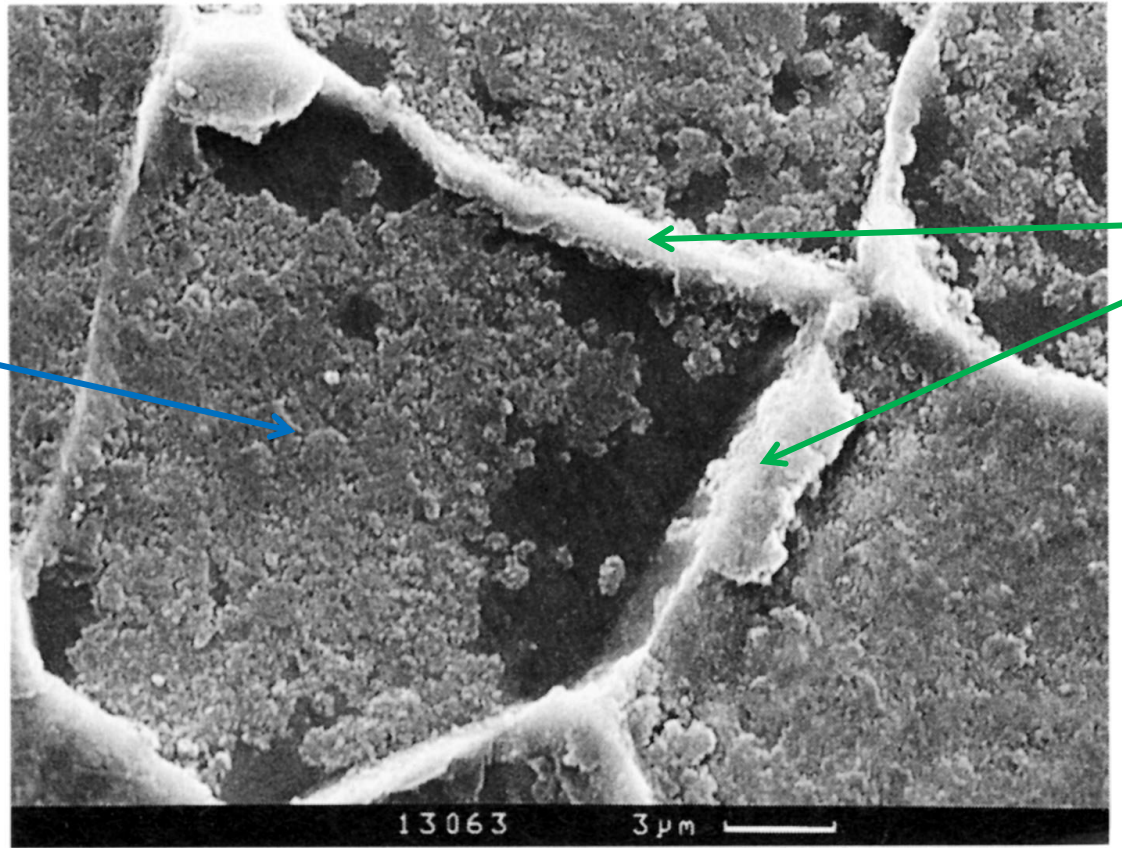
PRIME ST (R) forms a 1 µm thin Fe_2O_3 passivation layer on the iron surface which efficiently protect the steel against corrosion

ORMECON

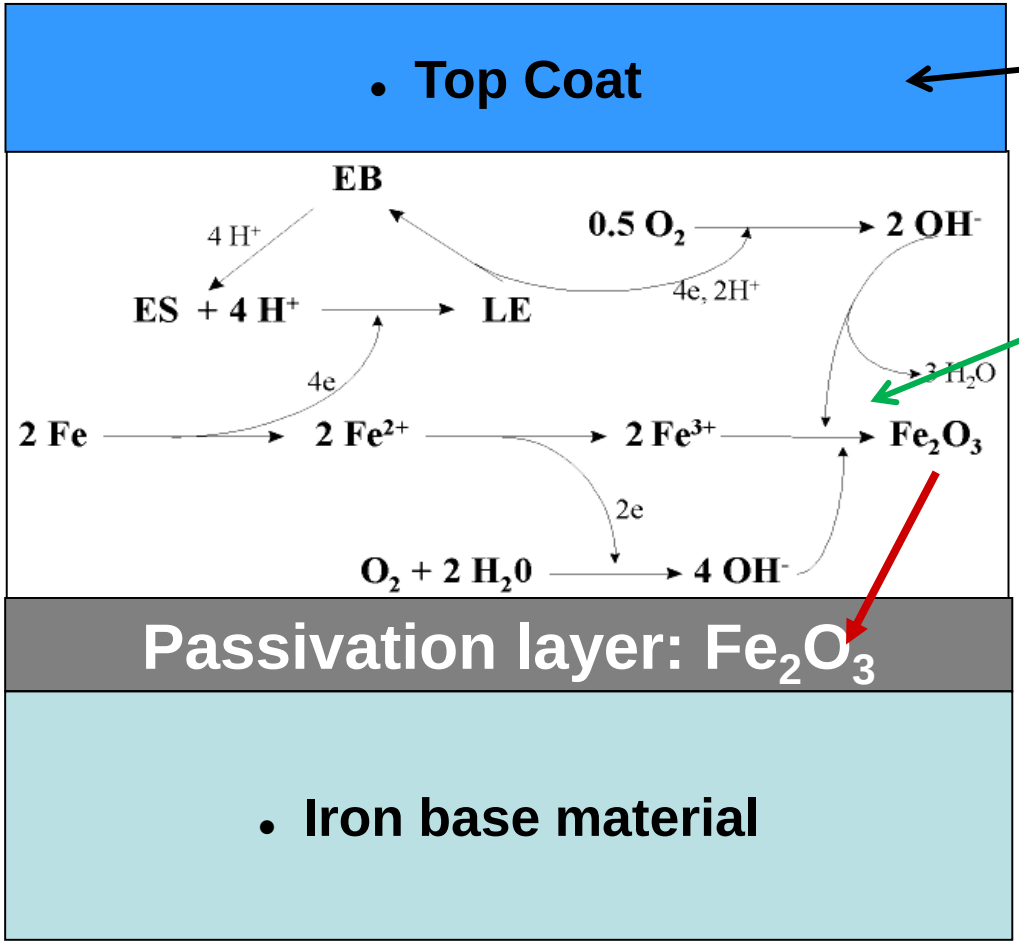
Fe_2O_3 layer (clearly detected and determined by XPS)



Grain boundaries

SEM picture of a steel surface treated with the **ORGANIC METAL** .
The Fe_2O_3 layer has started to grow within the grain boundaries.

Catalytic mechanism for the formation of the Fe_2O_3 layer provided by our Organic Metal



Top coat:

- Prevents reagents from leaving Primer

Primer

- Passivation reaction site

This graph shows

- the catalytic mechanism how the OM in its conductive form "ES" is oxidizing the iron and becomes reduced to "LE".
- O_2 is re-oxidizing it back to ES via EB.
- The Fe(2+) is further oxidized to Fe(3+) by O_2 as well, and together with the surrounding water, which is transformed to OH(-) during the oxidation reactions, Fe(3+) will form Fe_2O_3.