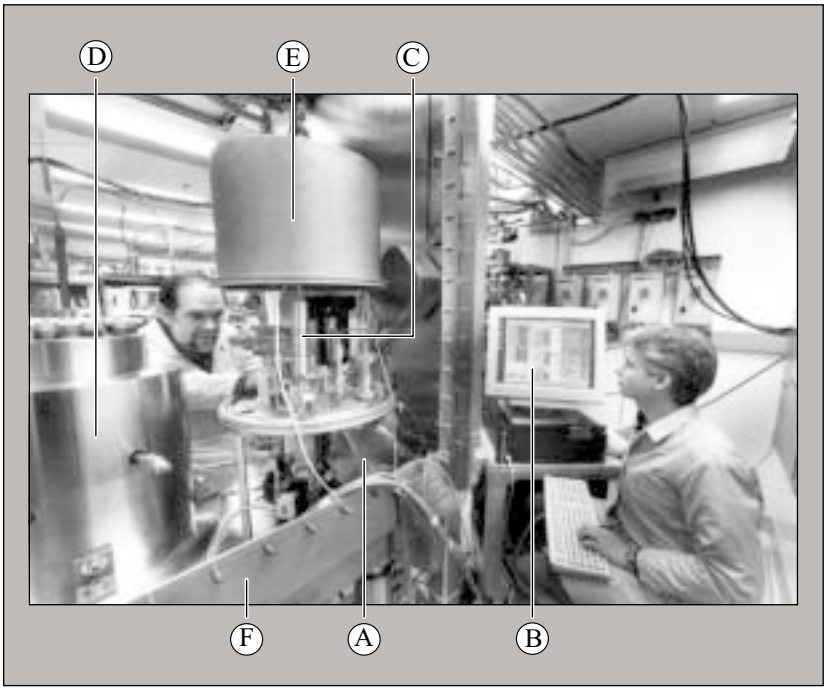

About the Cover:

On both the cover photo and the photo to the left, Roger Gram, research engineer, and Jason Hobler, laboratory engineer, perform tests on the high-pressure-filling portion of the cryogenic fill/transfer station, where they recently demonstrated the system's ability to fill targets to high pressures with the required rate of pressure rise. To pressurize targets, deuterium or deuterium–tritium (DT) is first condensed into a small vessel inside chamber (A) and cooled to 10°K. Using the controller (B) the temperature is slowly increased, raising the pressure around the targets inside a permeation cell (not shown). The pressure is monitored by a high-accuracy pressure transducer (C). After the targets have reached a pressure of ~150 atm, the diaphragm compressor (D) is operated, slowly raising the pressure to ~1000 atm. Chamber (E) provides secondary containment for the valves and pressure transducers that control the process. All elements containing 1 atm or more of DT will have secondary containment. The glovebox (F) will provide tertiary containment when DT is introduced.

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