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WAVE-POWER-MACHINERY

(Dansk Patent nr. DK 176417 B1)

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Prokura/Agent:
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BRINGES

Kbh. 15. Dec. 2008.

ÅBENT BREV,

Folketingets partier og E P U,
Christiansborg,
DK 1218 Kbh. K.

Det Energipolitiske Udvalg
EPU alm. del - Bilag 93
Offentligt

VEDR.: ENERGI - KLIMA - MILJØ.

Med skyldig hensyntagen til alle de pæne ord om ønsket CO2-FRI ENERGI, eller manglen på samme, tillader jeg mig hermed at gøre opmærksom på vedlagte bølgekraftanlæg/flåde, som er blevet internationalt PCT-PATENTERET 21.10.2008, og godkendt af samtlige eksaminations dommere og med afsluttende udtalelse: THE INVENTION IS INDUSTRIAL APPLICABLE.

De af regeringen undersøgte bølgekraft-værker fra år 1998-2002 havde alle energiudtag fra OPAD-GÅENDE bølge. Følgelig kan en sammenligning med vedlagte bølgekraftværk ikke gøres, idet dette sidstnævnte har energiudtag i NEDADGÅENDE bølge, hvorfor flådens egenvægt og tyngdekraften er faktorerer i energi-udregningen KRAFT x VEJ. Venligst se forklarende afsnit: DESCRIPTION, FLOAT-FUNCTIONS og ADDITIONAL ENERGY-EXPLANATION.

Iflg. energiudregningen i vedlagte materiale producerer een/1 bølgekraft-flåde på 10 M., udlagt f.eks. Horns Rev, mere energi end samtlige 80 store havvindmøller. 55 bølgekraftflåder ville således kunne dække hele Danmarks årlige forbrug af elektricitet.

Vedlagte bilags-materiale er også vist på internetadresse:
www.wave-power-machinery.dk .

BILAG: WAVE-POWER-MACHINERY

KOPI-BREV: C O N C I T O

Med venlig hilsen,
B. Rothausen
Bjørn Rothausen

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BRINGES

Kbh. 11.09.2008

CONCITO - Klimatænketank,
Nansensgade 19,
DK 1366 Kbh. K.

Kopi

Vedr.: KLIMA & MILJØ. FREMTIDIG CO2-FRI ENERGI.

Tak for jeres gode initiativ til at gøre noget for klima og miljø, hvilket jo desværre er påtrængende nødvendigt.

Udtalelsen: 'Danmark co2-frit indenfor 10 år' er ingen overdrivelse - tværtimod -, hvilket kan begrundes udfra følgende kendsgerninger:

Geografisk er Danmark placeret midt i et kæmpemæssigt energihav, hvorfra uanede store mængder ren CO2-FRI ENERGI kan hentes. Eksempelvis som vist i vedlagte materiale, og fordi EL- & BRINTBILEN er opfundet, hvorfor al transport og øvrige samfundsmæssige energi-tilførsler let kan gøres helt CO2-FRIE.

Teknisk set kan ovenstående sagtens lade sig gøre. Den eneste vanskelighed vil være modstanden fra kapitalinteresser bundet til nuværende energi-fremstilling fra Atom-kraft, Olie, Gas og Kul, samt den omstændighed at DONG desværre og rent faktisk har et energi-monopol i Danmark. Disse besværligheder blev kommenteret i en klima- og miljødebat af Svend Auken, idet han sagde: 'vi hører pæne ord, men vi ser aldrig noget udført i virkeligheden'.

Iflg. DONG's direktør: 'DONG's primære formål er at lave energi og at sælge denne til højeste pris til benefice for virksomhedens aktionærer og økonomiske interesser.'

Måske skulle CONCITO's klima-tænke-tank gøre DONG's direktør opmærksom på det forhold, at ingen - ej heller DONG's aktionærer - er tjent med en ødelagt verden.

Med venlig hilsen,
B. Rothausen
Bjørn Rothausen

BILAG: WAVE-POWER-MACHINERY

OBS!: E-MAIL-ADR. ER ÆNDRET:

info@wave-power-machinery.dk

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1 - 5</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>1 - 5</u>	YES
	Claims	_____	NO
Industrial applicability (IA)	Claims	<u>1 - 5</u>	YES
	Claims	_____	NO

2. Citations and explanations (Rule 70.7)

The present invention relates to a method of operating a wave power station and it also relates to wave power machinery standing on one or more legs on the bottom of the sea.

The cited most relevant document was:

D1: US3126830 A

The method and machinery according to the amended claims filed 10-07-2008 is characterised by means to stand loosely and partly movable on the bottom.

D1 shows a method and a wave power machinery which stands on one or two legs with a foot on the bottom. The foot is moveably arranged versus the leg but sits firmly on a pivot or swivel arrangement in order to use upward forces.

The present invention is apt only to use downward forces.

Thus, the invention according to the amended claims is novel and not considered obvious to a person skilled in the art. The invention is industrially applicable.

Til OPLYSNING:

*D1 er et amerikansk
Projekt knytt til
Sammensigning.*

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P R E F A C E

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CO2-FREE ENERGY - LOW COST OF PRODUCTION.

WAVE-POWER-FLOAT OCTOPUS. EL FROM HYDRAULIC POWER.

OCEANS of the WORLD are the greatest everlasting energy-source. 70 % of the surface of the world is covered by sea.

Powers of sea are enormous. As an example will a ship, of 10.000 tons, be lifted and lowered several times per minut, so easily done, as if it was a tennis-ball, often in a process of working of several meters.

By using those enormous powers we will never be in need of energy. But of course, it must be done in co-operation with powers of nature and on terms of the sea. Wave-Power-Float OCTOPUS has increased loading pressure in stroke of suction in upward wave, helping float up to a higher position. Energy-take-out, via freely standing flexible counter-legs to sea-bottom, in down going wave, why weight of float and gravitation are factors in energy-calculation, POWER x DISTANCE.

Following pages will shortly show: DRAWING, DESCRIPTION and ENERGY-CALCULATION of wave-power-float OCTOPUS. Danish PATENT: DK 176417 B1, which in above mentioned way is capable to produce large quantity of CO2-FREE ENERGY to LOW COST OF PRODUCTION.

Bjørn Rothausen



OBS: SPONSOR/JOINT VENTURE CO-OPERATION IS WANTED.

PCT INTERNATIONAL PATENTABILITY OBTAINED 21.10.2008.

PCT FINAL EXAMINATION-WORDS: THE INVENTION IS INDUSTRIALLY APPLICABLE. SALE OF LICENCE/NATIONAL-PATENT IS POSSIBLE.

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WAVE-POWER-MACHINERY

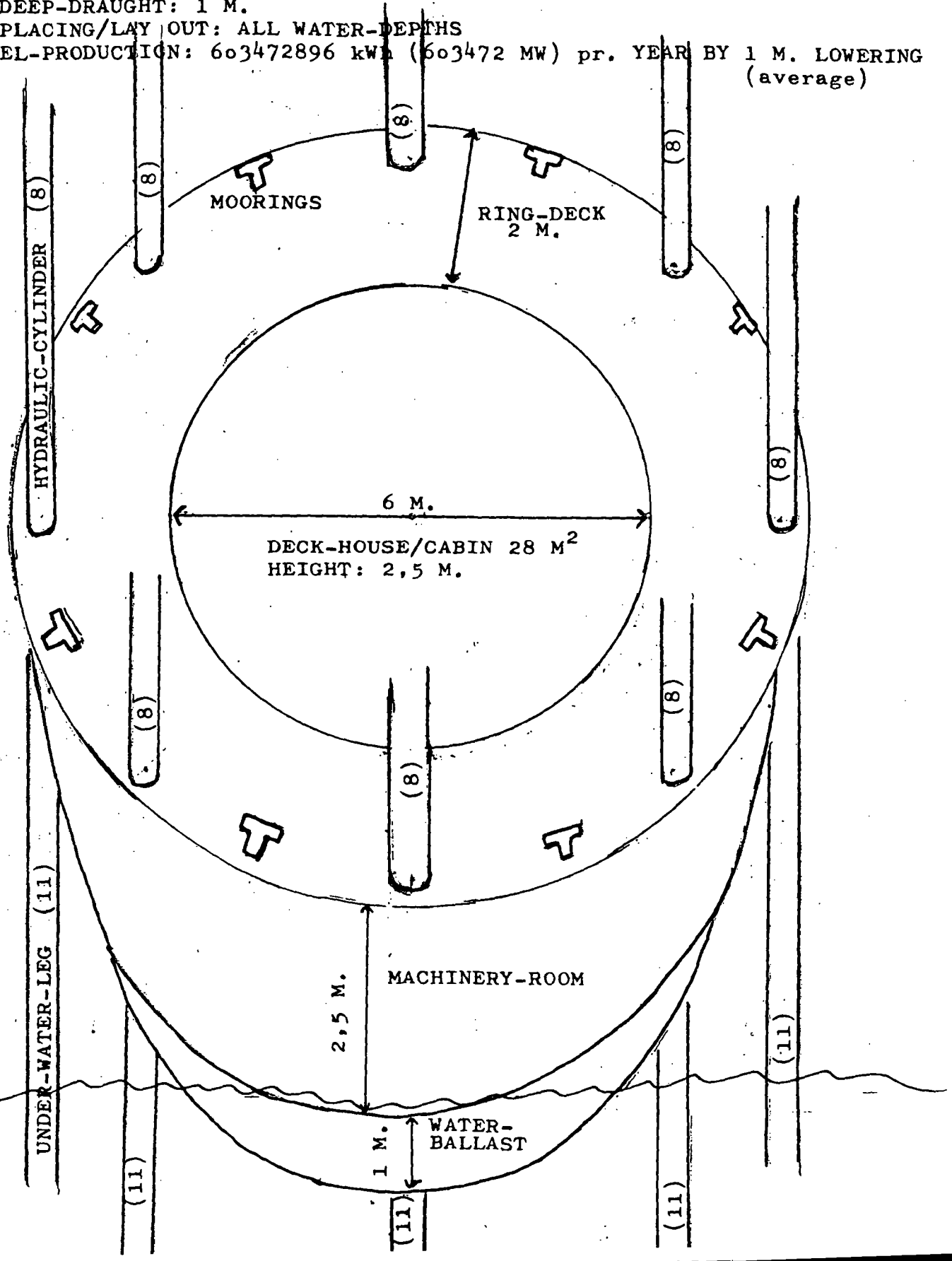
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WAVE-POWER-FLOAT O C T O P U S POINT ABSORBER TYPE

=====

WEIGHT: 80 TONS INCL. BALLAST
DIAMETER: 10 M.
DEEP-DRAUGHT: 1 M.
PLACING/LAY OUT: ALL WATER-DEPTHS
EL-PRODUCTION: 603472896 kWh (603472 MW) pr. YEAR BY 1 M. LOWERING
(average)



F L O A T - F U N C T I O N S

Wave-Power-Float OCTOPUS is built to co-operate with powers of nature in a harmonic way. Consequently all installations and the process of working must be done logical and on terms of nature-forces and local sea-conditions, and in following described way:

- 1) THE FLOAT WITH MOUNTED HYDRAULIC-CYLINDER
is the moving part around the still-standing piston with contact to the bottom of the sea.
- 2) THE UNDERWATER-LEG WITH TREADFOOT IS FREELY STANDING ON THE SEA-BOTTOM.
The leg is flexible and provided with an universal-joint to the tread-foot. Under installation the leg is guided through the float in an greased guide-/gliding-tube, and afterwards it will be mounted to the rod of the piston. By this the piston obtains contact to the bottom of the sea. In the local sea-climate, length of the underwater-leg will be regulated according to waveheight and tide-water-level, which is done by use of winch and wire to the tread-foot, which installation is located in the machinery-room. Consequently cylinder-length must be made accordingly those local sea-conditions.
- 3) STROKE OF SUCTION IN UPWARD WAVE AND STROKE OF COMPRESSION WITH POWER-TAKE-OUT IN DOWNWARD WAVE.
Those strokes happen automaticly, when change of space/volume in the hydraulic cylinder above the stationary piston arise, and by this is making a new and different pressure, which automaticly open/close one-way-valves in the hydraulic system.
- 4) INCREASED PRESS OF LOADING IN STROKE OF SUCTION IN UPWARD WAVE.
This function secures constant piston-contact to the sea-bottom, and is done by a larger lot of oil from the low-pressure tank, and by a lesser lot of oil from the high-pressure tank, which however makes the high pressure. The counter-pressure from the sea-bottom will help the float up to highest position, because the cylinder is mounted to the float, and it will moreover give the float an increased-energy-position according to the size of the pressure.
- 5) THE GAS-COCK OF THE FLOAT.
This function is made by the regulationable increased press of loading in upward wave.
HIGH LOADING-PRESSURE = HIGH ENERGY-PRODUCTION.

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WAVE-POWER-FLOAT O C T O P U S. POINT ABSORBER TYPE.

FLOAT WEIGHT: 80 tons (incl. water ballast)
PLACING/LAY OUT: All water-depths
DIAMETER: 10 M.
DEEP-DRAUGHT: 1 M.
OBS!: 2 PAGES
=====

EL-POWER: Generated by hydraulic pressure per lowering wave.
Increased loading pressure in stroke of suction in upward wave, giving higher upper position/production.
HYDRAULIC SYSTEM:

- 1) 8 hydraulic legs, freely standing on sea-bottom, and equiped with pressure strong cardan-joints, which provide power-transmission without friction.
- 2) High pressure tanks and low-pressure tank(s), working as energy-accumulators, caused of pressed airmass, and providing adjustable power-transmission.
- 3) Hydraulic engine and generator.

HYDRAULIC EFFECT: 65 %.

The float is planned placed on 10 m. water depth by HORNS REV, where EL can be delivered via the Wind-Mill-Park. Waves are coming per 5 sec. Wave height 0,5 - 2,5 m. Waves per minut: 12. It is expected to obtain MINIMUM 15 tons hydraulic pressure per 1m. wave-lowering, why below calculation is possible as per prescriptive formula:

$$1 \text{ HP} = 75 \text{ kg.m.sec.} = 736 \text{ Watt}$$

Time for wave lowering: 2,5 sec. = T

$$\text{Speed per sec.: } \frac{1 \text{ sec.}}{2,5 \text{ sec.}} = 0,4 \text{ m.sec.} = V$$

$$\text{EFFECT per SEC.: } \frac{15000 \text{ kg.} \times 0,4}{75 \text{ kg.}} = 80 \text{ HP.}$$

EFFECT: per float lowering of 1 M. by STEADY SPEED:

$$\frac{15000 \text{ kg} \times 0,4 (V) \times 2,5 (T)}{75 \text{ Kg.}} = 200 \text{ HP}$$

$$\text{Per MINUT: } 12 \text{ waves á } 15 \text{ tons} = \frac{180.000 \text{ kg.} \times 0,4 \times 2,5}{75 \text{ kg.}} = 2400 \text{ HP}$$

$$2400 \text{ HP} \times 736 \text{ Watt} = 1766400 \text{ Watt}$$

Per Year: 928419840 kWh

HYDRAULIC EFFECT: 65 % = 603.472896 kWh (603472 MW)

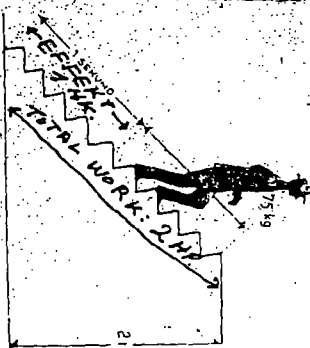
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In below example - man on steps - and in above calculation, is calculation done by FORMAL FOR STEADY SPEED: The relation between distance covered and time is measured in m/sec. or Km./hour. $S = V \times T$, where S is distance, and V is speed, and T is time. Energy = Power x Distance = Power x V x T.

TO LOW COST OF PRODUCTION. HEREBY SHORTLY DESCRIBED AND WITH SOLUTION, THE WORLD HAD NEED FOR LARGE QUANTITY OF CO2-FREE-ENERGY,

Illustrationen giver en forsyning af størrelsen af 1 HK. En mand, der vej 75 kg. og tilbagelægger den 2 m. høje trappe på 2 sekunder, har netop ydet en effekt på 1 HK.

Med hensyn til trækmaskiner er det især det arbejde, motoren kan yde i tilfælde af, der interessere. Denne arbejdsområde kaldes effekten, og den gives naturligvis i kgm pr. sekund, m. de denne enhed er ret lille, foretrækker man i praksis at angive effekten i hestekræfter, HK. Sammenhængen mellem HK og kgm pr. sekund er fastslået til: 1 HK = 75 kgm pr. sekund



Kraft, arbejds og effekt.
Når et legeme påvirkes med en kraft og legemet derved flytter sig en vej længde l kraftens retning, har det udført et arbejde. Kraftens størrelse angives i kilogram, kg, og den kan også have karakter af en maskin som tyngdekraften eller den trykkræfter overføres til stemplet i en motor cylinder. Vælsængen måles i m, og arbejdets størrelse er bestemt som kvadraten gange vjæjen, og måleenheden er derfor kgm. (tilsvarende meter).

I vore dage er hele den skibsfart, der betydningsfuld, baseret på skibe, der drives frem ved maskinkraft. Måske er såkaldte turismaskiner, der brændstofferens bundne kemiske energi omsættes til mekanisk arbejde, gennem en akselledning overføres til skibets skruer. Fjærend vi får nærmest ind på de forskellige maskintyper, vi først kort berøre de grundlæggende begreber, der tjener til at fastlægge maskinernes ydelse.

TEKNI

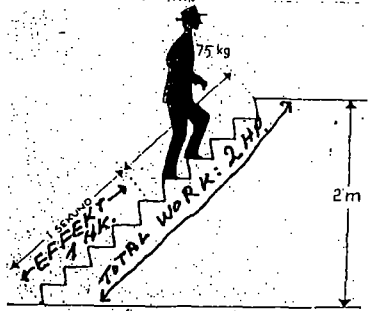
T E C H N I Q U E

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POWER, WORK AND EFFECT.

When a body is under influence of a power/force, and the body by this is moving in direction of the power, has the power produced a work. The size of the power is measured in kilogram, kg., and could for example be a nature force like the gravitation, or the force of pressure which is transferred to the piston in the cylinder of a motor.

The distance is measured in m. and the size of the work is determined to be POWER X DISTANCE and the unit of measurement will therefore be KGM.(kilogrammetre).



The illustration demonstrates the size of 1 HP.

The person with a weight of 75 kg. climbs the steps of 2 m. in 2 seconds, and makes by this an effect of 1 HP pr. sec. and a total work of 2 HP. in 2 sec.

In regard to power-machinery it is the work pr. unit of time which is of interest. This size of work is called the EFFECT, and is naturally stated in kgm pr.sec. but when this unit is of small size one will in practice state the effect in horsepower, HP. The relation between HP and Kgm. pr. sec. is determined to be:

$$1 \text{ HP.} = 75 \text{ Kgm. pr. sec.}$$

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ADDITIONALLY ENERGY-EXPLANATION

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A float/ship will normally in a climate of waves use the same time for its up- and down-going movement, which is done by steady speed. Consequently energy-calculation has to be done by FORMAL FOR STEADY SPEED, which formal is contrary/unlike formal by increasing speed, (the falling apple of Mr. Newton).

If you only want to know how much a energy-system is able to produce, you simply multiply the force/weight in kg. by the meter-distance and divide the result by 75 kg. By this you have a power-take-out in HP. 1 HP = 736 WATT. Please, take notice of shown example - MAN ON STEPS.

However, if you want EFFECT-CALCULATION in order to calculate the right size of the hydraulic-system with hydraulic-motor and generator, you will require energy-formal by steady speed. From dictionary:

$$\text{ENERGY} = \overset{(1)}{\text{POWER}} \times \overset{(2)}{\text{DISTANCE}} = \overset{(1)}{\text{POWER}} \times \overset{(3)}{\text{V}} \times \overset{(4)}{\text{T}}$$

- (1) is weight/pressure. (2) is meter-distance.
(3) is a vektor/size for speed pr. m.sec.
(4) is total-time of the power-take-out.

In this way it is possible to describe the distance by means of speed pr.sec.multiplied by total-time. (3) V is important in order to calculate the size of hydraulikmotor and generator.

Below is described 2 ways of Power-Take-Out:

(1): POWER-TAKE-OUT IN UPWARD WAVE:

Which is contrary to the direction of the gravitation, why float-weight and the size of the power-take-out are factors, which will limit/reduce the distance in upward wave, and by this will reduce the energy-production.

(2): POWER-TAKE-OUT in DOWN-GOING WAVE:

Where float-weight and gravitation are factors in energy-calculation: POWER X DISTANCE, where energy-take-out has none or lesser influence because of powers from float-weight and gravitation. It always pays to co-operate with powers of nature, and especially gravitation.

If you think, that energy-calculation for Wave-Power-Float OCTOPUS might be too high, compared to energy-calculation from Wind-Mills, then remember what Lecturer Mr. Peter Frigaard, University of Aalborg, DK has pronounced:

DENSITY OF ENERGY IN WATER IS 800 - 1000 TIMES HIGHER THAN DENSITY OF ENERGY IN AIR.

