

REVIEW OF WHEEL/RAIL FORCE, MACRO-CREEP RELATIONSHIPS DURING BRAKING REPORTED BY BR, SNCF AND DB UP TO MID-1985

The work reported here summarises the available test results on the effect of wheelslip on wheel/rail friction during braking. The results take the form of relationships between wheel/rail force and macro-creep. This work has been carried out by the French and West German railways (SNCF and DB) and by British Rail.

Prior to mid-1985 the BR Tribology train had not investigated wheel/rail forces at macro-creep levels. However in 1981 some work was carried out using a test coach fitted with a hydro-kinetically braked axle.

Descriptions of the testing equipment and test methods are given, together with typical results of the adhesion/wheelslip relationships. From these typical results an envelope has been produced, which gives the range of values of adhesion for a given wheelslip.