

## Performance and fabrication of 1kW class anode-supported flat tubular SOFC stack

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KIER has been fabricating the anode-supported flat tubular SOFC stack. For this purpose, we have fabricated anode supported flat tubular cells by the optimization between the current collecting method and the induction brazing process. After that we designed the compact fuel & air chamber by adopting the simulation technique to uniformly supply fuel & air gas and the unique seal & insulation method to make the more compact stack module. For making stack, the prepared anode-supported flat tubular cells with effective electrode area of 90 cm<sup>2</sup> connected in series with 30 modules, in which one module consists of two cells connected in parallel. The performance of stack in 3 % humidified H<sub>2</sub> and air at 800 oC shows maximum power of 920W. Through these experiments, we obtained basic & advanced technology of the anode-supported flat tubular SOFC stack.