

THERMAL-HYDRAULICS AND STRUCTURAL ANALYSES OF LLCB TBM SET

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- ❑ Testing of tritium breeding blankets to sustain fusion is one of key ITER objectives
- ❑ India is working on LLCB (Lead lithium ceramic breeder) TBM (Test blanket module)
- ❑ The conceptual design and related analysis of LLCB TBM set has been completed
- ❑ Thermal hydraulics and structural analysis of TBM FW, its manifolds and TBM shield has been performed.
- ❑ Flow distribution using CFD in FW shows uniform flow in all circuits
- ❑ Regulation of flow in TBM shield channels using orifices is confirmed by CFD simulation
- ❑ Thermal analysis of TBM shield performed based on flow distribution results
- ❑ Thermal hydraulic CFD analysis of single FW circuit done and Heat transfer coefficient ,pressure drop validated with analytical results
- ❑ Temperatures and stresses are found to be acceptable

