This Thesis is devoted to the investigation of superfluid helium flows due to torsional oscillators. In its first part, flow due to a torsionally oscillating disc suspended on a tungsten filament is studied (building upon the work of A. C. Hollis Hallett from 1952). Measurements of the motion of the torsionally oscillating disc were performed in superfluid helium at temperatures between 1.265 K and 2.157 K at saturated vapour pressure. Time traces of the disc angular deflection were obtained, and critical parameters related to the turbulent flow stability were determined. In laminar flow, scaling of drag forces with the dimensionless Donnelly number was verified. Based on these results, and comparison with the original work, a scenario of the decay of turbulent flow was suggested. The second part of this work is focused on the development and construction of a similar experiment for mK temperatures. A new type of oscillator was designed, a so-called “pillbox“, and a series of testing measurements was performed both at room and mK temperatures.