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THE MINING CHRONICLE

INCORPORATING OIL & GAS BULLETIN • NATIONAL COAL & LONGWALL • GOLD BULLETIN



Established 1995
Volume 12, Number 3
(April 2007) PP643938/0091
RRP \$4.40 (GST included)



Techno-Edge

Incorporating Corrosion Treatment & Prevention

The end of biofilm build-up in pipelines

Mines often use two types of water supply:

- A non-potable supply for continuous miners, longwall miners, drill rigs, scrubbing and dust suppression and so on.
- A low salinity, chloride and solids supply for the critical makeup of stable, non-corrosive hydraulic oil emulsions.

Increasingly, availability constraints have caused the non-potable supply to be water of poorer quality,

often containing significant nutrients and dissolved organic carbon – producing conditions ideal for in situ growth of bacteria on metal surfaces.

Bacteria alter electrochemical conditions at the metal/water interface, usually beneath a protective polysaccharide layer (biofilm). This has different effects, ranging from the induction of localised microbially induced corrosion (MIC), to corrosion inhibition and/or downstream fouling or corrosion of filters

and pumps via upstream detachment of biofilm fragments (biofouling).

In the last 20 years, significant progress in electrochemical interpretation of MIC effects has been achieved through the better understanding of biofilms.

Identification of biofilm build up in a water supply system is critical to the prevention of MIC and biofouling-related effects.

Ecoengineers has developed specialised

methods for the early identification of significant biofilm build-up in pipelines and other areas.

Ecoengineers recommend use of proprietary health and safety friendly multienzyme biofilm dissolving products from Aeris Technologies Ltd,

whereby biofilms can be quickly and safely removed whenever their build-up poses an upcoming cost threat. This removes the need for maintenance level dosing of possibly incompatible, corrosive or unsafe biocides at the heads of pipelines.

Branach in step with resisting corrosion

Branach has released a epoxy-based rungs replacing corrosion resistant version of its aluminium rungs, and 316

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