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C4Or1B-01: Overview of ITER Cryoplant construction and integration phases

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The ITER's Cryoplant occupies nearly 8000 m2 area composed of various cryogenic systems aimed at the production, liquefaction, and storage of cryogenic products. Transferring of cryo products occurs by cold and warm lines with a total length of 1.5 km within the Cryoplant area and 3.5 km in the Tokamak building to gradually cool down in total 10000 tons of ITER superconducting magnets, thermal shields, and cryopumps with the following maintaining 4.3 K during plasma operation state. After the successful completion of the construction and pre-commissioning phases, the Cryoplant is currently active in the commissioning phase with by now several commissioned systems including confirmed performance and the integration of automatic control to support the launch of the next systems. This paper reports on a detailed overview of the completed phases, starting systems, control implementation, and performance tests, including planned activities for 2023/2024.

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