

CFD IN NUCLEAR ENGINEERING: NEEDS ON VERIFICATION AND VALIDATION AND BEST PRACTICE GUIDELINES

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Abstract. Verification and validation of CFD codes is perhaps the major present challenge for their application in Nuclear Reactor Safety. Its appropriate consideration, as emerging from international consensus, is as follows: a) Experimenters and code developers should work in close collaboration to produce useful and valid data for CFD codes verification and validation; b) The overall validity of experimental data used for code validation must be assessed through consideration of detailed boundary conditions and uncertainty ranges and c) The steps to follow in order to get significant results, now called Best Practice Guidelines, should be followed as far as practical. These BPGs have been explicitly stated. Their application may, in turn, assure that CFD calculations are converged in the field of application. This lecture discusses the previous aspects and presents some reflections on their practical application.