



BANCE



OLE GAUGING VEHICLE

OGV



R BANCE AND CO LTD

BANCE

ELECTRIC OVERHEAD LINE MEASUREMENT SYSTEM

INTRODUCTION

The position of the overhead contact wire, which supplies electric power to the train, in terms of height above rail level and horizontal distance from the centre line of track is extremely important. Keeping the wire within its design parameters ensures that current collection is optimised and wear of pantograph carbon and contact wire is minimised.

Measurement of Height and Stagger is therefore a critical part of the overhead line maintenance strategy.

Development started in 1992 when the design criteria worked on in conjunction with British Rail were for a sturdy light device with measurements based on simple triangulation using the rails as a fixed reference point. The objective was to replace the hand-held “crucifix”.

The current version of the OLE Measurement System is the result of perpetual development since then to give a highly accurate continuous recording system.

CONSTRUCTION

The OLE Measurement System operates using ultrasonics. It has four transducers fitted at opposite ends of a yellow casing controlled by software and electronics. When the transducers are activated the bursts of sound emitted are reflected back from the target cable(s). The elapsed time is measured, temperature compensated and the position of the overhead line is displayed on the laptop screen.

The system components comprise:

- The ultrasonic unit
- Odometer / G.P.S.
- Laptop computer

THE SYSTEM

The OLE Measurement System is a “contactless” height and stagger measuring system. It is compact and virtually maintenance free. It can measure the contact wire and the support wire concurrently and provides a “moving graph” of the measurements and/or numerical output for Excel MS format.

Full post-processing of results gives additional information such as mid-span height and stagger and contact wire gradient. All measurements can be synchronised to one of the wheels. A full computerised record of measurements is provided.

SPECIFICATION

Weight:	10 kg
Height:	2760 mm (3m above rail top)
Width:	1466 mm
Depth:	235 mm