Commissioning of the Electron Cooling Device in the Heavy Ion Synchrotron SIS, K. BLASCHE, H. EICKHOFF, B. FRANZKE, L. GROENING, M. STECK, T. WINKLER, GSI Darmstadt - An electron cooling device has been constructed which serves the increase of the intensity of heavy ion beams in the synchrotron SIS. It is aimed at transverse cooling times of 100 ms allowing fast beam accumulation by repeated multiturn injection prior to acceleration. Depending on the particular acceleration cycle a maximum intensity enhancement by one order of magnitude is expected. This is achieved by merging the heavy ion beam with an intense, cold electron beam over a length of 3.3 m. Electron currents up to 2 A can be produced in the electron cooler which uses adiabatic magnetic expansion for the reduction of the transverse electron temperature. The results of the first cooling and accumulation tests at the injection energy of 11.4 MeV/u will be presented. The impact of cooling on the acceleration efficiency and on the final beam quality will be discussed.