

Can & Content Interaction

Methods used at Corus RD&T to monitor performance



How to guarantee shelf life?

Both content and metal can should survive several years without:

- Flavour change
- Iron pickup
- Coating degradation
- Leaking

And more...

But does it?

Test method

To get the answer to this question, Corus RD&T combines two test methods:

- Test packs (robust, pragmatic, realistic)
- EIS (on line, quick, extremely sensitive, in situ)

Pack test

Pack tests are done as the filler would do:

- Actual contents (e.g. beans, salmon, beer (+CO₂), pet food, shaving foam (+ gas), hairspray)
- Real cans and lids
- Real processing
- Opening after a predefined period and post mortem analysis

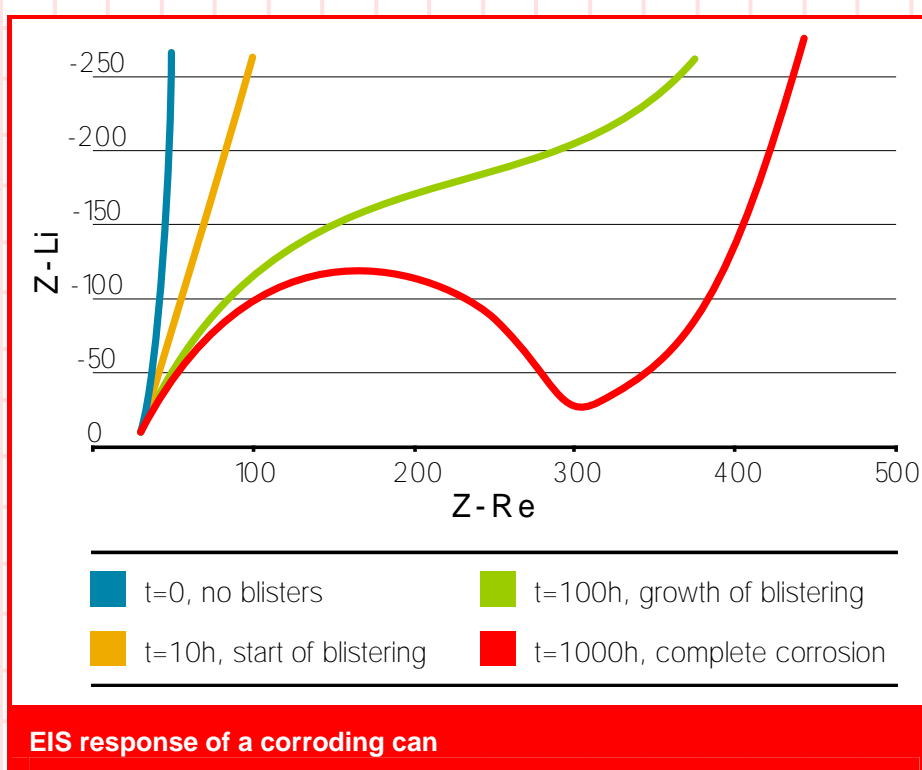


Test Pack facilities at Corus RD&T

EIS

Electrochemistry can monitor can performance. It also helps in developing a better coating.

EIS (Electrochemical Impedance Spectroscopy) is an advanced form of electrochemistry. It uses sines to increase the sensitivity. Very small defects can thus be seen, so this gives a quick but thorough answer.



The EIS measurement of a failing can changes with time (see figure above). The curve changes from left to right (blue, orange, green and red), indicating a corrosion process in the can. A good can would always correspond to the blue curve.

