

## A STUDY INTO A SUSPENSION FOR GENERAL APPLICATION TO FOUR-WHEELED VEHICLES

The aim of the study was to investigate the feasibility of a standard range of suspensions for two-axle freight wagons for standard gauge track, complying with the BR W5 loading gauge and acceptable to the Civil Engineer. This will not preclude further development by the use of more advanced technology such as resilient wheels. The range of the study embraces both bulk carriers and general purpose vehicles.

Two areas of vehicle dynamics have been investigated using a digital computer, namely lateral stability and vertical and lateral ride.

The design work carried out indicates that the proposed range of four-wheel freight vehicles fitted with a standard suspension is feasible structurally and can comply with relevant BR criteria. Theoretical studies show that the dynamic characteristics would be acceptable. The possibility of using one type of suspension for various vehicles offers advantages of standardisation, and the simple attachment to the vehicle body makes it possible to re-use suspension assemblies from obsolete vehicles.

It is recommended that a suitable vehicle is built and tested to confirm the results indicated by the study.