

VOLTAGE SOURCE INVERTER FED INDUCTION MOTOR TRANSFER FUNCTIONS

The tubular axle induction motor programme included the operation of the motor when supplied by a variable frequency voltage fed inverter. This report describes a technique for predicting the transfer functions of the system.

The system studied has the following main components:

- A variable voltage DC power source
- A DC link inductive-capacitive filter
- A 120° square wave inverter
- A tubular axle induction motor

The effects of sampled-data type delays due to the discrete nature of the inverter output are not included. Any application of the described technique should allow for these effects.