

METHOD AND ARRANGEMENT FOR DETERMINING INDUCTANCES OF SYNCHRONOUS RELUCTANCE MACHINE

ABSTRACT

A method and an arrangement of determining inductances of a synchronous reluctance machine. The method comprises the steps of supplying a voltage pulse in the quadrature-axis or direct-axis direction of rotor, sampling currents generated by the supplied voltage pulse, calculating values of flux at the sampling instants from the value of the supplied voltage pulse, the sampled current values and the value of the stator resistance, calculating synchronous inductance of the machine by dividing the calculated flux values by the corresponding sampled currents, and/or calculating transient inductance of the machine as a derivative of the flux with respect to current, and storing the calculated values as a function of current.

(Figure 4)