

# PRELIMINARY DESIGN OF IN-DA DIAGNOSTIC PLANT INSTRUMENTATION & CONTROL (FIP/P1-35)

**Summary:** This paper describe the detailed work carried out for design development of plant Instrumentation and control for various IN DA diagnostics system (X-Ray Spectroscopy, Electron cyclotron emission diagnostic (ECE), Charge Exchange Recombination Spectroscopy- pedestal diagnostic and Upper Port#09) towards Preliminary Design Review.

Plant I&C has been developed towards preliminary design of IN-DA diagnostic Systems by inclusion of a) Operation procedures, b) functional analysis including variable definition, c) hardware architecture and signal d) cubicle configuration and e) the plant system operating state machine (PSOS) for automation including the mapping to Common Operation States (COS) by following ITER Plant Control Design Handbook guidelines.