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Physics and engineering progress of CFETR integration design

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Chinese Fusion Engineering Test Reactor (CFETR) aims to bridge the gaps between the fusion experimental reactor (ITER) and the demonstration reactor (DEMO). CFETR will be designed and operated in two phases. Phase I focuses on a modest fusion power of up to 200 MW, where steady-state operation and self-sufficiency will be the two key issues. Phase II aims for DEMO validation with a fusion power over 1 GW. A new design has been made by choosing a larger machine with R = 6.6m,/a=1.8m, BT= 6-7T recently. Over 1GW fusion power can be achieved and technically it is easier to transfer from Phase I to Phase II with the new design. Physics and engineering progress of CFETR integration design are introduced in this paper.

Eligible for student paper award?

No

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