

Hydrogen: Most promising Fuel in Future

Energy Change: While the ${\rm CO}_2$ emission must be reduced, oil and natural gas should be prohibited increasingly. Hydrogen as the most promising fuel in post fossils ages will prevail.

The year 2020 is the year of hydrogen. In each case in Japan on the occasion of $32^{\rm nd}$ Olympic summer game the country wants to demonstrate for sustainability and hydrogen belongs to that. To no purpose in Japan. It gives fuel cells heating apparatus not invain abundantly in Japan. The first to manufacture Toyata in big series produced fuel cells-pkw.

The energy change in traffic sector makes the energy carrier hydrogen also in this country a support of expectation. While it is all clear that an energy change alone with battery electric arrangements hardly get supported. Punctually to IAA in Frankfurt in spring came hydrogen again on the agenda.

What-however is failing in Germany, a national hydrogen policy. Certainly it wants the Federal Government as four ministers already in November 2019 made public, however this still holding good. 'We want to be the number one in the world in hydrogen technology'—emphasised Peter Altimier. For hydrogen offers enormous potential for the energy the climate protocol and employments.

So hydrogen is in demand as fuel, so insidious is its manufacture. With that the gas does not carry any ${\rm CO}_2$ back sack, the water electrolyses that today replace marketable natural gas

based method. So the hydrogen production becomes one of (Eco) current reduction of future decades.

Example steel industry: In order coke coal as reducing agent for the iron ore to be able to be eliminated, many steel concerns researcher on the direct reduction with hydrogen. The brancenprimus of Austria Voestalpine has calculated out how much current (energy) it would require in order its Linger Foundry completely convert 33 TWh per year: This corresponds more or less to the half of today's Austria's current production.

Example chemical Industry up to how far hydrogen as raw material suitable for the synthesis of basic chemicals or complex combinations, many undertakings test, uptodate their research arrangements they hold, however, for the time being still under cut off.

Prestige project such as carbon 2 chemistry with which foundry gases with green hydrogen at exit production become liquid fuel and manure. In project Rheticus electrolyses and bioreactor are coupled together in order to generate butanol and hexanol.

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