Beam-based Measurement of Quadrupole Strength Errors with Localized Orbit Bumps, H. FUKUMA, Y. FUNAKOSHI, H. KOISO, S. KAMADA, S. MATSUMOTO and N. YAMAMOTO, KEK - Quadrupole strength errors are major sources of optics imperfection in circular accelerators and must be corrected precisely to achieve high luminosity and/or low emittance. A "π-bump" method is developed to measure the strength error of each quadrupole individually. A pair of corrector dipoles is excited to produce a bump orbit sharply localized at a target quadrupole. By analyzing a leakage orbit outside the bump, the strength error of the target quadrupole can be estimated. Feasibility of this method is studied in the TRISTAN main ring. Experimental results and discussions on accuracy of the measurement are reported.