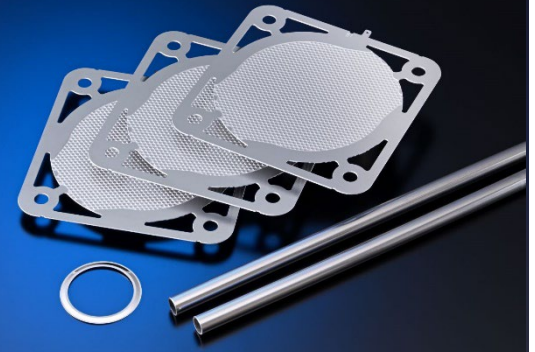


Material lineup for SOFC/SOEC

ZMG™232G10, ASL™619 and ASL™171



SOFC/SOEC

Outline

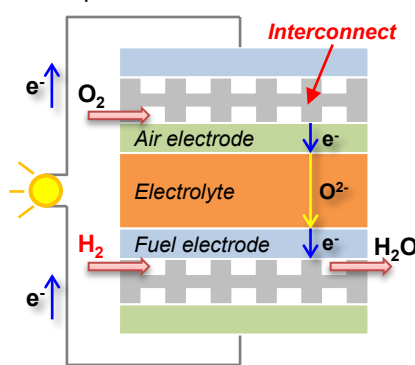
Proterial, Ltd. proposes materials suitable for components of SOFC/SOEC in their operating environment.

Applications

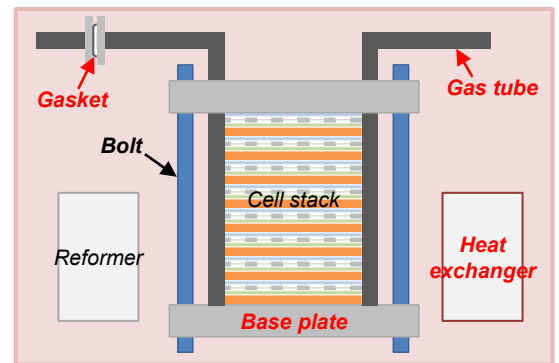
Material lineup

Components	Grade
Interconnect Current collector Base plate	ZMG232G10
Heat exchanger Gas tube	ASL619
Gasket	ASL171

Components of SOFC/SOEC



(a) Single cell (SOFC)

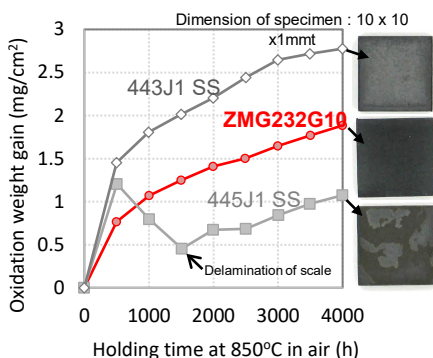


(b) Module

Feature

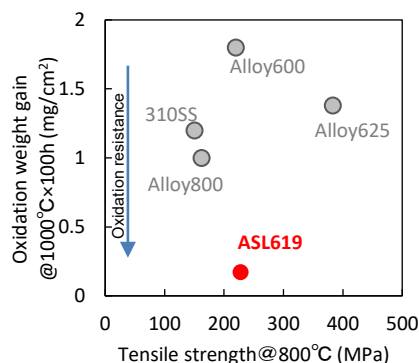
ZMG232G10 for interconnect

- Coefficient of thermal expansion close to electrolyte (YSZ)
- Good oxidation resistance up to 850°C compared to common ferritic stainless steels



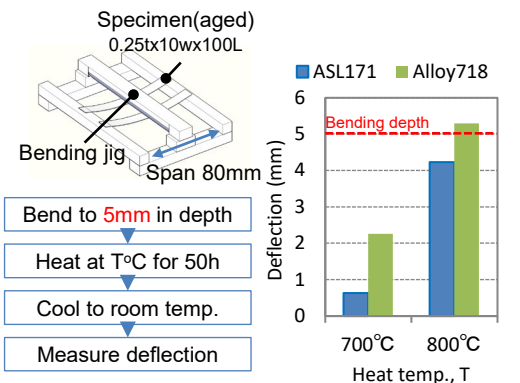
ASL619 for heat exchanger

- Tensile strength and creep rupture strength close to superalloys
- Good oxidation resistance up to 1000°C
- Low Ni content austenitic Fe-based alloy compared to Alloy800 and Alloy625



ASL171 for gasket

- Low Ni content compared to Alloy718
- Good heat resistance in long-term, high-temperature environments



[Aging condition] ASL171:850°Cx4h, Alloy718:720°Cx8h→620°Cx8h