

### Operation of 1.3KW Class Anode-Supported Flat Tubular SOFC Stack

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KIER has fabricated anode-supported flat tubular SOFC stack for the intermediate temperature (700~800°C) operation. For this purpose, we have first 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 manifold by adopting the simulation technique to uniformly supply fuel & air gas and the unique seal & insulation method to make the more compact stack. For making stack, the prepared anode-supported flat tubular cells with effective electrode area of 108cm<sup>2</sup> connected in series with 37 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°C showed maximum power of 1.3kW.