

The Scope of hydrogen as the future's energy

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The increasing concern about global environment and the recent focus on hydrogen as one of the future's energies have been literally global, and, at the same time, the problem of the global warming by carbon dioxide has been becoming a very serious one that must be solved on a global scale and at full speed.

For example, car industries are now reviewing that they have accelerated air pollution for a long time by emitting pollutant gases like CO₂, NO_x, SO_x and other pollutant, and, instead, are insisting of the appearance of hydrogen as the main role of the new energy's era by advocating fuel cell cars of which motto is so-called "zero-emission".

It is said that hydrogen is the most abundant element in the universe and exists mainly in combination with other chemicals; namely, water is an example of a substance containing hydrogen. Hydrogen can be produced through the electrolysis of water, in which electricity can be used to separate water into hydrogen and oxygen. Once the hydrogen has been produced, it can be stored in several forms, including gas, liquid, and solids. Hydrogen that can be produced through the electrolysis of water is a zero emission fuel.

When the electricity that is used to generate hydrogen is produced through clean technologies like solar systems and windmills, the electricity generation also has no pollutant emissions. When the hydrogen fuel is consumed in fuel cells or hydrogen internal combustion engines, the emissions are basically nothing more than steam. By using electricity generation based on clean technologies, water electrolysis or hydrogen fuel, the whole process from fuel creation to the final use of the fuel, whether it may be to drive a car or to be used at home, has no pollutant factor on the environment.

Hydrogen is as safe as any fuel. In many circumstances, hydrogen is safer than gasoline as a fuel for passenger cars because it is lighter than air and dissipates very quickly. Adopting a hydrogen system in your car or home would be similar to having natural gas appliances.

The ultimate solution to the global air pollution problem is the zero-emissions pathway that begins with renewable and sustainable energy. The fuel cell engine is more efficient and has a wider range than a gasoline engine with the same amount of fuel. Fuel cell vehicles offer many other potential advantages. Hydrogen driven vehicles do not emit greenhouse gases that are becoming increasingly limited by governmental regulations. In addition, fuel cell vehicles offer the potential for a smoother ride and less maintenance because of their smaller number of moving parts.

The use of hydrogen as a fuel is an excellent method of reducing and eventually eliminating ground level ozone (smog), regional acid rain and global effects of climate change due to greenhouse gases.

In this meaning it may be true that hydrogen will provide a global fuelling infrastructure for vehicles and other applications; from large stations for buses to small personal fuelling appliances for home use.

The on-site type of hydrogen generator (like our product) that is to be used outdoor would be the most suitable to the countries like Palau where many islands are scattered and separated with one another. The applications would range widely and variously from the cooling for electricity generation to the use as fuel at each home in combination with fuel cells.

The reason why is that the countries that have their own wide land may easily transmit electricity with transmitting wires, while the countries like Palau that are consisting of a lot of separate islands can not lay such transmitting wires all over the islands to do so. Therefore, the on-site type of hydrogen generator would, both geographically and physically, be the most suitable to the environments and circumstances which these islands countries have as their fate.

Additionally, if such hydrogen generators were used in combination with O-TEC technologies, their applications will be increasingly and unlimitedly expanding, and, as the result, the relationship of hydrogen and water containing hydrogen will be inseparable with each other

Thus, the time of hydrogen has come at hand, and the curtain of the stage has already been raised up. As a substance that is abundantly contained in water and as an element that is the most abundant in the universe, hydrogen will establish his own brilliant future soon, and will undoubtedly play the main role of the coming era of new “zero-emission” energy.