Abstract：Pressure expansion can be used to improve the piezoelectric d_{33}-coefficients of customary cellular polypropylene (PP) films. In the present paper, the experimental procedure for a double expansion process is described and experimental results of d_{33}-coefficients that can be achieved by choosing expansion pressures from 0.2 to 2 MPa and expansion temperatures from 20 to 120°C for the two processes are discussed. For example, expansion pressures of 2 MPa, a temperature of 90 to 100°C for the first expansion and 60°C for the second expansion, and exposure times of the order of 1h result in quasistatic d_{33}-coefficients of more than 1000 pC/N which are relatively stable at room temperature.