



Part I

What if water is a fuel?

Imagination as the first step toward science?

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I'm in the car to Dokkum. You know, where Boniface was murdered. Next to me sits Roos (Rose) from the NSG college. We are moving towards a watergas pioneer. He knows a lot of watergas and wants to show how it works.

This story is not about what is 'watergas'. It is about the imagination that precedes science. As astonishment always precedes change. Imagination like "I see a man on the moon" - produced a lot of new knowledge!

Of course my hero is Jules Verne. He is perhaps the first who said something as quoted above, but then in French. "Laissons aller à la lune" But he also said something less well known. In his book "The Mysterious Island" (L'île mystérieuse) the sailor Pencroff asks the engineer Smith what he thinks about the future of energy to propel ships. We then live at a time when everything was coal. And of course coal will once be depleted Smith replies: "On water! ". Huh said Pencroff, "Water to power ships?". "Yes, after at least two hundred years, water is the source of energy. With electricity water is split into its components of oxygen and hydrogen. By that time, electricity has become a commodity," said Smith. This last consideration is of interest, because it may be the reason that it for a long time little is done with gas from water. Electricity for the electrolysis was just too expensive. Although the first 'automobile' of de Rivaz ran on water gas as early as in 1805. This "watergas" is often called "HHO". HHO is the short and powerful abbreviation, which is used as a search term on the Internet. HHO has a flame propagation of a thousand meters per second. Propagation means the speed how fast the flame front moves forward. After a second gasoline is only about one meter further!

The pioneer in Dokkum shows us what the effect of watergas on combustion is. He has an old Mercedes. He adds watergas into the car. Via the air inlet watergas is fed into the engine. Normally an old engine is a dirty business. That's because after ignition the diesel fuel ignites with such a snail's pace. Before the flame front reaches the far edges of the combustion chamber the piston goes up again. Thus, the fuel in the nooks and crannies half-burned remains behind.



Our pioneer shows with a scope that valves and cylinder head are as clean as new. That's because of the watergas. If the fuel begins to burn-the watergas speeds ahead and reaches the farthest corners where it ignites the thick diesel fuel. In the process the watergas burns unburned soot deposits along like a white tornado.

Enough about the effect of watergas. It provides more efficient combustion of hydrocarbons. Just you Google on 'HHO'. With 'HHO torch' on Youtube you can see the remarkable water-flame torch. Very special!

I ask Roos - who is not really interested in cars - what she thinks herself. What will we see when water is used as fuel, such as Jules Verne promises? "Oh," she said immediately, "then those high voltage lines disappear! Because with watergas you can make your own energy at home. Then the power lines are no longer needed. We'll have a few left standing as a museum piece Then my children will know later on how primitive we were in earlier times And in the morning - when I live in such a neighborhood - I'll bring a small bag of garbage into the container. If you bring it yourself then you get paid more. In that container you've got a kind of burner. But it is very hot so that no smoke comes out. The energy of the waste heats the homes of our small neighbourhood. It is a pity, often store keepers already take in the sparse packaging. So it's them who get the recycling premium. Actually not fair that is.... .o ... And yes, by then I drive a steam car on watergas. Specially designed for people with electricity stress. They want to do everything all electric, but some people can't stand the vies, like me. Well, when water really can burn would those windmills still be standing? "

This was in 2009. It is now 2015. **Jules keeps his word.** And Roos? Perhaps almost graduated. Become a scientist?

In four parts, I'll tell the story of water energy. Watergas can compete with natural gas. **From imagination to science?**