

$$k_{t0}\left(\varphi_1(t)-\varphi_2(t)\right)-k_{t0}\left(\varphi_{P1}(t)-\varphi_1(t)\right)+i_{ym1}\varphi_1''(t)=c_{t0}(\dot{\varphi}_{P1}-\dot{\varphi}_1)-c_{t0}(\dot{\varphi}_1-\dot{\varphi}_2)$$