

Corrosion processes at the GGG40 steel–bentonite interface

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In this work, the corrosion of spheroidal graphite cast iron (GGG40) is investigated in near-field conditions expected at the very initial stages after saturation of backfilling bentonite with geological waters.

The experiments consisted in middle-term monitoring (3 months) of the corrosion process at the interface between steel and saturated bentonite by polarizations and electrochemical impedance.

The evolution of the surface morphology and chemistry was studied by surface techniques. The role of graphite nodules as cathodic elements was emphasized.

