

## The Technology of Hydrogen-Oxygen Carbon Electrode Fuel Cells

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Abstract\*

Low temperature, low pressure hydrogen-oxygen fuel cells have emerged from the research state and are presently subject to very intensive development efforts. The performance characteristics of carbon electrode fuel cells, namely, high current density, flat discharge characteristics, long life and high overload capabilities are established.

Recent engineering studies have led to a definition of the operating and design requirements for proper distribution of the feed gases and electrolyte, for water removal by transpiration through the electrodes into the circulating streams and for proper heat balance. The broad operating range of the carbon electrode fuel cell has permitted simplification of the auxiliary control and circulation systems.

Considerable reduction in size and weight have been achieved by using electrodes of a new structural design. Reliability assurance can be extended by redundancy.

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