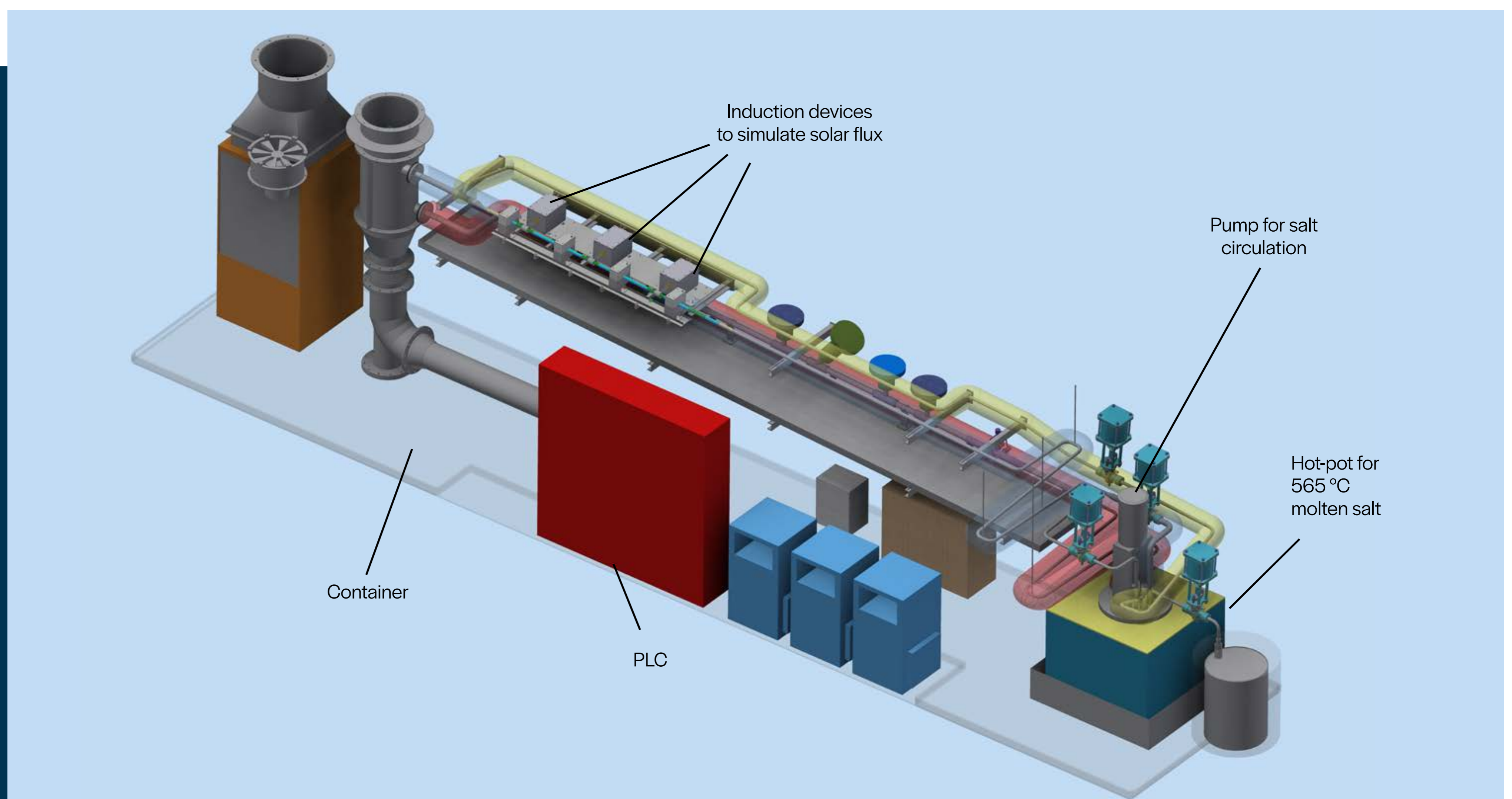


# John Cockerill Molten salt test loop for dynamic corrosion testing

## Why a test loop?

In the last ten years, John Cockerill Energy has successfully developed and supplied large scale solar receivers for both Direct Steam Generation Plants and Molten Salt Plants. Molten salt solar tower power plant is a recent technology. Molten salt is still at an early stage of knowledge. John Cockerill has already gone deeper into this salt expertise by performing static corrosion tests. In order to maintain its position on the market John Cockerill is willing to improve and complete its corrosion understanding by performing dynamic corrosion tests



## How does it work?

Fluid is heated up to 565°C in the hot-pot. The pump is used to circulate the molten salt through the loop, in which several test samples are put in series. Each test samples is independently heated by induction to simulate solar flux and create a temperature gradient between the metal and the molten salt; allowing us to better understand the corrosion behavior of molten salt in contact with higher temperature metal.

The test loop is in this way more representative of the plant reality:

- Circulation of salt
- Solar flux simulation
- Day/night thermal cycling

To allow a “plug and play” test plan, the complete assembly is put in a container.