Undamped Hydraulic Energy Generators HEG

Energy conversion with oscillating fluid columns based on ram pump technology without water losses Mini-HEG with 20 kW

20 kW device EGM-YPHP20SP-B

➤ V. V. Marukhin also developed a small 20 kW device the size of a Coca-Cola can.
➤ The license was sold in February, 2016 to a non-civilian group in Europe.
➤ This very expensive device is not commerically available.

Presentation of the components in Moscow on 18 July, 2016

video-2017-08-22

00:15

Video section:
52:54.17 ff.

МОДУЛЬ

OUTPUT CAPACITY, kW . . . 20
OUTPUT VOLTAGE AC, v . . . 220
TOTAL MASS, kg 0,9
DIAMETR, mm 40
ALTITUBE, mm 200

The netto height of the tube is 180 mm, the outer diameter is 40 mm, the weight is 0.9 kg. It can be estimated that the wall thickness of the tube is at least 5 mm which gives an inner volume of 0.127 liter. The ouput voltage is more then 30 kV and and is transformed down to 220 V via a DC-AC-inverter. Link: www.borderlands.de/Links/20kW-HEG-Volume.pdf

Presentation of a 20 kW HEG in idle mode

- A year after our meeting in Moscow, where Dr. V. V. Marukhin showed us a 20 kW energy generator in disassembled condition, he sent us a video of the device in operation.

- The video recorded on 25 May, 2017 shows two wires connecting the ends of the generator tube to a small black device that converts the high voltage from the device to 220–221 V AC as pictured.

- Recording time: 3:05 minutes.

https://yadi.sk/i/oYSUmlBm3M8vqc

Presentation of a 20 kW HEG in idle mode

- The measuring device used was a UNIT-T M830 B (Amazon).
- The switch was set in the video to 750 V range / alternating current.

The displayed voltage fluctuated in the video between 219 and 221 V. The video was without sound.

https://yadi.sk/i/oYSUmlBm3M8vqc

Presentation of a 20 kW HEG with load

The instrument is set to 50 Hz, which is confirmed by the flickering of the light at 10 Hz when viewing the lamps on the screen, which is updated at 60 Hz.

Calculation of power and energy

-   Duration of the film: 16:04 minutes

-   Volume of the can (0.18*0.015*0.015*3.14): 0.127 liter

-   Volume of the "voltage inverter": 0.11 liters (estimated)

-   Estimated lamp load: 3 * 100 W = 300 W

-   **In 16 min**. an energy of 300 W*16 min/(60 min/h) = **80 Wh is consumed**. **For comparison:**

-   If somebody had the intent to deceive, he could **use lithium batteries** with a capacity of 800 Wh/liter, so that a volume of 0.127 liter **would store 102 Wh.** But you need also some electronics to generate the high output voltage.

-   Anyway, **a presentation of this kind** (with lamps as load) **is not really convincing** critical people.

-   However, the following demo(s) showing the heating of water is (are) much more convincing.

Video received from Dr. Marukhin on 21 April, 2018

https://yadi.sk/i/rOkbDDmw3UbKU2   7:57 min.

You can hear very well the crackling of the high voltage discharge, and the water boiling in the kettle.

Video received from Dr. Marukhin on April 21, 2018

- ➤ **A licensee** who purchased a license for a module with a maximum power of 20 kW a few years ago made no secret about it and **sent a video showing another test of this device.**

- ➤ **In this demo**, the presence of a high voltage at the device becomes obvious from the electric arc visible between the white and red wires.

- ➤ Th**e load in this demo was a** conventional electric **water boiler** (kettle) in which about **2 liters of water** each were heated **to just before boiling point in** about **400 seconds**.

- ➤ **The energy drawn** from the module **was approximately 186 Wh** (see calculation on the following slide).

- ➤ It should be noted that each time after the water was heated, the kettle was emptied and refilled.

Calculation of the power of the water kettle

➤ The energy to heat 2 kg water from 20 degree C to 100 C is calculated to be

E = 2 kg * 4,1897 kJ/(kg*C) * 80 C = 670,35 kJ =

670.35 kWs = **186 Wh**

➤ The water seems to boil after 468 s (about 7.5 min.). Therefore, the needed power is P = 670.35 kWs/468 s = 1.43 kW.

➤ But the efficiency of a water heater normally is around 80%.

➤ Therefore, **we have to invest an electrical power of** 1.43 kW/0.8 = **1.79 kW**

Calculation of the total converted energy

➢ The inner volume of the module is around 1.5 cm * 1.5 cm * 3.14 * 18 cm = 127 cm^3 or 0.127 liter.

➢ If we use a lithium battery with a power density of 800 Wh/liter, a maximum of 0.127 liter * 800 Wh = **102 Wh could be stored in this volume.**

➢ But practically, we would need some additional space (30%, perhaps) for the needed high voltage converter (e.g. 12 V to 30 kV)

➢ **Therefore, with the battery volume reduced to 70%, we could store only about** 0.7 * 102 Wh = **71.4 Wh**.

➢ **But** effectively, **186 Wh were converted in the 7.5 minutes**.

Length of the arc: 1.8 cm corresponding to 30 kV

The video was an excerpt of a 24-hour video

➢ These 7:57 of **video** was only a **small fraction** of a 24-hour long video...

➢ …the amount of data for which is 42 GB.

➢ **The operator** (licensee) **poured room temperature water** into the kettle **a total of 210 times** and **poured the heated water away each time**.

➢ **Therefore**, a total of 210 * 2 liters of water equaling **3 bathtubs were heated to the boiling point (100 C !).**

➢ **Total decoupled energy** **from the HEG** = 210 * 2 kg x 75 degrees x 4.187 kJ = **36.6 kWh (!)**

HEG devices of different sizes

AR-500 (EGM-H-P-500-20)

Dimensions:
Height: 300 mm, Diameter: 140 mm
Weight: 20 kg
Voltage at output: 6 kV
Output power: 500 kW
Max. Angle of inclination: +/- 60 degrees

AR-1000 (EGM-H-P-1000-21)

Dimensions:
Height: 420 mm, Diameter: 150 mm
Weight: 40 kg
Voltage at output: 12 kV
Output power: 1000 kW
Max. Angle of inclination: +/- 60 degrees

Books on Hydraulic Energy Generator

E-Book version: **https://www.amazon.com/dp/B07DQRXLPC**
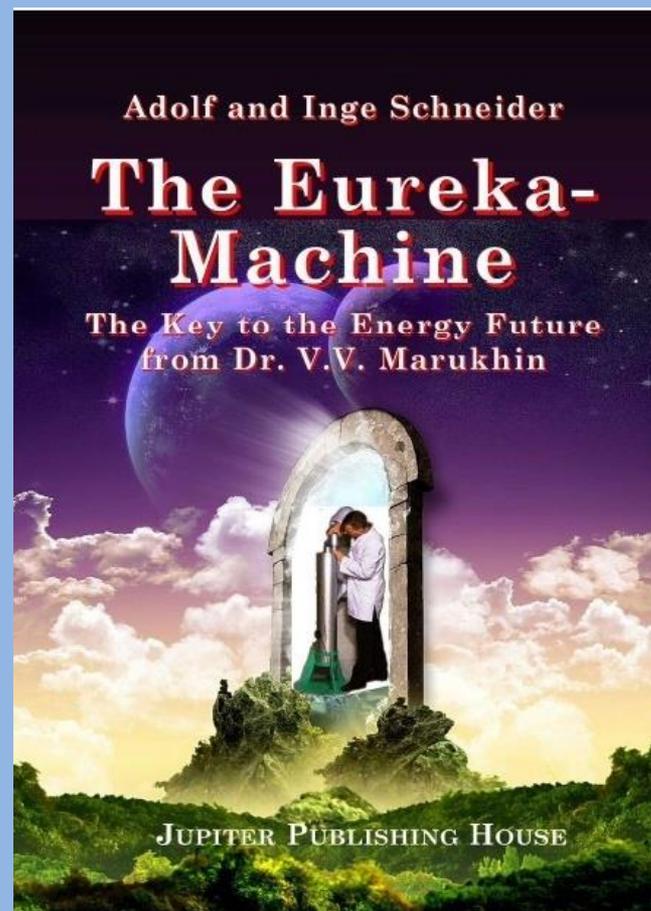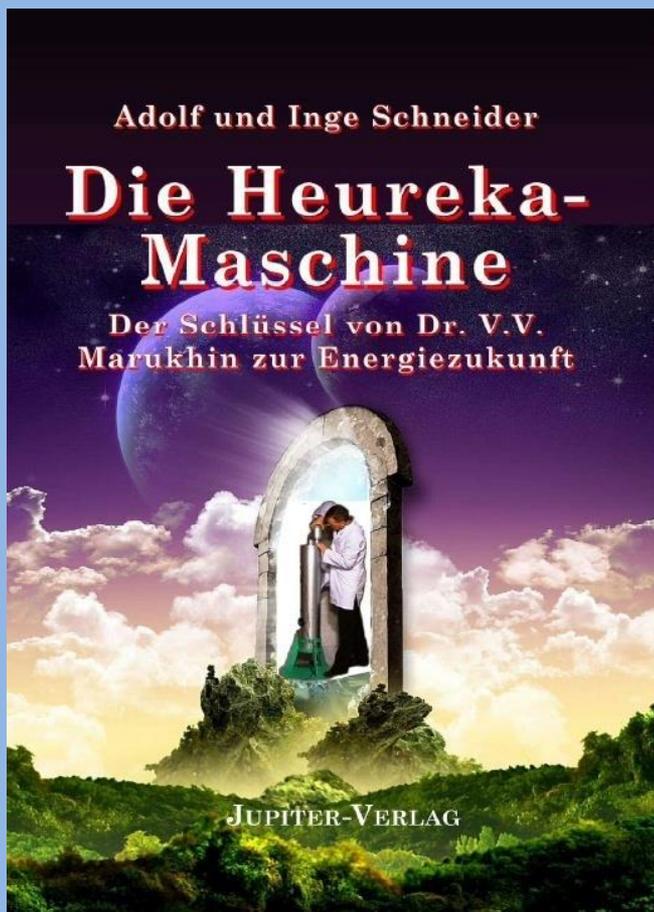
Newest scientific paper by Dr. V. V. Marukhin in SCIENCE AND WORLD, International Scientific Journal, № 8 (84), 2020, Vol. I

http://scienceph.ru/f/science_and_world_no_8_84_august_vol_i.pdf pp 33-70

Novel Energies

"This **new power** for the driving of the world's machinery **will be derived from the** energy which operates the universe, the **cosmic energy**, whose central source for the earth is the sun and which is even **present in unlimited quantities.**"

New York American, 1 Nov.,1933

"**I have harnessed the cosmic rays and caused them to operate a motive device.**"

www.borderlands.de/Links/NovelEnergyTechnologies.pdf
www.borderlands.de/Links/WCEC031116.pdf
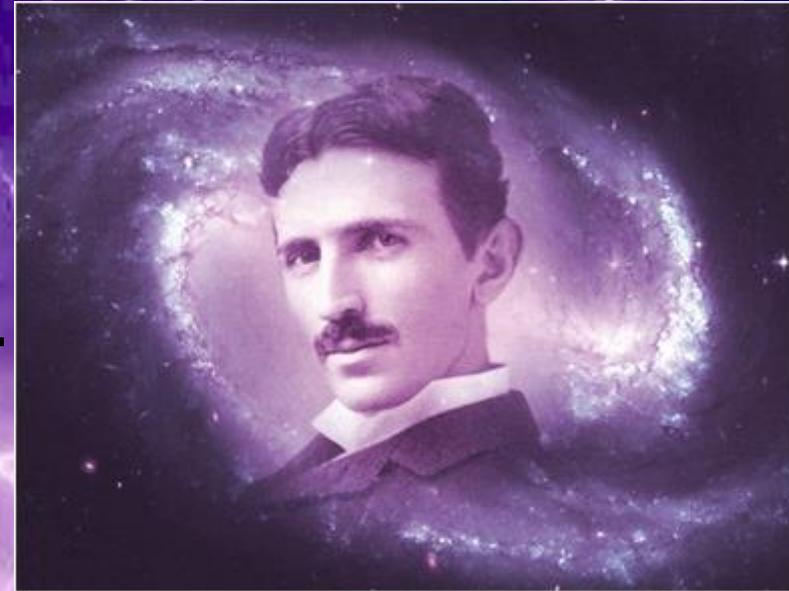
Nikola Tesla (1856-1943)

The Brooklyn Eagle,
July 10th, 1932,