



## WIT International, L.L.C. (Water Ion Technologies) Company Overview



WIT is a Florida, USA based business that discovered the Fourth State of Water, termed "Hydroxyhydrogen" and named "SG Gas". WIT provides research and development on the SG Gas Generator modular "blue" technology that produces SG Gas from water. SG Gas is an ionized gas, capable of oxidizing or reducing almost any material without the adverse reactions created by heat producing flames. WIT has retained Omega as their Energy Consultant to facilitate in the quantification and testing of SG Gas applications. See [www.WaterIonTechnologies.com](http://www.WaterIonTechnologies.com) for more information.

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## WIT SG Gas Production, USA and International Patent Application Summary & Update

### Abstract, Technical Field & Background

The pending Patent describes a method for producing a stable, compressible gas from an aqueous fluid. The gas, called "SG Gas", is suitable for a variety of uses and may also be infused into water which itself is useful for a variety of purposes.

This invention relates to the generation of a reasonably stable and homogeneous gas from an aqueous fluid, wherein said gas may be stored under pressure for on-demand uses. A low heat, electromagnetic process is used to produce SG Gas which is a distinct departure from conventional electrolysis of water.

Conventional electrolysis of water is known to produce:

- Hydrogen gas (H<sub>2</sub>) at the cathode
- Oxygen gas (O<sub>2</sub>) at the anode
- Water vapor due to high chamber heat

Conventional electrolysis of water does not allow for the effective separation of the Hydrogen & Oxygen gases resulting in a gaseous product that cannot effectively be stored for industrial applications in a single pressurized container without being explosive and dangerous.

High heat electrolysis of water creates an unreliable and heterogeneous mix of gases. It thus becomes desirable to develop a method by which a useful, stable, compressible gas could be formed from water or an aqueous liquid.

### Summarized Description of the Invention

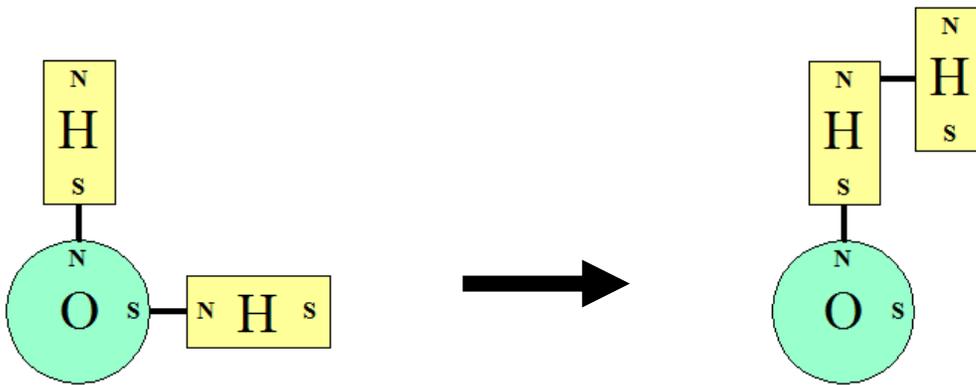
Distilled water (H<sub>2</sub>O) is mixed with an alkali salt electrolyte to produce an aqueous fluid which is introduced into a closed, heat resistant, water proof, primary reaction chamber allowing for reactions to occur under pressure.

Direct current electricity, using controlled amperages, is applied within the primary reaction chamber to a system of metallic separated end-plates (cathodes & anodes) and used to create variable, periodically collapsing, magnetic fields, which prevents electrolysis of the aqueous fluid and creates a unique Gas.

This unique Gas is then passed through a secondary reaction chamber which is comprised of rare earth magnets. The result is a homogeneous, reasonably stable, & paramagnetic Gas called SG Gas (Hydroxyhydrogen).

SG Gas is a perfectly balanced stoichiometric mix of oxygen and hydrogen in which its flame unlocks the intrinsic energy or heat potential of other materials.





Distilled Water (H<sub>2</sub>O) Liquid Molecule

SG Gas (Hydroxyhydrogen) Molecule

SG Gas can fill vessels (stainless steel cylinders) creating its own pressure without the use of a compressor. Based on WIT's testing, SG Gas can be safely stored under pressures ranging from 1000lbs - 1600lbs.

The stored homogenous SG Gas, using an air/propane torch with flash back arrestor (SG Gas is lighter than air and implodes when ignited thereafter reverting back to water), can be ignited to create a safe open single uniform flame at an approximate temperature of 270degF).

The flame from this unique Gas with such a moderately low heat will cause oxidation and reduction reactions in contact with other materials to bring them to melting point.

## SG Gas Properties, Findings & Potential Applications

### Materials Melting, Cutting & Fusing

SG Gas is able to oxidize non-oxidized substrates and reduce completely oxidized substrates.

When materials are exposed to the SG Gas open flame, a chemical reaction is produced with the material that causes temperatures to rapidly rise to above material melting point, release heat and converting the SG Gas back to water.



SG Gas Flame



SG Gas Flame Applied to Material





Documented examples of using ignited SG Gas tested on various substances are shown below:

<b>SG Gas Flame Documented &amp; Proven Test Result Examples</b>		
<b>Substance</b>	<b>Melting Point</b>	<b>Effect on Exposure to Ignited SG Gas (1 min. or less)</b>
Stainless Steel	2,600degF	Melting of stainless steel and production of heat caused by the chemical reaction of SG Gas flame.
Steel	1,330degF	Melting of steel and production of heat caused by the chemical reaction of SG Gas flame.
Copper	1,984deg F	Melting of copper and production of heat caused by the chemical reaction of SG Gas flame.
Ceramic	10,000degF – 12,000degF	Melting of ceramic and production of heat caused by the chemical reaction of SG Gas flame.
Tar Sands	Variable	Sand is converted to glass and metals separated out of the tar sand matrix.
Concrete	Variable	Creates a glassy molten surface which can adhere to metal when cooled.
Glass	Variable	Melting of glass. True colors in the glass are achieved with no carbon flakes or residue embedded inside the glass.

SG Gas may be used to cut through various materials with potentially cleaner cutting edges and can be used to fuse dissimilar materials together such as concrete and steel.

### **Heat, Steam & Electricity Generation**

Ignited SG Gas may be applied to a substrate with a view toward capturing the generated heat as a useful product.

The generated heat can be transferred to a substance such as air or water to produce hot air, steam or super-heated steam that can be used in industrial applications such as driving a turbine or piston engine for production of mechanical energy which can be used to drive an electrical generator to produce electrical energy.

### **Solid Waste Conversion**

Ignited SG Gas may disintegrate waste that is currently being disposed in landfills or storage facilities. Some of these wastes include e-waste (computer and electronic materials), medical waste (syringes), auto fluff (car seats and dashboard plastics), paints, oils, acid batteries and even nuclear waste.

The high temperatures using SG Gas as a catalyst also will completely disintegrate PCB's without dioxin as a by-product. The ash from a disintegration process using SG Gas is expected to be more beneficial as potash when compared to the ash generated from conventional incineration and gasification systems.

### **More Efficient and Cleaner Burning Fuels (Fuel Extender)**

The SG Gas torch produces a single uniform flame cone that provides a more efficient conversion of hydrocarbons and produces more heat from combustion of hydrocarbons lending the SG Gas to be used as a fuel extender.

As an example, when SG Gas is injected into a regular combustion engine air intake and combusted together with regular fuel, water is created which is converted by heat into steam which in turn increases engine torque resulting in higher power output, higher fuel efficiency and reduction of harmful exhaust emissions.

### **Cleaner Burning Candles**

When melted paraffin is infused with SG Gas and remolded into a candle the SG Gas candle burns with lower carbon emissions when compared to untreated paraffin candles.





## Ionized or Polarized Fluids

SG Gas has an affinity for water and other liquids up to the liquid saturation level.

An example is to create ionized or polarized water which effectively creates smaller water molecule clusters that are believed to permit faster cellular absorption and more complete hydration for humans, animals and plants.

Applications for ionized or polarized water include:

- Human & Animal Consumption: Efficient cellular absorption for more complete hydration and removal of toxins.
- Food & Health Supplement: Improves product quality, shelf life, nutrient benefits, absorption and taste.
- Cleaning: Enhanced effectiveness of cleansers and reduced need for emulsifiers and surfactants.
- Plants, Crops, Hydroponics, Floral Arrangements and Golf Course Turf: Larger size plants, improved plant quality, higher yield, more vigorous growth, longer viability and reduced hydroponic container scale buildup.
- Aquariums & Fish Farming: Larger healthier fish.
- Water Systems: Less algae growth (resulting from relatively high oxidation and reduction potential of SG Gas-infused Water) for long term water storage, municipality and commercial/residential water treatment systems.
- Refrigeration Systems: Less mold accumulation.
- Industrial Scrubbers: Less algae growth and scale buildup to maintain scrubbing efficiency.
- Industrial Products & Processes: Oil, gas & tar sand extraction reducing or eliminating the need to use petroleum based solvents.
- Pharmaceutical and Medicine Manufacturing: Efficient carrier of medicines and removal of by-products from medicines and solvent carriers.
- Skin Treatment Products: Hydration of skin cells, improved absorption of moisturizers and reduction in pigment changes due to sun damage.
- Wound Treatment: Faster healing and pain relief.
- Respiratory Relief: Used with humidifier systems to improve breathing and less snoring.
- Eye Relief Products: Relieve eye irritation and improve hydration.
- Dental Care Products: Removal of or inhibit plaque and stains on teeth.
- Cosmetics & Beauty Supplies: Less need for chemical binders and higher resistance to contamination buildup of cosmetics as well as improved hair growth.
- Water Features: Cleaner water with less or no chlorine or chemical additives for use in swimming pools, spas, hot tubs, waterfalls, fountains and water amusement parks
- Steam and HVAC Systems: Less algae or mold growth for cleaner air circulation systems.

More detailed information on SG Gas may be found in the USA Patent Application Publication US 2010/0209360 A1. A copy of this document may be requested from WIT ([www.WaterIonTechnologies.com](http://www.WaterIonTechnologies.com)).

There are many potential emerging applications of SG Gas relating to the Renewable Energy, Alternative Energy, Medical, Commercial and Industrial Markets that are currently being investigated.

For example, a recent application using SG Gas for Car Wash facilities and the reclamation of waste-water for re-use is being studied with plans for testing on current operating and planned car wash locations including those in Europe.

As of September 2010, WIT and Omega's main research is currently focused on integrating SG Gas technology with Renewable & Alternative Energy Industry manufacturer technology to help increase overall system efficiency, improve operation, improve energy output, material recovery, decrease emissions, reduce maintenance, reduce capital cost and provide a better more affordable energy solution to customers.

In addition, research is being done on using existing renewable and alternative energy solutions to produce purified water and green electricity, both of which are needed to produce SG Gas.





## Renewable & Alternative Energy Industry Applications Main Focus

WIT and Omega do not intend to produce a stand-alone Renewable or Alternative Energy Manufacturing solution but are rather focused on forming partnerships with well established, third party, Renewable and Alternative Energy Manufacturers to research, test, manufacture, install & operate fully integrated solutions using both technologies. WIT or an affiliate will essentially play the role of the Original Equipment Manufacturer (OEM) to existing Renewable and Alternative Energy Manufacturers.

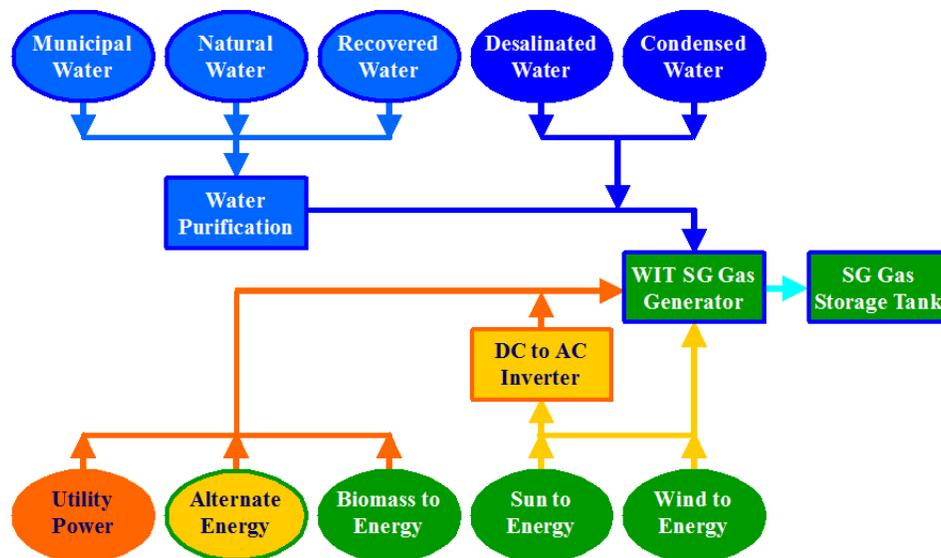
### Water & Power Production Applications

The production of SG Gas requires water and electrical power, both of which are readily available from Conventional, Alternative and Renewable sources.

Clean water which is required for the best maintenance and efficiency of SG Gas generators and may require pre-treatment such as filtration or infusion of SG Gas itself into water to remove suspended solids.

Water can readily be obtained from the following sources:

- **Municipal Water:** Processed water obtained directly from the Water Utility.
- **Natural Water:** Water obtained from natural sources such as lakes and rivers.
- **Recovered Water:** Water obtained as a by-product from Fossil Fuel, Municipal Solid Waste (Garbage), Municipal Liquid Waste (Sewage), Industrial Liquid Waste, Medical Waste and Biomass processing.
- **Desalinated Water:** Water obtained from the sea using reverse osmosis or other means.
- **Condensed Water:** Water from humid air using condensing systems.



WIT SG Gas Manufacturing Process

SG Gas Generators require very little power to produce SG Gas and can be readily powered from the following sources:

- **Utility Power:** AC Power obtained directly from electrical utilities or municipalities.
- **Alternate Energy:** AC Power obtained directly from Fossil Fuel Energy and Waste to Energy power plants.
- **Biomass Energy:** AC Power obtained directly from Biomass Renewable Energy power plants.
- **Sun Energy:** DC Power obtained directly from Photo-Voltaic Renewable Energy power plants. This could also be converted to AC Power using an Inverter. The SG Gas Generator can accommodate both DC and AC Power supply. The Sun's energy can be harnessed to create Electric Power that runs the SG Gas Generator for as long as



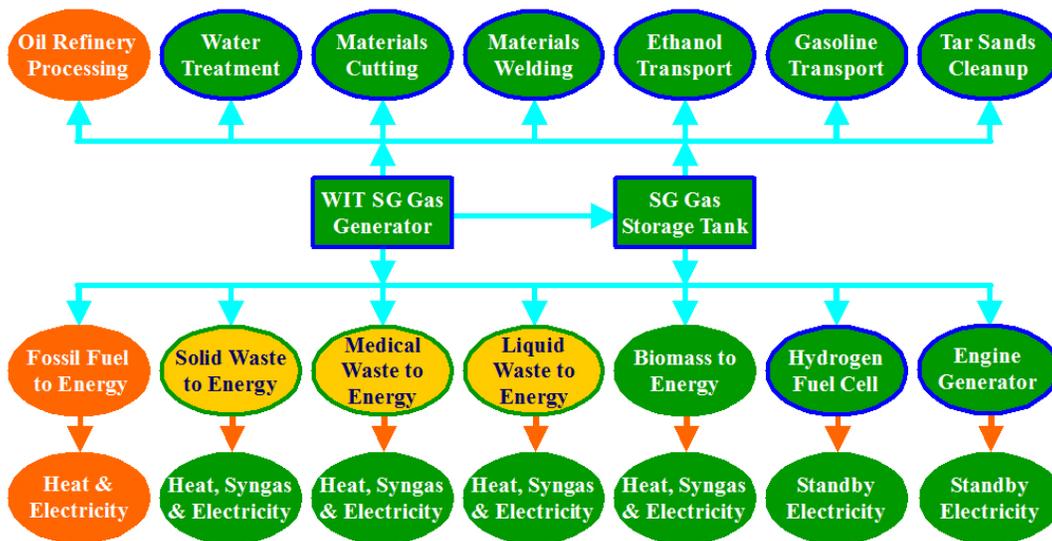


adequate sunlight is available. SG Gas is stored in pressurized storage tanks for immediate or emergency use in the above mentioned Fossil, Alternative or Renewable Energy Production Systems. In the event of inadequate sun, regular power can be used to continue the production of SG Gas.

- **Wind Energy:** DC Power obtained directly from Wind Turbine Renewable Energy power plants. This could also be converted to AC Power using an Inverter. The SG Gas Generator can accommodate both DC and AC Power supply. The Winds energy can be harnessed to create Electric Power that runs the SG Gas Generator for as long as adequate wind is available. SG Gas is stored in pressurized storage tanks for immediate or emergency use in the above mentioned Fossil, Alternative or Renewable Energy Production Systems. In the event of inadequate wind, regular power can be used to continue the production of SG Gas.

SG Gas Generators can be integrated into Fossil, Alternative or Renewable Energy Systems where the SG Gas could improve or enhance the overall efficiency without any additional toxic emissions, such as:

- **Fossil Fuel Energy Production Systems:** Complete combustion of Fossil Fuels (Coal, Crude Oil, Petroleum, and Natural Gas), increasing Fossil Fuel Power Plant energy efficiency and the reduction/elimination of by-products such as Ash, Green House Gases and Toxins.
- **Alternative Energy Production Systems:** Complete combustion of unsorted Municipal Solid Waste & Medical Waste feedstock (existing MSW & MW Power Plants using Incineration, Pyrolysis, Gasification & Plasma technologies combust up to 75% of the Solid Waste), increasing Alternative Energy MSW Power Plant energy efficiency, producing water as a SG Gas by-product and the clean-up/reduction/elimination of by-products such as Ash/Slag, Green House Gases and other polluting Toxins.
- **Renewable Energy Production Systems:** Complete combustion & energy recovery of Biomass feedstock (existing Biomass Power Plants using Pyrolysis, Gasification & Plasma technologies only capture up to 70% of the energy present in the Biomass), increasing Renewable Energy Biomass Power Plant energy efficiency, producing water as a SG Gas by-product and the reduction/elimination of by-products such as Ash, Green House Gases and polluting Toxins.



WIT SG Gas Applications

## Conclusion

WIT & Omega have the conviction that SG Gas can be used in many industries to help provide Renewable, Green, Blue and Alternative solutions that will greatly benefit Manufacturers, Consumers and the Environment. This is a perfect triple-win solution using existing and emerging technologies to facilitate developing a new clean and sustainable economy.





## **Appendix A - Progress Report on SG Gas Properties, Applications & Differentiation**

A Progress Report on SG Gas Its Properties, Applications and Differentiation from Other Gases.  
Prepared by Representatives of LSG Partners, L.L.C. - August 2010

### **Introduction**

The emergence of LSG Partner's water ion technology (the "Technology" and "Process") will have a dramatic and positive role as a clean energy alternative useful in reducing greenhouse gas emissions for a wide-range of industrial applications.

The Technology also creates pure, polarized water that is stable for long-term water storage supplies during catastrophic events and has intriguing potential applications in medicine delivery systems, pain relief, wound healing, and disease prevention and recovery.

The Technology, discovered by Ted Suratt and Robinson Gourley and fully owned by LSG Partners, L.L.C. located in Sarasota, Florida, will simply make life, products and the environment better.

We call our Discovery, the fourth state of water as we believe the Process changes the elemental structure of water to become a stable beneficial gas that we have named, SG (Suratt/Gourley) Gas, that when lit, has a flame that upon contact will unlock the intrinsic energy of any material.

SG Gas also binds into ultra-pure water which creates its own unique beneficial properties. We realize this is a profound statement: Simply stated, our Discovery has the potential to clean up most industrial technologies, with less environmental impacts.

### **Process**

SG Gas is produced by using a gas generator with a controlled electrolytic process, a selected proprietary electrolyte and a single gas outlet.

A low voltage of less than three volts is maintained across the plates and the temperature of the gas generator is kept below one hundred degrees Fahrenheit when producing the gas.

The gas is next passed through a reverse osmosis membrane to strip away any residual electrolyte, and then filtered through a closed pressure tank containing de-ionized distilled water and a vacant space above the water where the hydrogen accumulates.

The result from this Process and apparatus is the generation of a novel gas formula of magnetically attracted hydrogen and oxygen in a configuration that makes the gas both compressible and safe to store under normal conditions.

### **Composition**

As expected considering its origin from water, mass spectrometric analysis confirms the elemental composition of SG Gas to be hydrogen and oxygen (2/1 molar ratio as in water) plus approximately eight percent water <sup>(1)</sup>.

Although SG Gas can be thought of as an energized gas generated from water and possessing a high energy state of electron rearrangement, the complete structure and nature of the chemical bonds involved are not known at present.

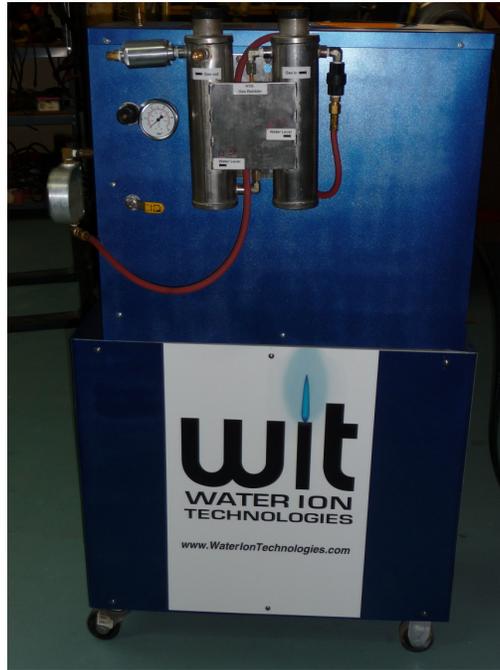
In the near future, we plan to arrange laboratory testing of the bonds of SG Gas involving several spectrometric tests such as IR, Raman and NMR. Whatever composition is ultimately proven, we have high certainty that SG Gas will have a dramatic and positive role in the marketplace, in particular a central role in the alternative green energy sector.





## Apparatus

Over the years, we have constructed prototypes of SG Gas generators, including Jake SP5000.



*Picture of Jake SP5000*

Our current prototype is Jake LP5000 which involves four cells of large metal plate arrangements filled with our selected electrolyte to increase the efficiency volume of gas production by at least two fold.



*Picture of Jake LP5000*

This prototypic design can be adapted to build customized devices for all industrial and commercial applications under licensing agreements.





## Theory Discussion

We are at present not certain of the molecular structure of SG Gas, and our theories continue to evolve as more testing is performed on SG Gas and new discoveries come to light.

The Process for creating SG Gas that we have invented may be generating a reliable and repeatable blend of O<sub>2</sub> and H<sub>2</sub>, a unique cluster of diatomic hydrogen and oxygen surrounding and attracted to a single H<sub>2</sub>O molecule, or perhaps something else.

What we observe regardless of the structure is that high energy gas is produced by the Process. When this gas is combusted, e.g., by a spark, it will release significant amounts of energy and revert to the original lower energy configuration of the water molecule.

We are currently pursuing laboratory and other testing in an attempt to prove the composition of SG Gas and the types of atomic and molecular bonds present therein.

## Cluster Theory

It is well known to those trained in the art that H<sub>2</sub> will not bond to a water molecule, however, O<sub>2</sub> will form a weak magnetic bond to the hydrogen of the water molecule, in the same manner that it bonds to the oxygen in another water molecule to form a liquid cluster.

The oxygen will liberate a single water molecule from the liquid and it will rise to the hydrogen rich atmosphere above the water.

The water molecule after forming a magnetic cluster with the paramagnetic O<sub>2</sub> molecule, changes from its diamagnetic state to a paramagnetic state, allowing it to magnetically attract the H<sub>2</sub> at the bottom of the water molecule which, in turn attracts the paramagnetic oxygen.

In summary, whatever theory is ultimately proven, we have high certainty that SG Gas will have a dramatic and positive role in the marketplace, and in particular a central role in the alternative green energy sector.

## Desirable Applications of SG Gas

SG Gas production is a viable green energy alternative fuel which requires comparatively little energy to produce and utilization of a solar energy source in conjunction with an SG Gas generator yields even lower energy requirement for running the gas generator to produce the gas.

This means less reliance upon petroleum fuels for energy production, no toxic pollution emissions since SG Gas combusts back to water, and SG Gas can be produced anywhere in the world where there is a reasonably clean water supply and sunlight.

SG Gas with a single supply hose has a distinct advantage over tanked gases of H<sub>2</sub> and O<sub>2</sub>. After purification by reverse osmosis, SG Gas is ready for immediate use on location, or it can be safely compressed and stored between 1,000 and 1,600 lbs. under ambient temperature.

If it is exposed to an open flame, SG Gas will implode within the tank and create a vacuum. We have determined that SG Gas is less expensive to produce, safer to store, and easier to regulate than H<sub>2</sub> and O<sub>2</sub> in separate containers.

As a single gas, the SG Gas flame will melt ceramic more efficiently when compared to that of a combination of H<sub>2</sub> and O<sub>2</sub>.





Based on our current theories, we believe the water molecule contained in an SG Gas Cluster also keeps the flame cooler and allows the substrate to heat to its reaction temperature where it reacts directly with the gas and creates a smoother, faster, and more efficient melt. This phenomenon allows the oxidation and the reduction to occur at the same time and prevents the popping or spitting of fragments that normally occurs with oxidized materials such as rusted metals or ceramic type materials.

Activated SG Gas flame is effective in metal and porcelain industries not possible with other fuel torches including a combination of H<sub>2</sub> and O<sub>2</sub>. With the use of SG Gas, popping or spitting of fragments are prevented, and a smooth melt permits heat bonding of porcelain modules and incompatible metals such as steel and aluminum.

These characteristics of SG Gas hold great promise in the building construction sector by creating a glass glazing effect on the exterior surface of concrete block for waterproofing and mold prevention, and welding of dissimilar materials such as rebar onto concrete block.

Another property of SG Gas infused in water makes the water less buoyant and increases the sedimentation rate of suspended particles in the water. This has tremendous applications in water and waste treatment plants, in car wash services, laundries, and on cruise ships reliant upon recycled facilities needed for water conservation. It is estimated that our prototype for car wash facilities in Europe alone, will annually save over one billion gallons of water.

Finally, a promising beneficial potential, is in the health improvement field. We are sponsoring some limited testing to determine clinical trends and convert strong antidotal information from our bottled water customers into more of a factual platform. Solution of SG Gas in ultra-pure water appears to improve kidney functions, and ameliorate the status of individual suffering from neurological diseases by consuming the water, and accelerate healing of skin burns and reduce associated pain through topical applications of the water. The Gas itself, when breathed by an individual, seems to alleviate lung congestion caused by pneumonia and eases the chest cavity for a more regular heart rhythm.

## Testing

LSG Partners have arranged testing of SG Gas and water infused with SG Gas by nationally-recognized experts, certified laboratories and scientific consultants including an emeritus professor with a long-standing affiliation with Florida State University.

We are also sponsoring absorption or transport studies on the gas-infused water to be performed by a professor from the University of Florida in the fall of 2010. Certified labs, including Southwest Research Institute located in San Antonio, Texas, have performed water quality and oxidation/reduction potential analyses on the gas-infused water. We received a lab report in the summer of 2010, verifying the gas-infused water is not a microbial killing solution. Additionally, LSG is working with a lab on the protocol and logistics for performing a bond structure confirmation test later this year.

In an effort to assess capabilities and differentiate SG Gas from a mixture of hydrogen and oxygen gases, we performed tests and measurement which some are described below:

### A. Density Measurement

The density of SG was determined experimentally by transferring 20 liters of gas directly from the generator into a pre-weighed Cornelius tank and weighing the tank after the transfer. The averaged net weight is  $0.52 \pm 0.02$  grams/liter. The calculated average density of a combination of hydrogen and oxygen gases is 0.49 g/l.

### B. Heating Efficiency

In a copper vessel 93 grams of distilled water were heated with SG Gas for 71 seconds to raise the temperature 120 degrees. The same test done under identical conditions with the same gas flow rate using hydrogen and oxygen in a stoichiometric mix required 80 seconds to reach the same temperature.





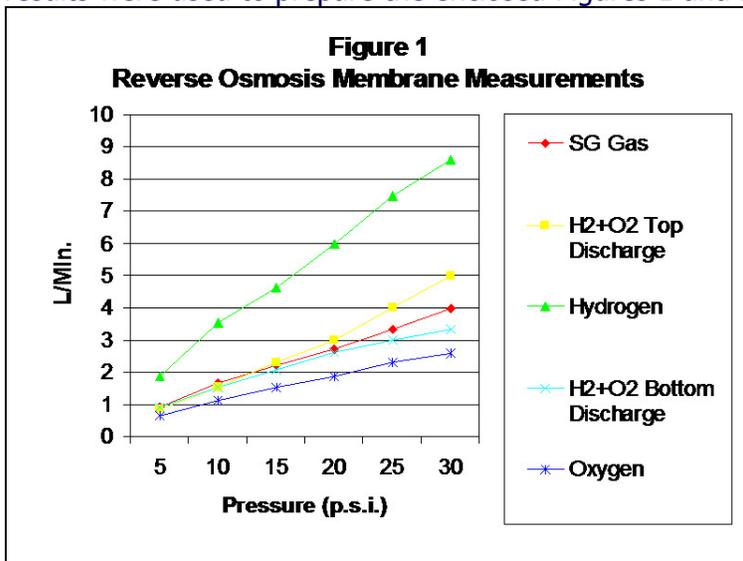
### C. Reverse Osmosis Potential

Samples of gas at varying pressures were passed through a Reverse Osmosis (RO) membrane (TW30-1812-50) at several pressures and time for 1 liter of displacement was recorded.

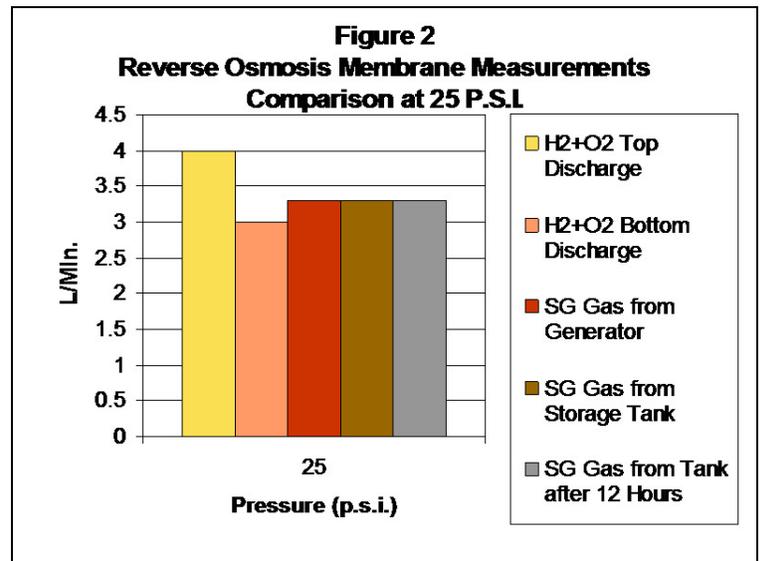
The gases used were (1) O2 Gas, (2) H2 Gas, (3) combination of H2 and O2 Gases at 2:1 ratio, and (4) SG Gas.

The pressure intervals were 5, 10, 15, 20, 25 and 30 Pressure per Square Inch (psi) (or 5-30 psi at 5 psi intervals).

Repetitive measurements were performed to enhance precision. SG Gas, produced using Jake SP5000, was directly tested connecting the out port of the generator with the RO membrane apparatus. Samples of SG Gas were also tested from a storage tank immediately after transfer from the generator and after a 12- hour storage period. The results were used to prepare the enclosed Figures 1 and 2.



**Notes:** Reverse Osmosis Membrane Measurements Average(\*) Flow Rates (L/Min.) at 5-30 p.s.i. Pressures  
(\*) Average of 2 or more repetitive determinations.  
Mixture of H2 (30 p.s.i.) and O2 (15 p.s.i.).  
SG Gas measurements directly from generator.



**Notes:** Flow rates (L/Min.) for SG Gas and a mixture of hydrogen and oxygen (30 and 15 p.s.i., respectively) at 25 p.s.i. pressure.

### D. Gas Production

The SG Gas rates increase linearly with increasing pressure similarly to hydrogen and oxygen. The corresponding values are between those of hydrogen and oxygen, but much closer to the latter. Although at pressures lower than about 20 psi rates of diffusion for SG gas and the hydrogen and oxygen mixture are not significantly different, at higher pressures the curves diverge considerably.

The rates of SG Gas continue to increase linearly where the rate increase for the mixture is greater for the mixture collected from the top of the tank and lower for the mixture collected from the bottom. The shifts are in the direction of the hydrogen and oxygen values respectively indicating some degree of heterogeneous stratification. In accordance with the different densities of the two gases (oxygen and hydrogen), the surface layers would contain higher percentages of the lighter gas hydrogen and the bottom layers would be richer of the heavier gas oxygen.

This stratification of the mixture and the homogeneity of SG Gas are confirmed in Figure 2. The results are identical when SG Gas is diffused immediately after transfer from the generator or after 12 hours of storage in a tank. The mixture of hydrogen and oxygen performs clearly as a stratified heterogeneous system. SG Gas, however, appears to be more stable, homogeneous and uniform even after 12 hours in a tank with top and bottom discharges of SG Gas.





## E. Stability

We have tested the stability of SG Gas in several types of accumulators by filling the chamber with SG Gas and applying pressure. Based on these observations, SG Gas neither explodes nor implodes at 2,000 psi of pressure.

## F. Testing of SG Gas in Water Solutions

1. Oxidation and Reduction Potential (ORP) Measurements: The ORP of water solutions of SG Gas were performed by certified laboratories. Based on a number of samples, the ORP range between 380 and 460 mV was confirmed for a solution currently in commercial use by one of our licensees, AquaNew, L.L.C. (a registered trademark name of Watt-Ahh®). This range indicates a medium oxidative power and a probable moderate antibacterial effect.
2. Chemical Analyses of Watt-Ahh®: Extensive inorganic and organic chemical analyses were performed by certified national laboratory. The results reported are typical of those of distilled ultra purified water and well below the federal standards for drinking water.
3. Additional study results on the SG Gas-infused Water can be found at [www.AquaNew.com](http://www.AquaNew.com) including the results of a pilot study with autistic children and increased shelf life for consumable products such as cut flowers.

## Contact

LSG Partners, L.L.C. is the sole owner of the SG Gas and Water Ion Technology and its associated provisional, priority and international patent applications pending before the USPTO and twelve international patent offices, including the European Patent Union, for review.

Ted Suratt and Robinson Gourley are co-inventors and may be contacted in Sarasota, Florida by calling 1-941-923-8972. Their research and development company, WIT International, L.L.C., has a website that describes the multiple commercial applications for the Technology ([www.WaterIonTechnologies.com](http://www.WaterIonTechnologies.com)).

The exclusive licensing agency for the Technology is Water Ion Solutions, L.L.C., also located in Sarasota, FL., and Drew Smith may be contacted at 1-941-552-2716.

<sup>(1)</sup> *The small percentage of water reported by mass spectrometry analysis may be a residual water from the gas generator or water formed during the analysis itself and not necessarily a constituent of SG Gas. Mass spectrometry only confirmed the predictable presence of hydrogen and oxygen in the same proportions as the water molecule of origin.*

