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Recent progress in the development of the European 1 MW, 170 GHz CW gyrotron for ITER

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The European 1 MW, 170 GHz industrial prototype CW gyrotron for ECRH&CD on ITER is a conventional (hollow-cavity) gyrotron, which is being developed by the European GYrotron Consortium (EGYC) in cooperation with the industrial partner Thales Electron Devices (TED), under the coordination of the European Joint Undertaking for ITER and the Development of Fusion Energy (F4E).
The CW industrial prototype was extensively tested in the short-pulse regime (with pulse length up to 10 ms) and operated under long-pulse conditions with pulse lengths of up to 180 s, which is the limit at the High-Voltage (HV) power supply currently available at KIT.
In this contribution we report on the performance of the tube during the long-pulse operation at the KIT test facility, details regarding the operating points are presented and the long-pulse phase of the experiments with pulses up to 180 s is analyzed.

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