We have analyzed the archival data for ROSAT and ASCA. Since we focused on the SNR showing thermal emission, we selected SNRs imposing the below criteria: 1) the spectrum is well represented by a thin thermal emission, 2) the extent of the X-ray emission is measured, 3) the extent of the radio emission is measured. In most cases, the X-ray emitting region is well enclosed by the radio shell. We assume that the interior of the SNR cavity does not lose energy through radiation nor conduction due to the low density. If there is no energy loss inside the SNR, the pressure is relatively uniform much better than other parameters: density, temperature. We measured the pressure in the X-ray emitting volume that is hardly affected whether or not the radiation loss becomes effective at the shell region. Using the volume enclosed by the radio shell, we calculate the thermal energy contained in the SNR when there is no radiation loss. We find that the thermal energy calculated in this way shows similar values of about 10^{51} erg for various SNRs: from young SNR to old SNR. We also show that we can estimate the distance to the SNR from the combination of the thermal energy of the X-ray emitting plasma and the volume enclosed by the radio shell.