyses of Heating Neutral Beam and Diagnostic Neutral Beam Systems for ITER

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A RAMI (Reliability, Availability, Maintainability, Inspectability) analysis has been performed for the heating (& current drive) neutral beam (HNB) and diagnostic neutral beam (DNB) systems of the ITER device [1-3]. The objective of these analyses are to implement RAMI engineering requirements for the design and testing to prepare a reliability-centred plan for commissioning, operation, and maintenance of the system in the framework of a technical risk control to support the overall ITER Project. These RAMI requirements will correspond to the RAMI targets for the ITER project and the compensating provisions to reach them as deduced from the necessary actions to decrease the risk level of the function failure modes. The RAMI analyses results have to match with the procurement plan of the systems.

- [1] BLOCKSIM and XFMEA softwares (in <http://www.reliasoft.com>)
- [2] M. Boldrin, A. De Lorenzi et al., Potential failure mode and effects analysis for the ITER NB injector, Fusion Eng. Des.(2009), doi:10.1016/j.fusengdes.2009.02.010
- [3] R. Hemsworth, H. Decamps et al., Status of ITER heating neutral beam system, Nuclear Fusion, 49 (2009) 1-15