On the imperfect water entry, a high speed slender body moving in the forward direction, rotates inside the cavity. The bo y’s mot on mak s sup r av ty p nom na n wat r flow T wat r v lo ty an pr ssur f l s mak r a t on to o y’s mot on In t s pap r t coupling simulation model is a combination of two- sub models: In the first sub-model the motion of slender body running very fast under water is simulated (see [5, 6]). The equation system of this sub-model is solved by Runge -Kutta method; In the second sub-model the water flow and pressure field under reaction of very fast slender body motion are simulated by ANSYS FLUENT (see [1]). The simulation results of this couple model are compared with measurements.