

# **PRACTICAL EXPERIENCE IN IR-FREE POTENTIAL MEASUREMENTS UNDER STRAY CURRENT INTERFERENCE CONDITIONS**

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A large diameter water transfer pipeline coated partly with bitumen fibreglass (55km) and partly with sintered polyethylene (60km) was fitted with ICCP. The pipeline crosses a heavy-haul DC electrified rail and other pipelines. Significant DC stray current interference was identified during construction. The sources of interference could not be switched off or interrupted.

A number of techniques were utilised to determine whether the pipeline was adequately protected in terms of BS EN 13509 Section 4. These included the use of coupons, intensive measurement, potential recordings, integrated CIPS / DCVG and physical inspection of selected locations.

This paper presents the methodologies undertaken and the correlation between the results of the various techniques.

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\* Neil Webb is an independent corrosion engineer with more than 35 years experience in pipeline corrosion protection.