

Jeftina i čista energija? "Hladna nuklearna fuzija - u Bologni smo uspjeli"! Kontroverzni fenomen niskoenergetske nuklearne reakcije nastavlja izazivati nevjericu i polemike i među znanstvenicima i u svijetu običnih smrtnika.

Dva znanstvenika sa Sveučilišta u Bologni, fizičar Sergio Focardi i inženjer Andrea Rossi, prije nekoliko dana su svijetom proširili senzacionalnu vijest. Talijanski naučnici tvrde da su postigli uspjeh u jednom od najvećih izazova ispred suvremene znanosti - hladnoj fuziji. U industrijskoj zoni nadomak Bologne, znanstveni tim je u petak 14 siječnja ove 2011 godine izveo eksperiment i time održao praktičnu demonstraciju rada ovog sustava pred odabranom publikom novinara, istraživača i profesora. Dobivanje energije nuklearnom fuzijom na niskim temperaturama je intrigantna tema puna nada i razočaranja još od 1989. godine kad su Martin Fleischmann i Stanley Pons čovječanstvu najavili mogućnost za rješavanje energetske krize na ovaj način.

Bologna, 14. siječnja 2011 - iako si možda među rijetkim odabranim sretnicima, u objekat kojem pristup kontroliraju zaštitari možeš ući samo ako potpišeš izjavu da se svojom prisutnošću pristaješ izložiti eventulanim rizicima eksperimenta koji bi mogao izazvati revoluciju u sektoru proizvodnje energije. Po prvi put u Italiji, u industrijskom dijelu grada zavijenom u maglu, pred očima stručnjaka, realizirana je ideja hladne fuzije upotrebom nikla i vodika, procesa koji je u stanju proizvesti nevjerojatno više energije od one koja je potrebna za stvaranje same nuklearne reakcije. Time je otvoren put prema dobijanju čiste energije uz niske troškove.

"*Novost je u tome da se nuklearna reakcija odvija u uređaju koji funkcionira poput kućne električne grijalice* ", objašnjava izumitelj Andrea Rossi, inače inženjer. Uz njega je fizičar visokog kalibra, profesor Sergio Focardi.

Focardi je talijanski pionir u ovom istraživačkom području. Jučerašnji događaj u Bologni je prvi eksperiment takve vrste proveden u prisustvu vanjskih promatrača.

Energetski katalizator je veličine stola. Iznos proizvedene energije je izračunat na temelju mjerenja količine vode koja isparava u jednoj sekundi. Po završetku eksperimenta, Rossi zaključuje: "*Potrošeno je 600 kW/sati, a proizvedeno 12.000 kWh*".

Prototip je već zaštićen patentom, Maddalena Pascucci, inače Rossijeva supruga, osoba je na čije ime glasi licenca. Izum je spreman za proizvodnju i komercijalizaciju.

Znanstvenici su naravno jako radoznali, a Andrea Rossi replicira: "*Mi smo tvrtka, da pred njima otvorim uređaj, trebao bih platiti odštetu investitorima. Cijena i troškovi? Mogu reći da aparatura uz jedan gram nikla košta dvije tisuće eura po kilovatu*
".

Besplatna energija? Hladna fuzija je veliki korak čovječanstva prema progresu koji nikako ne bi smio doživjeti tužnu sudbinu veličanstvenih izuma Nikole Tesle. Pitanje koje se nameće: Kako će reagirati naftni i nuklearni lobiji?

Journal Of Nuclear Physics - Energy Catalyzer first test - Bologna-Italy - Andrea Rossi and Sergio Focardi:

1. dio
{youtube}z-0WvK2b7dU{/youtube}

2. dio
{youtube}u-Ru1eAymvE{/youtube}

3. dio
{youtube}dmHZrhTQhUc{/youtube}

Članak prenesen sa: cromalternativemoney.org

Dodatne informacije na engleskom jeziku (preneseno sa http://pesn.com):

Brief Description of the Calorimetry in the Rossi Experiment at U. Bologna, January 14, 2011
by Jed Rothwell

The experiment has been underway at U. Bologna since mid-December 2010. It has been done several times. Several professors with expertise in related subjects such as calorimetry are involved.

LIST OF MAIN EQUIPMENT IN EXPERIMENT:

A hydrogen tank and a method of measuring the hydrogen flow accurate to 0.1 g
10 liter tank reservoir, which is refilled as needed during the run
Displacement pump
Tube from pump to Rossi device (The Rossi device is known as an "ECat")
Outlet tube from the Rossi device, which emits hot water or steam
Thermocouples in the reservoir, ambient air and the outlet tube
An HD37AB1347 IAQ Monitor (Delta Ohm) to measure the relative humidity of the steam. This is to confirm that it is "dry steam"; that is, steam only, with no water droplets.

Alternating-current heater used to bring the Rossi device up to the working temperature

METHOD:

The reservoir water temperature is measured at 13°C, ambient air at 23°C.

The heater is set to about 1000 W to heat up the Rossi device. Hydrogen is admitted to the Rossi device.

The displacement pump is turned on, injecting water into the Rossi device at 292 ml/min.

The water comes out as warm water at first, then as a mixture of steam and water, and finally after about 30 minutes, as dry steam. This is confirmed with the relative humidity meter.

As the device heats up, heater power is reduced to around 400 W.

RESULTS:

The test run on January 14 lasted for 1 hour. After the first 30 minutes the outlet flow became dry steam. The outlet temperature reached 101°C. The enthalpy during the last 30 minutes can be computed very simply, based on the heat capacity of water (4.2 kJ/kgK) and heat of vaporization of water (2260 kJ/kg):

Mass of water 8.8 kg
Temperature change 87°C
Energy to bring water to 100°C: 87°C*4.2*8.8 kg = 3,216 kJ
Energy to vaporize 8.8 kg of water: 2260*8.8 = 19,888 kJ
Total: 23,107 kJ

Duration 30 minutes = 1800 seconds
Power 12,837 W, minus auxiliary power ~12 kW

There were two potential ways in which input power might have been measured incorrectly: heater power, and the hydrogen, which might have burned if air had been present in the cell.

The heater power was measured at 400 W. It could not have been much higher that this, because it is plugged into an ordinary wall socket, which cannot supply 12 kW. Even if a wall socket could supply 12 kW, the heater electric wire would burn.

During the test runs less than 0.1 g of hydrogen was consumed. 0.1 g of hydrogen is 0.1 mole, which makes 0.05 mole of water. The heat of formation of water is 286 kJ/mole, so if the hydrogen had been burned it would have produced less than 14.3 kJ.

Dodatne informacije na njihovoj službenoj web stranici: http://www.journal-of-nuclear-physics.com/

Rezultati i dodatni popratni članci:

Italian cold fusion saga continues with new papers released - Research papers out of the University of Bologna confirm that much more energy is coming out of the reactor than is required to run the reactor, including a self-running mode; and that radiation is not escaping from the machine. (*PESN*; January 27, 2011)

Fear Mongering: From Cannabis to Cold Fusion - Considering the wide range of practical uses of cannabis, the politicizing of the plant and general banning has been more about protecting competing industries. We need to make sure something similar doesn't happen to cold fusion as it emerges into commercial use. (*PESN* and *BeforeItsNews*; January 23, 2011)

Fighting the Infection of Cynical Skepticism with Cold Fusion - Given the abundant evidence available, both for cold fusion in general and for the

recent Italian 10 kW demonstration in particular, why is it that mainstream science's first reaction has to be crass criticism instead of curiosity and tentative support? (*PESN* and *Before It's News*; January 21, 2011)

Cold Fusion getting hot with 10kw heater prepping for market

- Italian inventor, Andrea Rossi, claims to have an industrial product ready to manufacture that produces large amounts of energy reliably, safely, and much cheaper than coal or natural gas power. It utilizes the fusion of hydrogen and the common element nickel at relatively low temperatures. (*PESN*; January 17, 2011)

Directory: Andrea A. Rossi Cold Fusion Generator

- Feature page at PESWiki for collecting material from around the web regarding Italian inventor, Andrea Rossi's energy amplifier, which produces useful power from the apparent fusion of hydrogen and nickel into copper at relatively low temperatures and pressures. They claim to be going into production with a 10 kW industrial product that is reliable, safe, and cheap. (*PESWiki*; January 17, 2011)

Multi-kilowatt Ni-H cold fusion demo under way January 14 in Italy

- Today, Sergio Focardi and Andrea Rossi held a press conference about kilowatt cold fusion reactor using nickel and hydrogen that can produce up to 10 kilowatts: with 100 of such modules being made for a 1 MW plant in construction. A reporter posted live updates from the scene. (*PESN*; January 14, 2011)

