The goal of this thesis was to study Stokes problem with eigenvalue in boundary condition. We were in particular interested in determining the asymptotic behaviour of the sequence of eigenvalues. We approached this problem by modifying techniques used in several papers studying asymptotic behaviour of eigenvalues in boundary condition for Steklov problem and we wanted to conclude similar results. Firstly, we introduced some theoretical results yielding that the eigenvalue sequence of the problem is corresponding to an eigenvalue sequence of a certain compact and self-adjoint operator. Next, we explicitly calculated precise asymptotic behaviour of eigenvalues of auxiliary problems on simple domains, however, due to technical difficulties, we were only able to do in two and three dimensions. Finally, by using Min-max Theorem, we managed to get estimates of eigenvalues of the original problem on any bounded $\mathcal{C}^2$ domain by eigenvalues of considered auxiliary problems and thus by applying previous results, we managed to prove the desired asymptotic behaviour.