Biologically Influenced Corrosion

INNOVENT
Technology Development

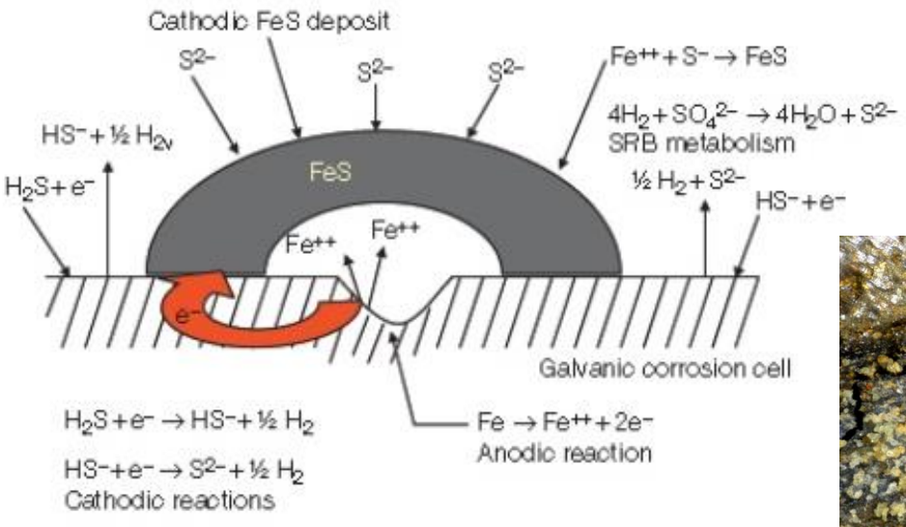
Research Department: Primer and Chemical Surface Treatment

According to current knowledge, 20-30% of generally corrosion and almost every corrosion in absence of oxygen are caused by some species of bacteria. They significantly influence the corrosion mechanism and the damage process.

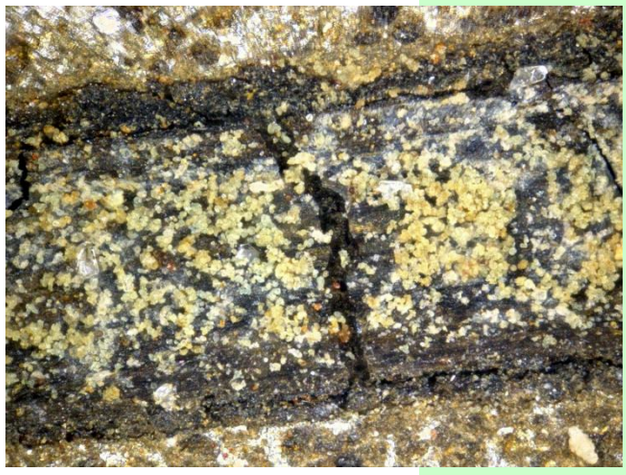
Sulfate reducing bacteria (SRB) play a central role in the field of biologically influenced corrosion. These organisms are able to accelerate the corrosion of steel up to 10 times of an aerobe (atmospheric) corrosion.

Economic damage based on biocorrosion occur in *i. e.*:

- storage tanks and pipelines for oil and its products,
- subsoil constructions,
- chemical plants,
- water and sewerage systems.



Scheme of physicochemical changes in a rust tubercle



corrosion by *Desulfovibrio vulgaris* (200× magnification)

Our range of services:

- R&D: modification of surfaces for protection against biologically influenced corrosion
- Tests for proving the protective effects

Contact:
INNOVENT e.V., Dr. Jörg Leuthäußer, Prüssingstr. 27 B, D-07745 Jena, Germany
phone: +49 3641 282548; e-mail: JL@innovent-jena.de
website: http://www.innovent-jena.de