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C3Or4C-01: ITER Complex Cryolines installation System –Features, challenges and status

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The ITER Cryogenic Lines (CLs) system is a complex network intended to distribute helium at three main nominal temperature levels (4 K, 50 K and 80 K) in order to fulfil the requirements of Cryogenic system end users called clients (mainly magnet feeders (CTBs) and cryopump Cold Valves Boxes (CVBs)). The installation of Cryolines in particular in the Tokamak building is a very challenging and highly integrated task due to complex shapes of CLs segments, coactivity and the congestion of the area with the presence of many equipment in their vicinity.
The aim of this paper is to provide the ongoing status of installation works of complex cryolines, as well as the upcoming phases will be presented. After detailed description of the ITER CLs system and its design particularities, the assembly and installation plan developed will be presented. A focus will be made on developed different operating modes and associated tools considering the layout constraints and complexity arising from the integrated installation in the Tokamak building.

The views and opinions expressed herein do not necessarily reflect those of the ITER Organization

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