

## REPORT ON FEASIBILITY STUDIES INTO RELUCTANCE MOTOR DRIVES FOR RAIL TRACTION

This report describes the researches of BR into four-phase switched reluctance motor drives. It assesses the results of feasibility studies by two universities. A cost comparison exercise has been conducted on two equivalent drive systems to compare the overall economies of induction and reluctance motors.

The reluctance motor appears to be a good machine from a traction point of view, able to produce the required output in the same frame size as the induction motor. The results for the power conditioning equipment are, however, disappointing. It has emerged as more complex than originally thought, and offers no economic benefit compared to a sine wave inverter.