Gas Diffusion Electrode

ALTEK FUEL GROUP Inc.
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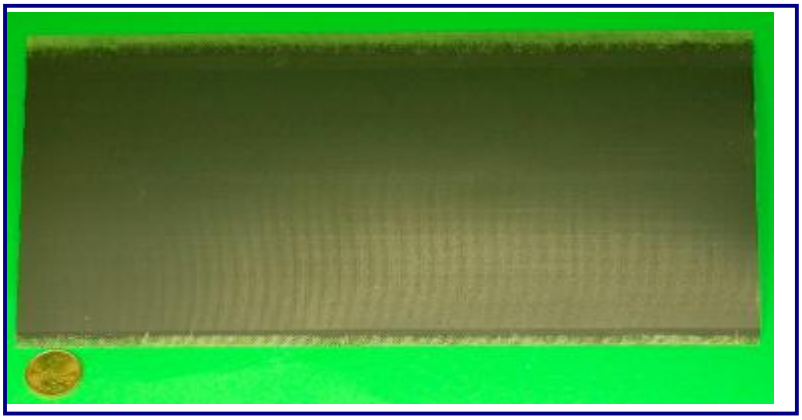
GDE
Ready to Use



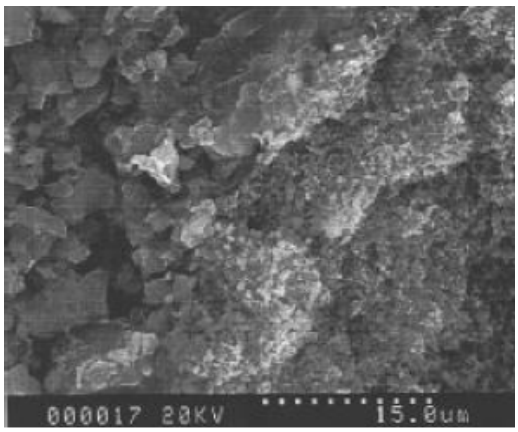
AFG's Gas Diffusion Electrode

Catalyst	Proprietary, Pt 0.25mg/cm^2 and less
Nominal Current Density	50-125
Operating Environment:	
Oxidizer	**Air**, CO_2 none scrubbed, breathing (no pressurized);
Fuel	Aluminum alloy A95 (Europe)/ 1195(North America)/or Mg/or Zn
Electrolyte	Alkaline/Salt/Acid
Temperature	30-40"C
Width, cm	Up to 50
Length,	Unlimited can be shipped in 100 meter rolls.
Thickness, mm	100-750
Shapes	Flat rectangular/Flat circle/Tube

Altek Fuel Group introduces proprietary Gas Diffusion Electrode based on a unique porous catalyzed structure as a cathode for an alkaline fuel cell, in particular for a metal-air fuel cell.

Altek Fuel Group Inc. has developed a manufacturing fabrication process for a fully reproducible Gas Diffusion Electrode (GDE). The core of this technology is an extruded all in one design, creating a process that requires minimal man-hours. AFG's GDEs are aimed for PEM/Alkaline fuel cells and are suitable for portable/residential/transportation applications.
This has led to the development of GDE using a proprietary technology.
The GDE is more applicable as a gas diffusion cathode with oxygen from the air depolarization for metal-air fuel cells.
Price, compared with other companies, is substantially lower. The basic 10x10 cm GDE produced by other companies has an average price of about several tens of dollars. Altek's MEA product, with the same performance or better, can be delivered for only a fraction of that price.

Cross-section of GDE's interlayer.



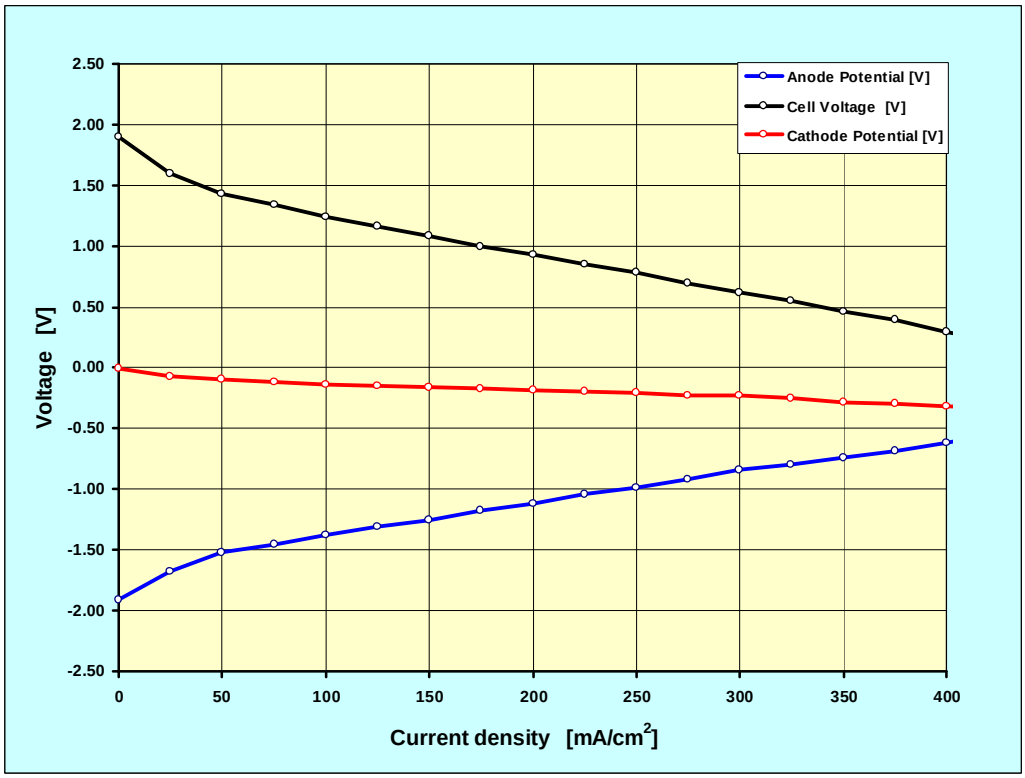


Fig.1 Cell Voltage and Potentials of Anode & Cathode vs. Current Density
Performed by Altek's standard test alkaline aluminum-air fuel cell
Polarizations compared to Hg/HgO reference electrode
Active area 20cm^2, ambient temperature 23°C

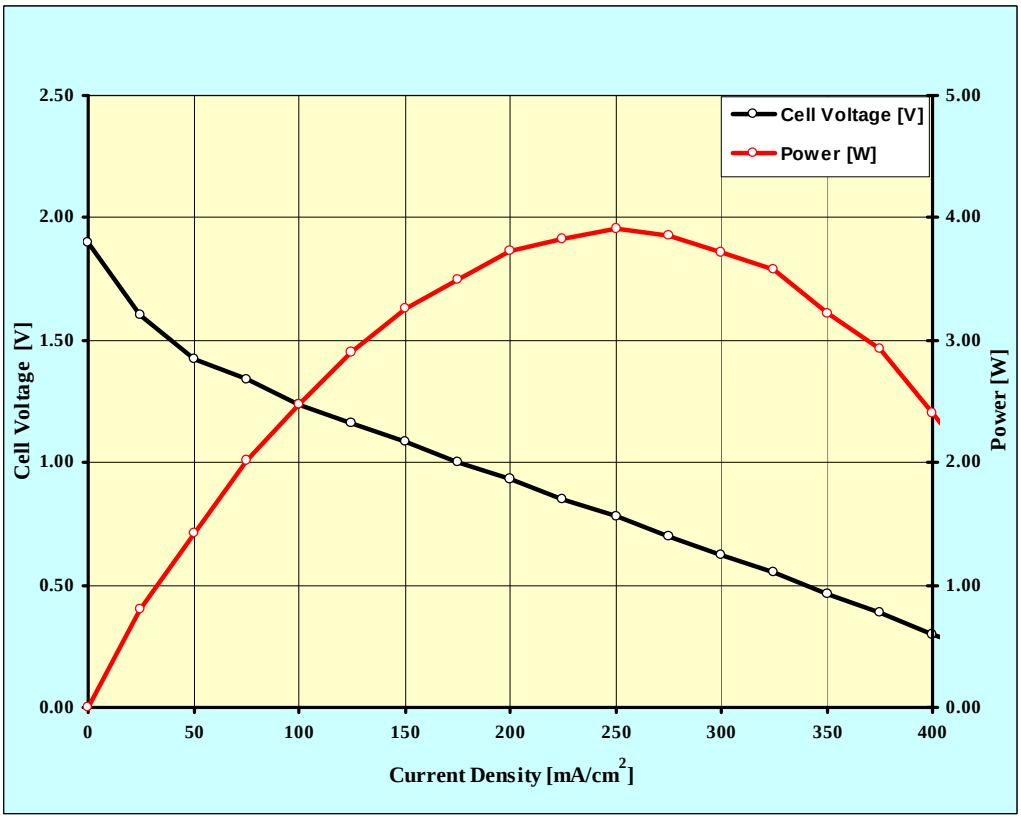


Fig.2 Cell Voltage & Power vs. Current Density
Performed by Altek's standard test alkaline aluminum-air fuel cell
Active area 20cm^2, ambient temperature 23°C