

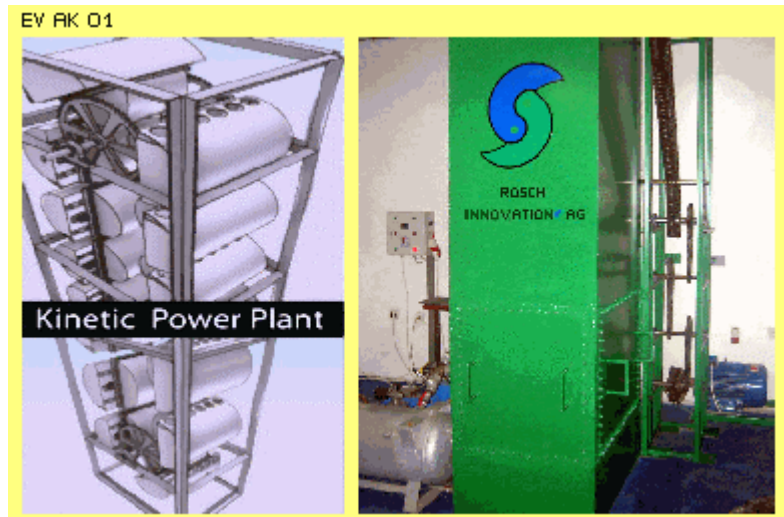
Buoyancy Power Station – Perpetuum Mobile of Forth Kind

Licence and Law for Usage of Free Energy

The Swiss Rosch AG started selling licences for the construction of buoyancy power stations in 2013. One can build modules up to 500 kW. A prototype of about 10 kW was demonstrated. So Free Energy, based on pure fluid-mechanical technology, could finally be available.

In 2002, I put into words a general valid law for using Free Energy. A 'Perpetuum Mobile of Forth Kind' can function based on these facts: in nature often exist equal spreading or stabile states. One can disturb the balanced or stabile state with relative few power-demand. As soon as the disturbance is stopped, the system autonomously falls

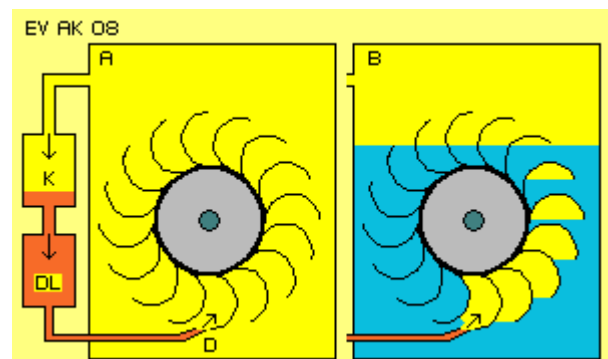
back into its original state. Inevitably the act of disturbance is followed by a most strong reaction. The force coming up or a side-effect of the reaction is usable as Free Energy. The conception of the Rosch-Buoyancy-Powerstation (at picture EV AK 01 left side and the prototype right side) are a clear example for a Perpetuum Mobile of Forth Kind, as described at the following (see also the graph some later).



Disturbance of Uniformity

The disturbance of an equal spread state is sketched at picture EV AK 08 left side at A. Normally, the air of a local area shows likely density, corresponding to the momentary atmospheric pressure. A compressor K condenses the air and the compressed air DL is stored within a tank. So now exist two areas of unequal density respective of differing pressures. If the tank has an opening towards the area of normal pressure, a balancing reaction will occur immediately. A nozzle could slow down the flow, e.g. corresponding to the new compressed air delivered by the compressor-pump.

However, not only the pressure-balancing occurs. The air flows off a narrow nozzle D by relative high speed, so the air jet shows additional kinetic energy. An air jet directed towards the blades of a turbines affects a mechanic turning momentum. So the energy invested into the pump will be available again at the turbine shaft (dark-grey). As usual, losses come up by friction etc.



and inevitably each compression results additional heat. If however the system is heat-isolated and the air is fed back into the compressor, the increased motion-energy of the air-particles remains within the system.

This part of the machine does not deliver Free Energy. It's only an example how a balanced state can be disturbed by relative small net-losses and automatically the original state is renewed. This is valid when using compressed air of 1 bar and just likely e.g. of 5 bar. This is valid for a turbine running within air and just likely for a turbine running within water (like sketched at picture EV AK 08 right side at B).

Buoyancy For Free

The nozzle opens direct near the blades. The water affects no static resistance versus the static pressure within the tank of compressed air. By kinetic view, the jet at first drives a canal through the water and afterward the jet can flow off the nozzle with nearby no resistance. Especially advantageous would be a twisted flow within the pipe (see 'Potential-Twist-Pipe' of my website). There, the water builds a stationary torus-shaped vortex around the nozzle, protecting the jet against the pressure all around or even will accelerate the jet. As an alternative, the twist can finish within a long stretched nozzle, e.g. like the wood of a pen is peeled off a pencil sharper.

However, at this conception will come up resistance when the water must be pushed off the blades (see below a solution for that problem). Like at previous turbine running within the air, also here the jet hits onto the blades, affecting a mechanical turning momentum. In addition, now the air bubble (yellow) enclosed within the blades, affects a buoyancy force. So if compressed air is filled into blades below at the water, as a side-effect comes up a buoyancy force with an additional turning momentum - just for free.

Disturbance of stabile State

The second part of this machine now is a good example for disturbing a stabile state. The gravity arranges matter by specific weight: upside are the light ones, below each heavier substances. Within a homogenous water-pile the gravity affects a pressure, linear increasing with the depth. At picture EV AK 09 that's marked by different blue colours.

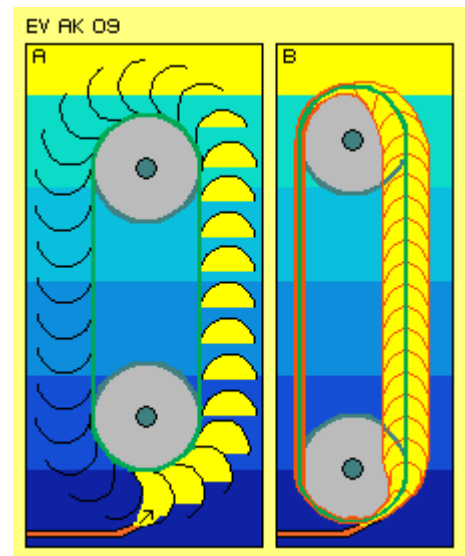
Instead of a simple turbine-wheel, here at A is sketched a 'paternoster-system' (generally according to upside Rosch-conception): around an upside wheel and one below, a chain (green) is running around with many 'blades' or tanks (for better stability, the wheels and chains are mounted double). When moving down (left side) the tanks are filled up with water, when moving up they are filled with air (yellow). By putting the light air into the tanks downside of the tank, the stabile state is disturbed. The system reacts immediately by pushing the light substance up. As known since Archimedes, the buoyancy force corresponds to the weight of the displaced water-volume.

Free Energy Machine

Putting air down within the water demands energy input for generating the necessary volume of compressed air. The static pressure of the water is not really resisting the sharp air jet, no matter at which depth. With upside mentioned 5 bar, air can be

pressed into tanks at 1, 2, 5, 10 or even 25 m depth, practically with likely effort. As mentioned upside, the air jet affects a mechanical turning momentum at the blades, so the invested energy is regained by most parts at the turbine shaft, again independent of the depth.

Opposite, the buoyancy force generated at this paternoster is increasing with the depth respective with the number of installed tanks. So here does not exist a certain rate of performance like at usual machines (for simple transfer of energy of one shape into the other). Here, a stabile state is disturbed with few net-input of energy. The autonomous elimination of the disturbance results much stronger forces. Naturally, the finally usable energy is reduced e.g. by the efficiency of the electric motor and generator and unavoidable friction losses. Losses come up also by turbulences within the water, e.g. when the water is filled into the tanks and removed again further down. If edgy metal-tanks are moving through water, it won't be really according to fluid-flows.



Flexible Tanks

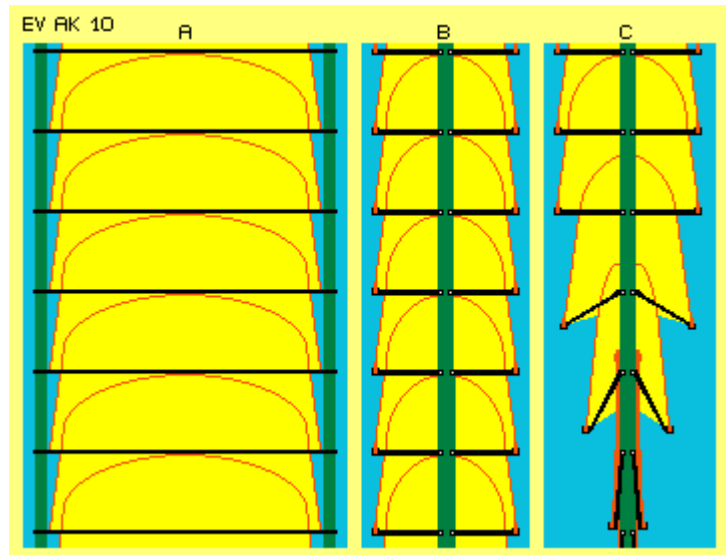
Opposite to previous Rosch-conception of a buoyancy power station (and other experiments), I would prefer flexible tanks, e.g. build by air- and water-tight textile. Picture EV AK 09 right side at B shows, how these tanks are piled up, one including the next and thus building an air-pile throughout bottom up. Under the below wheel, compressed air is pushed through the nozzle and the 'balloons' become extended. At the top, the bulges are drawn off the water - without turbulences - and the air flows off. The bulges were automatically fold and further on, they glide down again through the water like a narrow gapless band. The bulges keep 'empty', because at each part further down, the water pressure is gradually stronger than at parts above.

A single air bubble is pushed upward, because at its face below the water pressure is some stronger than at its upside face. The air bubble raises jerky and relative slow, because at its upper side the water must move aside on and on. Within water is valid as a law: 'length is running faster'. Thus that long-stretched air-pile will raise with much less resistance. At the upper face, practically no counter-pressure exists, while at its below face exists the maximum water pressure. That air-pile will 'fly' upward, and continuously its below end is added by a new layer.

Picture EV AK 10 shows the shape of the bulges (red) and how they are attached to the chains (green). Left side at A shows a longitudinal cross-sectional view through both chains. At the below parts, the tanks are cone-shaped and only their upside part is arched like a balloon. Curved rods (black) keep the chains at constant distance. The below edges of the tanks are fixed at these rods respective frames.

A side-view at one chain is sketched at B. Each one pair of frame-rods is fixed at one link of the chain, so the bulge is spread at both sides of the chain. Also by that view, the cone-like parts are included one within the next. Only there, the continuous air-pile (yellow) is surrounded by water (blue).

At C is drawn, how the bulges are folded. The frames can swivel aside by right angle to spread out the balloon at it's maximum. The frames are mounted turnable and can swivel back (in turning sense of the system). That motion occurs upside of the upside wheel, where the air exits the tanks (and at the following the folded bulges are guided down again like a small band). Opposite, below the below wheel, the balloons are blown up by the jet of compressed air as the frames swivel sideward.



One should drive that system by some 'oversized' compressed air. This needs to transport a smaller volume of air, allowing faster speed same time. When the compressed air is blown into a bulge, the air expands immediately. The expansion occurs upward directed because suspended by stronger water-pressure below. So the expansion affects an additional upward directed thrust.

Performance

Over and over again, different new conceptions and technologies of power station at size of mega-watts are presented, however none was realized up to now. Much more interesting would be small decentralized units for 'use in the home'. By the example of previous sketches, following data could be relevant.

Paternoster-wheels with radius of 0.4 m are installed. The distance between the shafts and between the chains are each 1 m. Both frames could show rectangle shape of about 0.6 to 0.9 m. The air-pile within could show a cross-sectional face of about $0.5 \times 0.8 = 0.4 \text{ m}^2$. At height of 1 m, the air-pile has a volume of about 0.4 m^3 . So 400 liter water is displaced, resulting a buoyancy of about 4000 N. This force affects at previous radius of 0.4 m, thus resulting a turning momentum of about 1600 Nm. The circumference of the wheels is some 2.4 m. If a raising-speed of 0.8 m/s could be achieved, the wheels will turn 20 rpm. Based on common formula $P = M \cdot n / 9550$ a performance of $P = 1600 \cdot 20 / 9550 = 3.3 \text{ kW}$ would be available. Each further meter of depth delivers stronger performance (however down there the air is stronger compressed, so only weaker buoyancy forces come up. A compressor for producing the demanded compressed air needs some 1.6 kW.

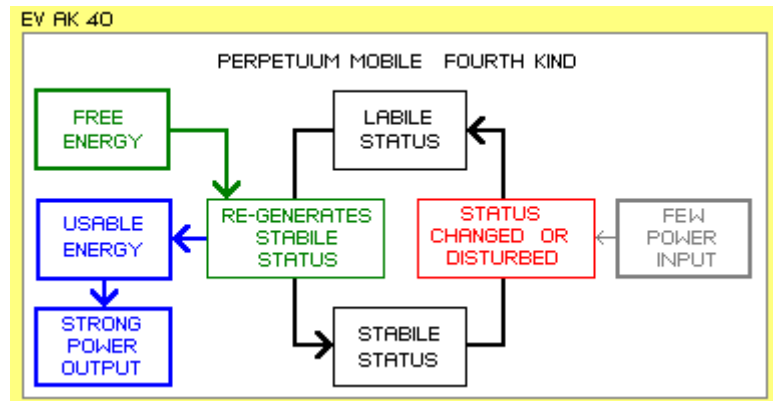
So it's plausible, why the prototype produced already usable net-performance (as already demonstrated and checked by specialists). Depending on dimensions of the machine, also power stations of high performance are really possible.

Energy 4.0

The special performance of the (unknown) inventor was to overcome the limitations of common understanding. The special performance of the Rosch AG is to start the

real construction of that buoyancy power station. Great respect deserves to diverse promoters and especially to the activities of the GAIA-group.

Previous analyses and conclusions pointed out some important theoretic criterions, especially concerning the source of the usable energy. This machine does not transfer energy of one shape into energy of another shape, so the common limit of energy-constant is not involved. Here, energy is not taken away from anywhere and no additional energy is generated. Only by smart organization of the approach, the permanent given gravity is redirected: the downward affecting weight is chanced into an upward affecting buoyancy force – exactly corresponding to processes and effects defined as Perpetuum Mobile of Fourth Kind.



It's an advantage, these machines can be build by known technologies and they allow decentralized energy supply. Like water power stations, short time after starting the system, full performance is available. Based on modular conception, immediately one can react on differing energy demands, e.g. also to stabilize existing electric nets. So hopefully many companies will take part to install these power stations and 'Free Energy' soon will be available for everybody, at relative good conditions – so Energy 4.0 becomes reality.

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