

Induction 3-phase motor model

16.01.2013

Induction 3-phase motor theory and LTspice model by Sohor U.N. 2008

http://ie.archive.ubuntu.com/download.sourceforge.net/pub/sourceforge/d/project/di/diel/Sohor_Modelling_LTSPICE.pdf p.95-105.

LTspice model revision by Kubov V.I. 2013

Induction 3-phase Motor by Sohor & Kubov

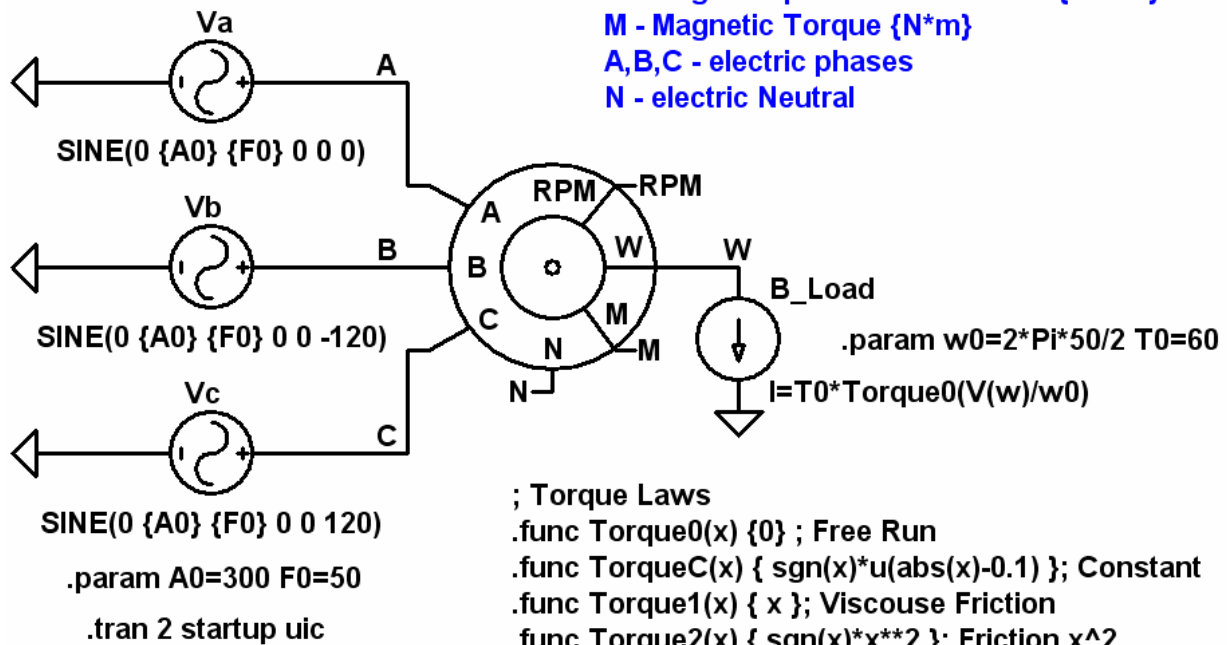
PPM - rotations per minute

W - angular speed. Point of Load {Rad/s}

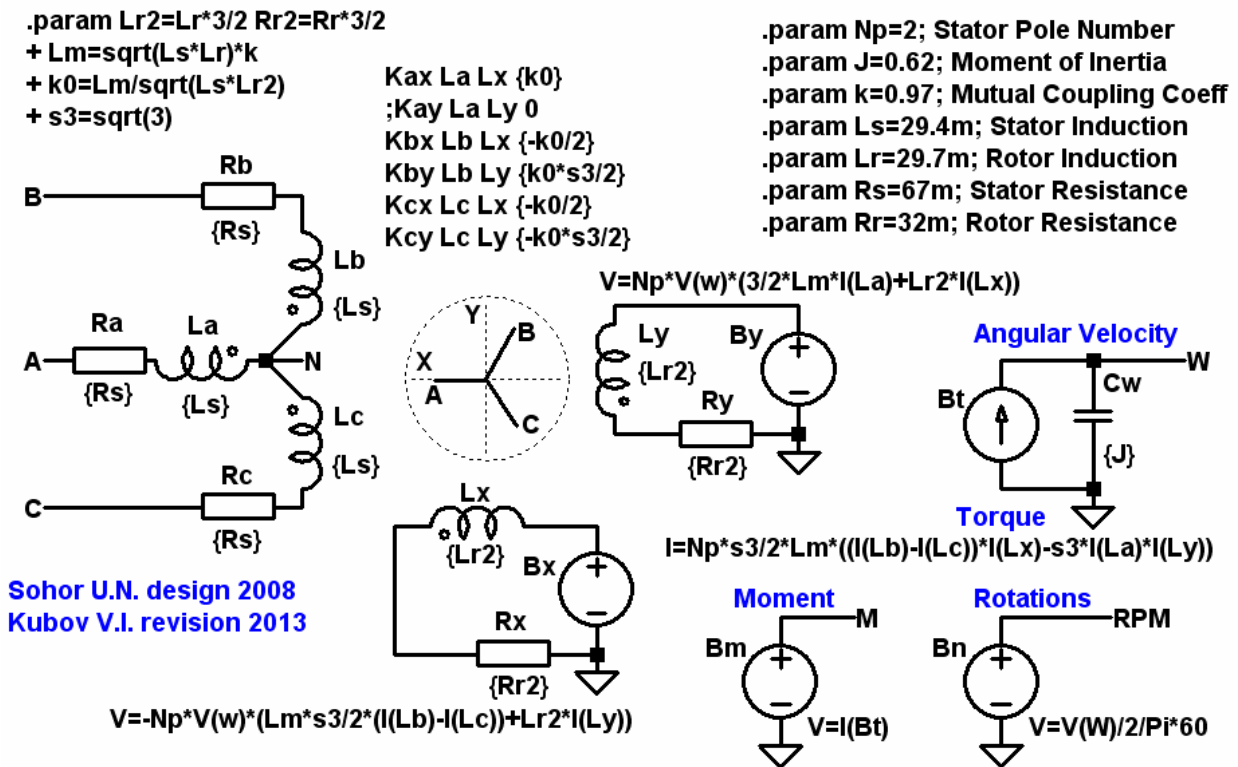
M - Magnetic Torque {N*m}

A,B,C - electric phases

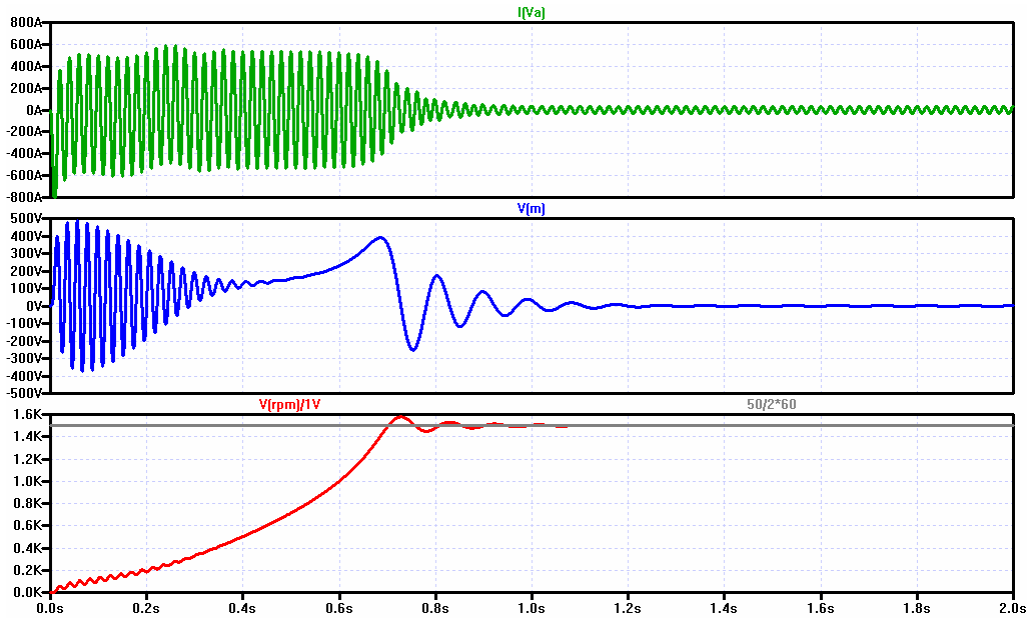
N - electric Neutral



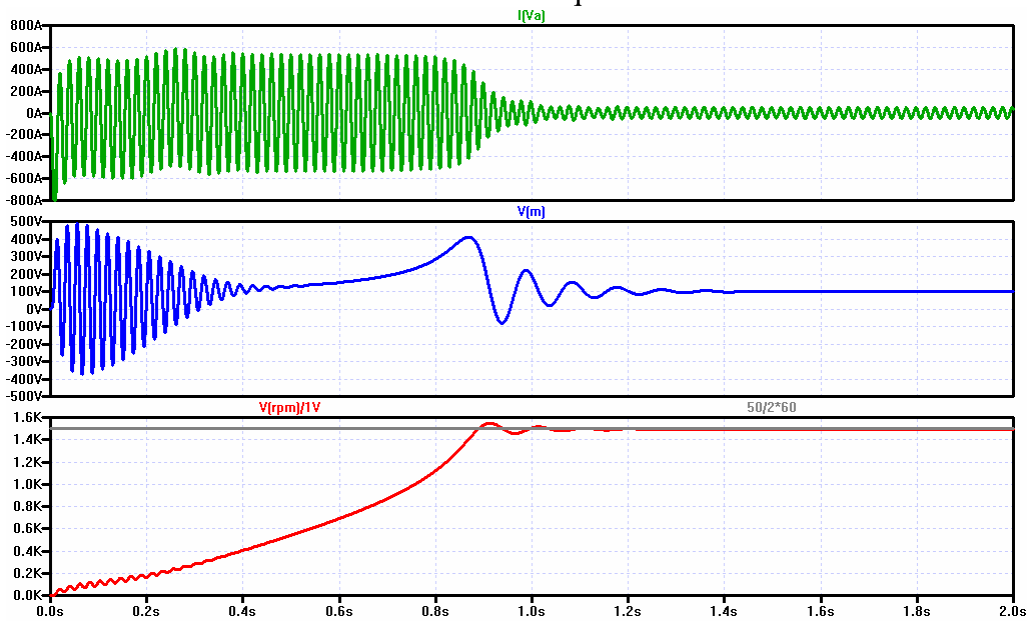
Test schematic. IndMot3phTest.asc



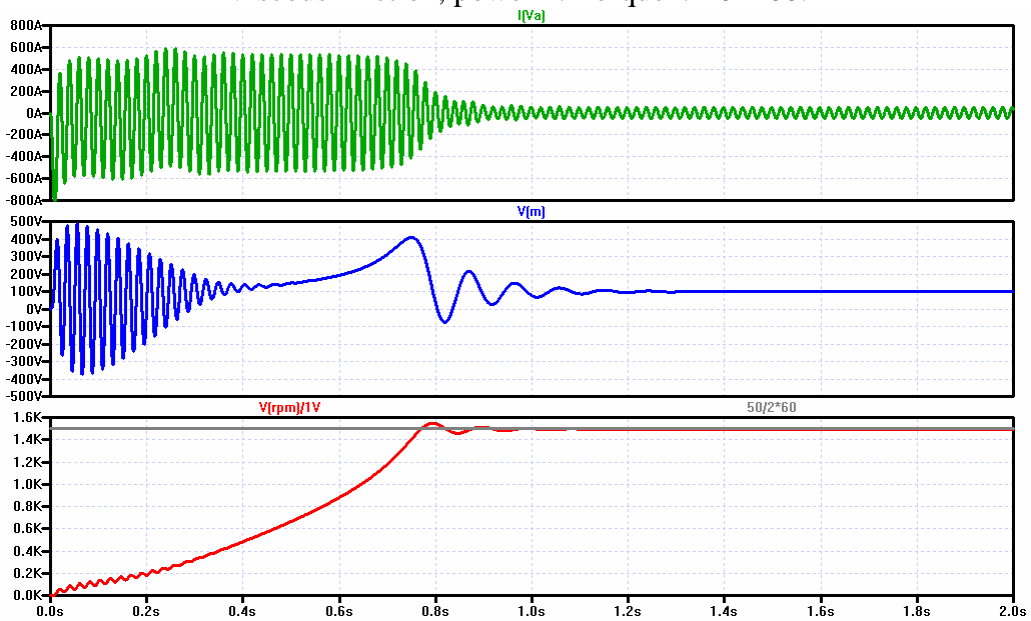
Motor Model. IndMot3ph.asc



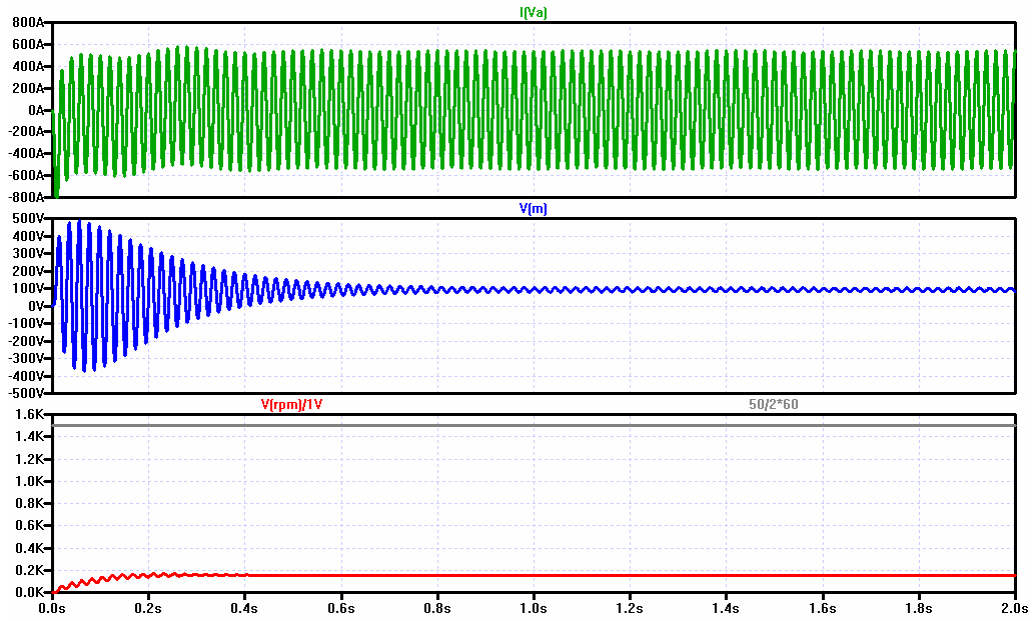
Free run. Torque0.



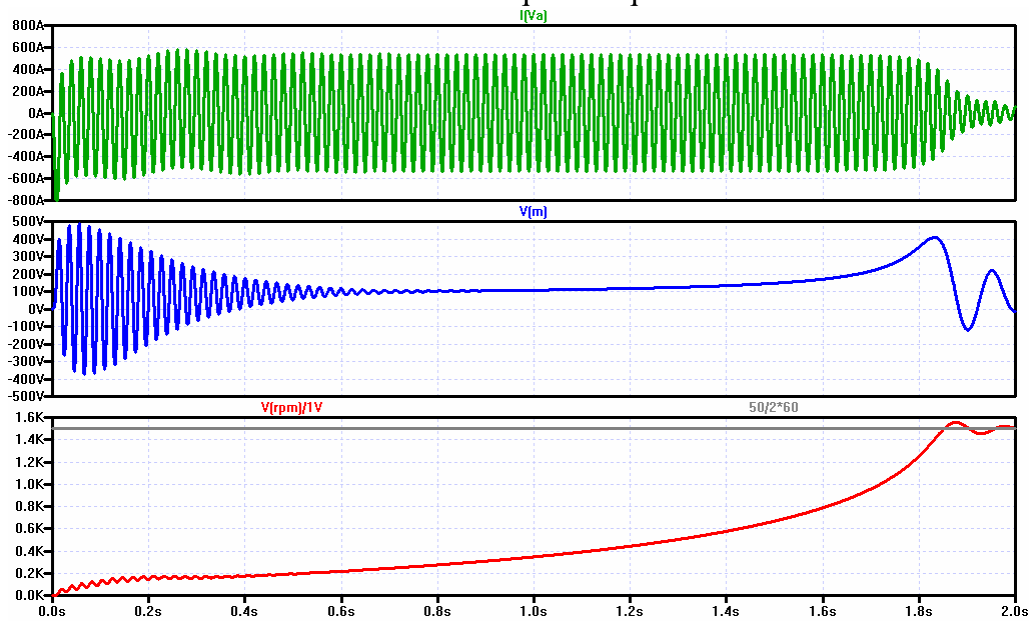
Viscous Friction, power 1. Torque1. $T_0=100$.



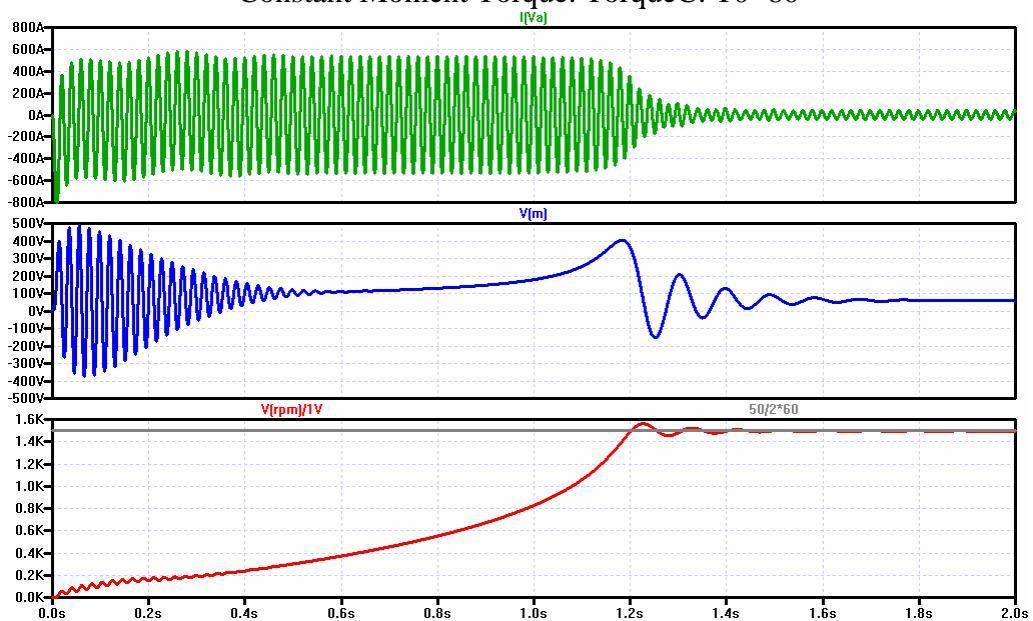
Viscous Friction, power 2. Torque2. $T_0=100$.



Constant Moment Torque. TorqueC. $T_0=100$



Constant Moment Torque. TorqueC. $T_0=80$



Constant Moment Torque. TorqueC. $T_0=60$