NyTeknik First, the technology and IT
Sunday, March 4, 2012

Cold fusion - now it must be ready for production

By: Mats Lewan 418 comments
Published January 20, 2011 11:26

Italian scientists say they have an absolute green energy source ready for production. Last week, demonstrated the device that seems to be based on cold fusion.

(Our coverage in English here and here).

(UPDATED). Before the fifty invited scientists and journalists showed the Italian scientists Andrea Rossi and Sergio Focardi up their experiments in an industrial hangar outside Bologna on Friday.

The researchers believe that the case of cold fusion , but claim that while not even themselves have a clear fysikalsik explanation of the process.

For this reason, a descriptive article written by scientists are not accepted by the established wheat scientific journals.

During the demonstration, which lasted about an hour showed that the device "lights" with an electrical resistance. Input power was about 1 kW.

At the same time producing appliance heat with power output between 10 and 12 kW, which was used to boil water.

The water was kept at about 101 degrees Celsius under pressure in a container of one to two liters, and the experiment was boiled about 13 liters of water removed.

The apparatus includes nickel and hydrogen, and only picogram of these consumed during the reaction. After use of copper traces in the apparatus, indicating the fusion of nickel and hydrogen.

A certain increased amount of gamma radiation was measured, but no radiation should remain in the container when the unit is turned off.

The entire experiment was monitored by representatives from the Department of Physics at the University of Bologna.

The big fly in the cup, however, that even these were transparent in the unit interior.

The reason is that Andrea Rossi and Sergio Focardis technology funded by a large company that is preparing mass production of the heater.

First deliveries will start within three months, and mass production to start in late 2011. Units of 1MW, consisting of 125 sets, to be produced.

The technology is patent pending (application is available here), but the researchers wanted to show you all the details, so as not disclosing an industrial secret.

The patent discloses that nickel powder is used and the operating temperature preferably comprised between 150 and 500 ° C, under a pressure between 2 and 20 bar.

According to Andrea Rossi does a device with the technology around 2,000 euros per kilowatt of power, and works with one gram of nickel.

The energy cost is estimated at less than 1 cent / kWh.

Several Italian newspapers, including La Repubblica , reported from the experiment.

New Energy Times Blog publishes an account of the physicist Francesco Celani who attended the experiment.

A report with discussion on the site physorg.com .

A detailed blog post by Daniele Passerini, who is personally acquainted with a researcher in the group, also describe the experiment.

He reported in a previous post that his acquaintance was initially extremely skeptical of the technology around 2008, but that he was upon rows of verification experiments have been convinced.

In a statement put forward the idea that rather than cold fusion case of so-called sonofusion or bubble fusion .

Modern research on cold fusion received much attention in 1989 when researchers Martin Fleischmann and Stanley Pons reported the heat generation in an experiment with palladium and heavy water.

Since then, numerous researchers had left the area, without much result.

According to Francesco Celani was a Japanese researcher Yoshiaki Arata first to show an abnormal heat with a nickel alloy in 2005.

As used expensive nanoparticles of an alloy of nickel, zirconium and palladium, and these reacted with deuterium (heavy hydrogen).

"It looks interesting" - read the comments from Hanno Essén , associate professor of theoretical physics and professor at KTH.

Read about the scientific observers' reports and a variety of other tasks related to the experiment.

New follow-up articles 2 February 2011:

Cold fusion will provide a megawatt of Athens

Cold Fusion: The professor wants to make further tests

By: Mats Lewan

Email reporter
Follow the Reporter on Twitter