

The Best Brown's Gas Technology on the Planet Just Keeps Getting Better!

What is Brown's Gas?

Brown's Gas (BG) is created with water and electricity. Through a specialized process of electrolysis, electricity is used to enhance the components of the water. The resulting hybrid is a high-energy mixture known as Brown's Gas.

The electrical energy is 'stored' in the BG. When Brown's Gas is ignited, the flame releases the extraordinary energy potential.

BG is a unique, super-efficient medium for transmitting electrical energy into the atomic structure of materials, producing effects often unobtainable by any other means.

In use, the differences between BG and other torch gases are both dramatic and remarkable.

By nature Brown's Gas is gentle. It is odorless and harmless when inhaled (unless ignited). In pure

form, it is implosive. In fact, BG has even been tested as an underwater breathing gas.

BG is inherently safer than other combustible gases because it is lighter than air, diffuses rapidly and has a high initial flammability limit. Furthermore, BG is the only gas that can easily meet government (USA) standards for both zero pollution and no storage of combustible gas in enclosed areas.

User-friendly attributes aside, a shop that converts to Brown's Gas can reduce direct fuel costs up to 98% AND increase productivity by an average of 25% ... as soon as you make the switch.

Full details of Brown's Gas are well documented in Brown's Gas Books and Brown's Gas Videos available from: Eagle-Research, 1306 Main St, Oroville, WA 98844 USA <http://www.eagle-research.com>



BG flame Characteristics

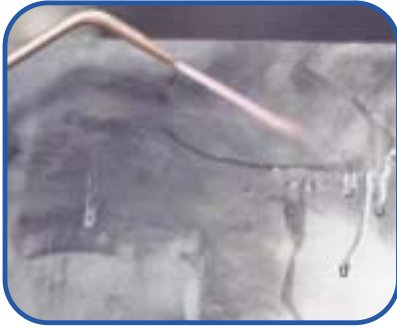
- 'laser-like': long, thin, *implosive*
- 'cool': radiates at 274°F / 129°C.
- inherently a correct mixture
- minimal flareout
- does not require atmospheric oxygen to burn
- does not deplete oxygen in area
- can burn in vacuum
- flame energy is controllable by volume of gas & distance from work (allows operator extreme precision and flexibility)
- no harmful radiation emissions
- clean: exhaust is pure water
- flame is easily shut off & restarted



- ER WaterTorches Cut Ferric**
- 30% less oxygen needed for cutting (oxygen is added *only* for cutting)
 - no preheat oxygen is used
 - cuts ferric 25% faster than oxy./acet.
 - 80% less heat hardening

continued inside • page 3 top right

Safe • Efficient • Industry Transforming



ER WaterTorches Make Water into Fire into Water

- BG reverts to pure water when burned
- unique and efficient medium for transmitting electrical energy into materials



BG Flame Does Not Boil Water

- water and air dissipate the electrical energy with minimal heating
- 3.8 times the energy potential of a diatomic flame of equal mass



ER WaterTorches Braze

- fast, easy, clean fusion
- laser-like flame allows torch to be held away from work

Significantly Increase Productivity

Point by point, Brown's Gas outperforms traditional torch gases on every key issue that industry is faced with. Brown's Gas gets the same work done with more precision, greater speed, at less cost, with reduced operator fatigue, and is environmentally sound.

Brown's Gas costs only Pennies per hour to Operate

Bottle rental, exchanges, storage and cartage fees of traditional torch fuels are eliminated. The only 'fuel' costs of BG are water & electricity.

Brown's Gas increases Productivity

Pre-cleaning is usually eliminated. (BG cuts dirty metal easily with minimal popping and spitting.)

The BG flame produces cuts so precise that little or no finishing is needed. Torch tips are virtually maintenance free and oxygen bottle exchanges are minimized. Since Brown's Gas is created on-demand, you won't run out of gas in the middle of a cut!

Brown's Gas Flame is Safer

The BG flame has minimal radiant heat. The cool torch tips, which are safe enough to touch, also prevent flash backs. The torch can be used more safely in tight areas where combustibles could ignite.

Brown's Gas is User-Friendly

Regardless of the torch gas currently being used, converting to Brown's Gas, is easy, efficient and immediately satisfying. Use all the same equipment (minus the bottles), light up and go! You don't even have to make mixture adjustments.

Brown's Gas is Ecological

BG exhaust is pure water. No harmful emissions like carbon monoxide, carbon dioxide, radiation, or oxides of nitrogen are created.

EXAMPLE #1: Reduce Labor Costs

A company that used acetylene to braze refrigeration pipe had serious health problems to solve. Their employees had headaches, fatigue, nausea, dizzy spells, confusion and irritability. The labor force was ill or quitting. The costs of sick benefits and constantly training new people were exorbitant.

By converting to Brown's Gas, fuel costs were reduced by 80%; health and morale improved significantly; productivity as well as the quality of the work was increased.

EXAMPLE #2: Transform Industry

Brown's Gas increases efficiency and safety in automotive shops. Cutting, brazing, soldering and heating can often be done with the components still in place. In addition, the laser-like flame minimizes the chance of igniting nearby oil, plastic, rubber & fabrics.

Emerging Industry: Small Brown's Gas electrolyzers (which cause a huge drop in pollution and fuel consumption, while increasing both performance and engine life), can be added onto customer's vehicles.

EXAMPLE #3: Increase Precision & Profits

Brown's Gas has been a 'trade secret' in the jewelry industry for over 30 years. Artists use BG because it is the ideal gas for welding noble metals. It produces minimal discoloration which cuts polishing time. The flame's low radiant heat reduces or eliminates masking & metal distortion and the precision of flame allows intricate jewelry to be easily manufactured.

Brown's Gas is the gas of choice for creating semi-precious stones like rubies, sapphires & moonstone. Brown's Gas allows delicate work to be done with quartz and glass.

Accurate • Quiet • Powerful

Dramatically Reduce Costs

current applications

- annealing
- brazing
- creating semi-precious stones
- casting (die and investment)
- enhance fossil-fuel combustion
- flame drilling
- flame cutting
 - directly cuts thin metal, plastic sheets, hard rods and hard fibers
 - adding oxygen: cuts thick steel, cast iron & iron
- flame drilling
- flame polishing of glass, plastic, quartz and ceramics
- ore and mineral separation
- preheating
- plasma spraying
- soldering (all types)
- sintering
- surface glazing
 - metals, ceramics, bricks, cement ...
- tempering
- vacuum - high quality
- welding (replacing industrial gas)
 - wax, glass, quartz, cast iron, copper, aluminum, plastics, precious metals ...

developing applications

Empirical data, proving the astounding effects of Brown's Gas in the following applications, is just beginning to emerge.

- pure 'new' water manufacture
- hydrated water for health
- muscle relaxation; pain relief
- help plants germinate and grow
- neutralization of radioactive waste
- creating new industrial materials
- transmutation
- inexpensive toxic waste disposal
- vastly increase recoverable ore
- underwater breathing gas
- super-efficient room heating
- surface treatment of materials

principle industries

- aerospace
- aircraft
- artists
- automotive
- bridge building / repair
- ceramics
- construction
- dental
- electro-mechanical
- electronics
- fabrication (light and heavy)
- glass
- instruments
- jewelry
- laboratories
- maintenance
- manufacturing
- marine
- military
- mining
- molding
- oil (rigs, pipelines, refining, etc.)
- optics
- plastics
- power plants
- recycling
- refrigeration
- repair
- salvage
- schools / universities / colleges
- semiconductor
- shipyards / ship building
- shipping
- solar cells
- thermocouples
- tool makers
- waste disposal



ER WaterTorches Cut Ferric

continued from front

- cuts thin slices of ferric with precision (minimal or no machining needed)
- punches holes with minimal slag
- cuts extremely thick iron quickly, cleanly, precisely, at any angle



ER WaterTorches Solder

- pinpoint flame accuracy
- flame's low radiant heat minimizes risk of burning nearby materials
- minimal flareout

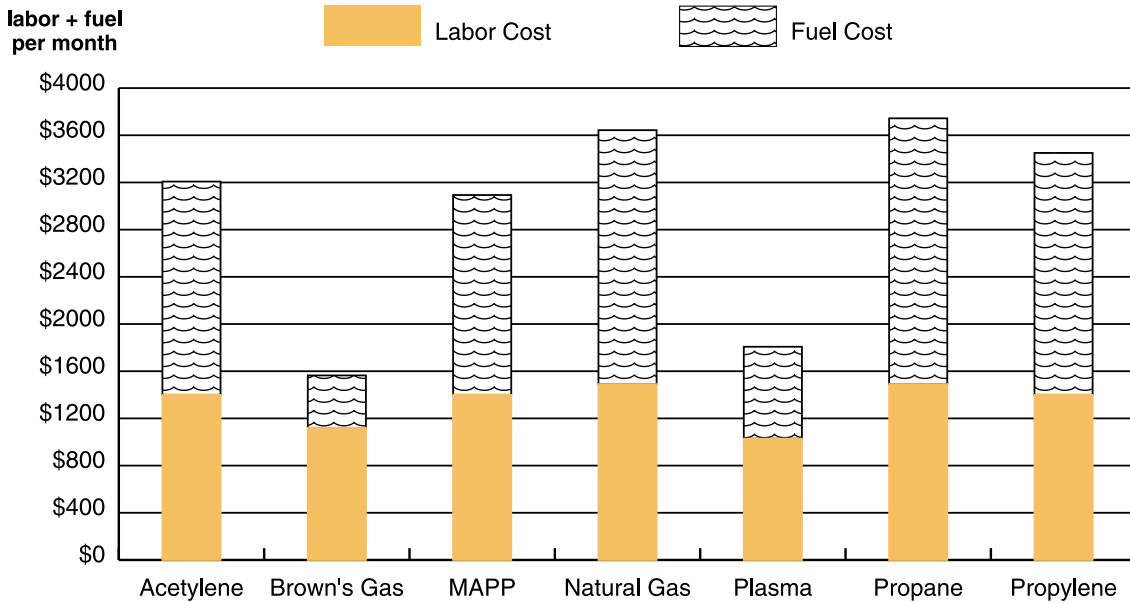


ER WaterTorches Weld Aluminum

- neutral flame: perfect mixture created on demand
- minimal metal discoloration
- minimal metal distortion

Consistent • Controllable

Comparison of Brown's Gas and Traditional Cutting Options



Assumptions: All figures in USA currency. Acetylene \$0.1375 cf; Electricity \$0.07 Kwh; Labor \$28/hr; MAPP \$0.0794; Natural Gas \$0.0075 cf; Oxygen \$0.20 cf; Plasma consumables \$15.79/hr.; Propane \$0.025 cf; Propylene \$0.08 cf; Water \$1.00 per US gallon. Using Eagle-Research WaterTorch™ technology, 1L water makes 1200L Brown's Gas. It takes 0.003 Kwh to produce 1L Brown's Gas. In all cases, cutting 4500 feet of 1" steel per month.
Note: Capital expenditures; bottle costs; equipment weights; space requirements; sound intensity; technology versatility and wattage considerations have not been figured into the equations for any of the cutting options. **Sources:** www.torchcutter.com; www.hypertherm.com; www.eagle-research.com

ER WaterTorch™ Technology

WATERTORCH™ CLASSES

- portable: ER10 - 1600 L/hr
- commercial: ER1700 - 3900 L/hr
- industrial: ER4000 L/hr . . . plus

Custom units available. Request quote and production schedule information.

LEARN MORE:
www.watertorch.com

BOOK A DEMO • BUY A TORCH

ER WaterTorch™ technology has undergone rigorous testing and upgrading since 1997. Specifications may be improved without notice.

Since 1994, Eagle-Research has been immersed in Brown's Gas research, experimentation and development. They've written the books, dispelled the myths and repeatedly raised the standards.

Eagle-Research has licensed their Brown's Gas technology to Water Torch Collective, Ltd.

ER WaterTorches outclass the competition

A systematic approach to quality innovation is evident from simplicity of design right through to the safety features, efficiency, user-friendliness, low-maintenance and longevity. Each aspect of every model is engineered to exceed the performance of any counterpart.

ER WaterTorch™ features

- ✓ 100% duty cycle
- ✓ reliable, efficient electronics
- ✓ one switch operation
- ✓ series-cell efficiency
- ✓ capacitive power supply
- ✓ no power transformer
- ✓ precise gas pressure control
- ✓ simple, rugged reliability
- ✓ easily replaced components
- ✓ designed to last for decades
- ✓ quiet, super-efficient operation
- ✓ less than half the size and weight of traditional electrolyzers
- ✓ produces the same quantity of gas using less than half the wattage of traditional electrolyzers
- ✓ operates on worldwide power standards . . .

Reliable • Light-weight • Cost Effective