

SOUTHERN REGION INTERFERENCE TESTS

An investigation was undertaken of ac components flowing in running rails of the dc electrified lines on Southern Region. This information is needed to determine possible interference with jointless track circuits. The aim of the investigation was to detect currents down to about 2mA over a frequency range 0-100 kHz.

The results indicate that silicon rectifier equipment is quieter than mercury arc rectifiers, especially above 20 kHz, and that some silicon rectifiers (the series bridge pulse type) may be considerably quieter over the whole range. The silicon rectifier equipment does show a resonance phenomenon giving a peak of a few milliamps in the 20/30 kHz region. Further tests were expected to be undertaken.