

Bakeout of KIN

The bakeout of KIN was carried out in a smaller tent, using 5 heaters (courtesy Lothar Schulz & Theo Bieri). During the bakeout, the pressure at the turbo molecular pump and the temperature of three different locations at KIN has been recorded.

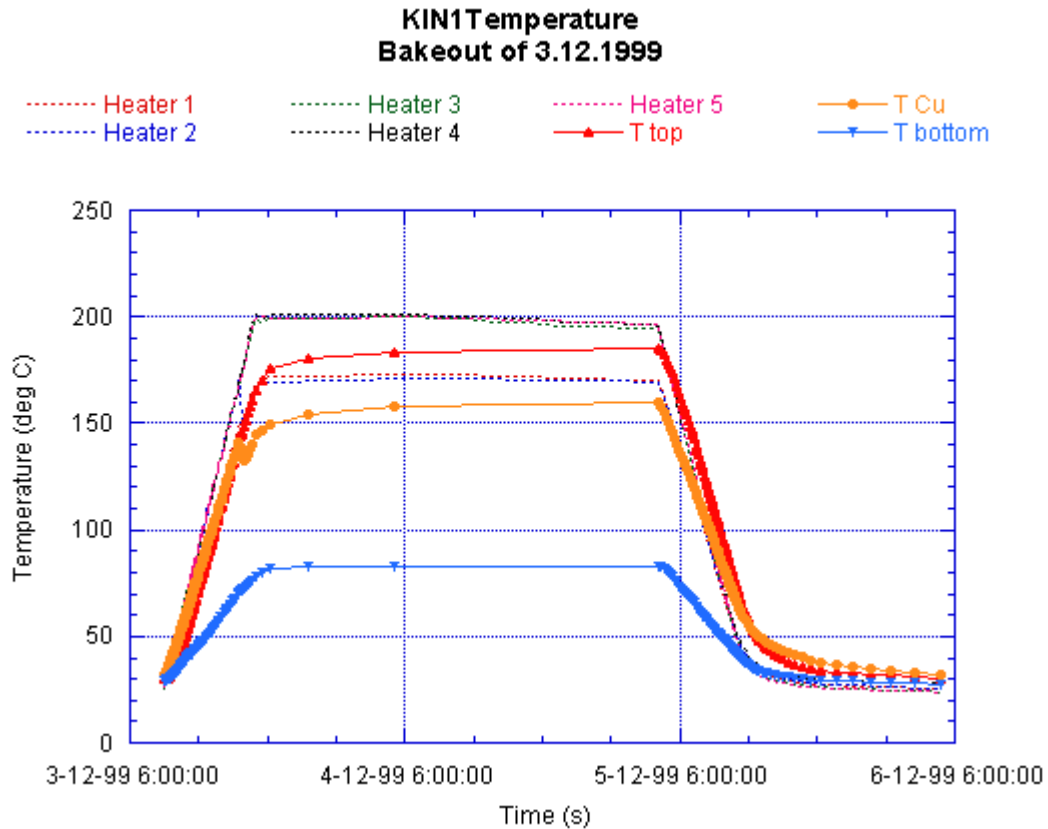


Fig. 1: Bakeout temperatures

After the heat-up phase of 9h there was 36h period at a target temperature of 200 deg C. The temperatures of heater 1 and 2 reached only 170 deg C because H2 failed after about 7h operation and H1 could not compensate the reduced heating power. Three temperatures of easy accessible locations of the vacuum tank have been recorded too. That is the temperature at the center of the cover plate (T top), the temperature of the conductor rod (T Cu) and the temperature of the Al-bottom plate of the bakeout tent, which was in thermal contact with the getter pump top face.

KIN1Vakuum
Bakeout 3.12.1999

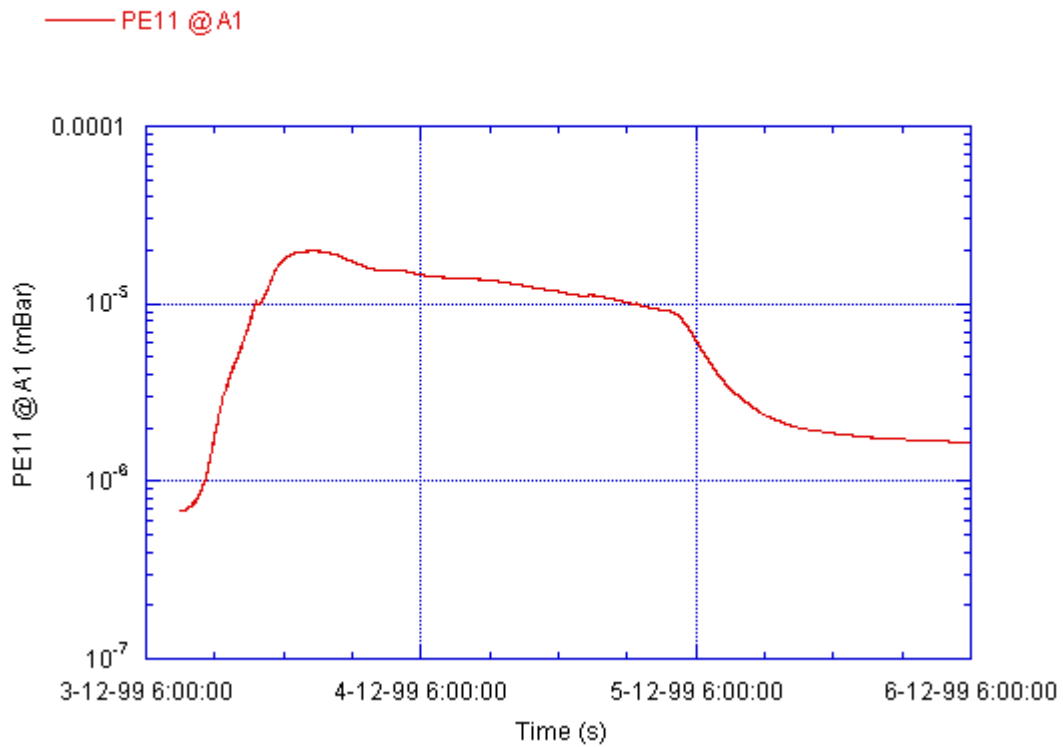


Fig. 2: Bakeout pressure

The high pressure at the end of the bakeout process let one assume a leak which has been caused by the high temperature. By means of a leak tester (Alcatel ASM 122D) one big leak of $8.9 \text{ mbar}^* \text{ l/s}$ could be found in the brazing joint of the left bushing of the kicker terminal (6.12.1999).

The leak was tightened by re-brazing using mobile brazing equipment, standard flux and filler (Thanks to Urs Bugmann). During the following leak test no leak could be found and finally the pump-down could be started again and the getter pump could be started after a few hours rawing-out with the turbo-pump (see Fig. 3).

KIN Pump-down after brazing

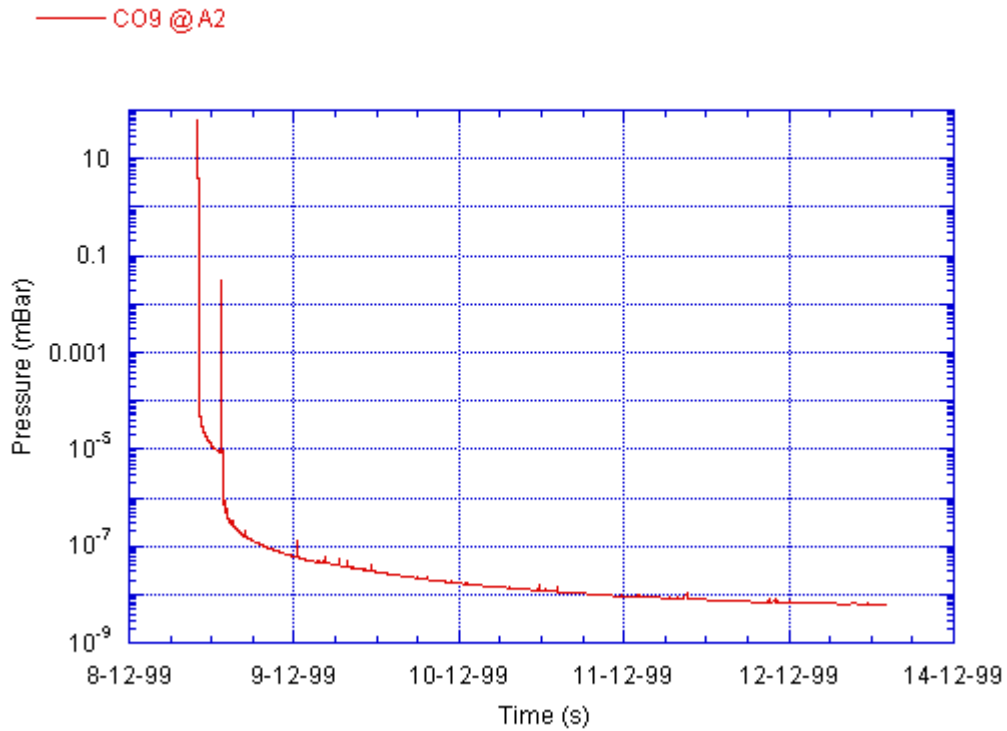


Fig. 3: Pump-down curve after re-brazing

The sharp peak in the pressure at 1 p.m. of 8-12-99 was caused due to switching on of the getter pump. It has to be mentioned that the getter pump did not fit into the heating tent and thus was at a much lower temperature of below 80 deg C.