



Apparatus for Corrosion Studies

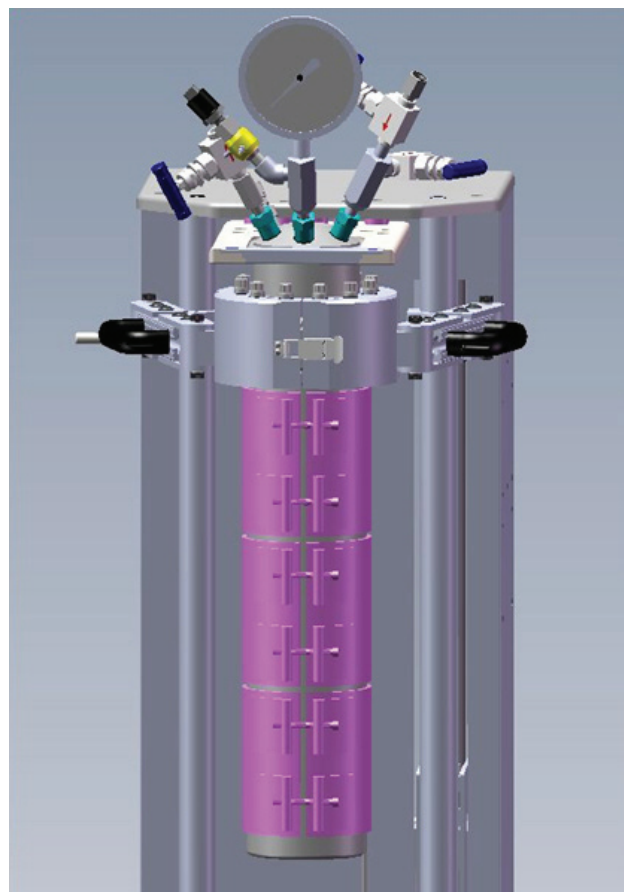
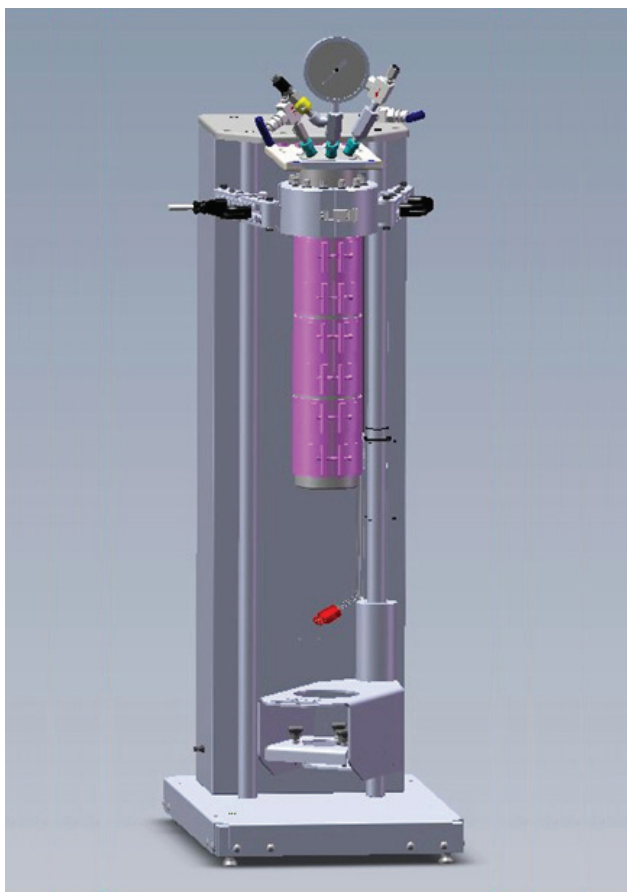
Parr Instrument Company has designed a vessel specifically to be used for long term (up to 4000 hours) corrosion testing of zirconium alloy samples in aqueous solutions near the critical point of water.

The vessel illustrated is a non-stirred, fixed head design with a volume of 3.7 liters with a maximum working temperature and pressure of 450 °C and 275 bar, respectively.

The vessel is heated with three clamp-on style band heaters. Using an internal multipoint temperature sensor, the system is capable of

maintaining a uniform temperature of ± 1 °C over a working zone of 30 cm centered along the vertical axis of the vessel. A unique control system, developed around the Parr 4871 Controller, is used to separately regulate power to the three heaters. This ensures compliance with tight temperature uniformity requirements.

Valves are provided on the head of the vessel for purging with inert gas prior the start the test as well as periodic sampling of the contents of the vessel. The controller is equipped to record temperature and pressure data for the duration of the test.



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