

Outgassing Tests on Materials Used in the DIII–D Tokamak.* K. Holtrop, and

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In order to achieve high performance plasma discharges in the DIII–D tokamak, impurity levels must be carefully controlled. Since first wall materials can desorb volatile impurities during these discharges, it is important to characterize and control the outgassing of these materials. An outgassing chamber was built to measure the outgassing properties of various materials used in the DIII–D vessel. The results of pump-down tests performed on ATJ graphite, thin grafoil gaskets, and MGO coaxial cables will be presented. In addition, to pumpdown tests it was desired to study the behavior of the materials at temperatures up to 400°C, which is the maximum temperature to which the DIII–D vessel is baked. The station was modified to include independent heating control of the sample and a simple load-lock chamber.

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