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Progress on design and R&D for helium-cooled ceramic breeder TBM in China

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ABSTRACT

The helium-cooled ceramic breeder (HCCB) test blanket module (TBM) is the primary option of the Chinese TBM program. Current progress on the design and R&D for Chinese helium-cooled ceramic breeder TBM (CN HCCB TBM) in China is presented. The main updated design and related R&D of CN HCCB TBM are introduced briefly. The mock-up fabrication and component tests for Chinese test blanket module are being carried out. Recent status of the components and fabrication technology development is also reported. The neutron multiplier Be pebbles, tritium breeder Li_4SiO_4 pebbles, and structure material CFL-1 are being prepared in the laboratory scale. The fabrication of 1/3 sized mock-up and construction of a He test loop are being carried out. The key technology development is proceeding to the large scale mock-up fabrication and demonstration tests toward on ITER testing.

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