

ASTRO S.A. Inc

HELPING TO SAVE THE PLANET



April 2008 Newsletter

ASTRO SA meeting report for 14th March 2008 Start 8.05pm

Sam & Matthew Guest speakers: Sam from Kangaroo Island spoke about his company and plans for KI in setting up “Sustainable Island.” He spoke about selling power back to the grid, (mainland) and that a second under-water power cable was required.

Matthew: Spoke about government grants that are available for renewable energy type projects. Sam explained access to government grants required that you have a Business plan, a marketing plan and a financial plan. Sam’s company offers a service to help with these kinds of documents and situations.



Uli: Said that with his experience the paperwork and “hoops to jump through” that are required and the strict accountability needed for government grants make it somewhat prohibitive. Uli spoke about a little generator that uses 1 cup of oil per day to generate 50KW’s of energy. His research found that a New Zealand company ITMDI bought the production and manufacturing license from France for the MDI Aircar. It runs on compressed air, but actually runs on solar energy and works like a heat-pump. It cools the atmosphere as it runs and counter acts global warming.



Charley: Said his polycarbonate churn that he has/was building for his wind turbine desalination concept worked.. but not quite fast enough. Now he is investigating and making a new compression version. He will keep us informed of his progress.



Michael: Demonstrated and spoke about his **Bedini Motor replication device**. The rotor is made out of Perspex, the coil is made from multiple laminated soft iron rods and the coil is tri-fillar wound. The device works by spinning the rotor and magnets past the coil. The sense winding detects the changing current and turns the main transistor on. The main transistor fully energizes the second coil and creates a magnetic field that slightly opposes the passing rotating magnet. The magnet now swings past the core of the coil and the transistor now turns off rapidly. The field collapses and the third coil now collects the back-EMF, it is then rectified and collected in a capacitor. A timing circuit and inverted transistors periodically dump the collected energy of the capacitor to a second isolated battery. He claims that it recharges the second battery faster than the first battery powering the device runs down.

He said that this form of electricity is called **Negative-Energy or Radiant Energy**. He demonstrated the discharge of the capacitor by using a thin piece of silver wire. He claims the vaporized wire, gives off a characteristic **“Green Flash”** produced by the Radiant energy. He said that it was best for interested people to check out the DVD **“Energy form the Vacuum part2”** and Bearden’s book **“Energy form the Vacuum –Circuits and schematics”** for a better explanation and understanding.

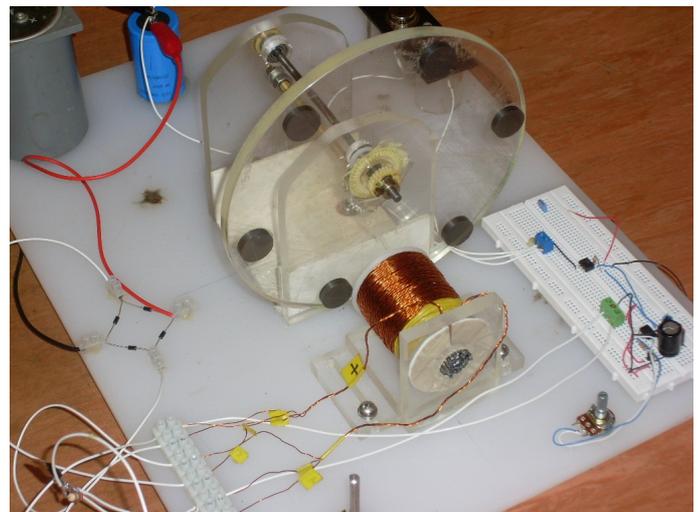


Image above Mike explaining the motor. The following image is the green flash!

Warwick: Gave us an update on Keith Potts and the progress with his research and said he was moving forward with members of parliament looking at his research in regards to global dimming.

Andrew: spoke about desalination plants; and also about a Victor harbor hydroponic lettuce grower’s fungus problem, being solved with his eco-vortex units.



Tony: Demonstrated Back Assist. Inner soles. They have a slight taper on them that when worn for a few hours per day activated certain muscles in the lower back to reduce lower back pain. They are made of soft plastic and can be cut for different foot/shoe sizes. He claims that they work well and are also fantastic for sports people.

Visit:

www.backassist.com.au



Below is a picture of Bob C running the show, thanks Bob.



Dino: He said that he was swishing negatively charged liquid in his mouth to stop bleeding gums and to aid in healing.



Meeting ended around 11pm with supper after with much conversation, followed by the “wee hours club” out the front and a local coffee spot.

Here is an extract from <http://www.rexresearch.com/flettner/flettner.htm>

Ron: spoke about a new MP3 player form JB HI-FI and gave us some book reviews.

Popular Science Monthly (February 1925)
A Sailing Ship Without Sails: New Wonder of the Seas
By G.B. Seybold

Huge spinning cylinders harness the wind ---
Inventor plans to take strange vessel across the
ocean this year.

From the wharves at Kiel, Germany, the schooner
Buckau recently put out to sea, a ship without sails
or steam. Like a ghost ship it moved mysteriously
through the water with no apparent means of
propulsion.

The astounded spectators on shore knew that the
boat was an old 2000-ton steel vessel and that
previously 500 square yards of canvas had been
needed to propel her. But now she was denuded of
all sails, masts, and rigging. Instead, two strange
cylinders, resembling giant smoke-stacks, rose from
her deck. But no smoke was pouring from them and
no engine noise was heard. There was no churning
of screws. Yet the ship plowed its way through the
rough waters of the Baltic, at nearly twice its
former speed.

For several weeks the secret of the strange ship with
the great towers was closely guarded. People were
told only that the craft was equipped with a Flettner
rotor, a new invention, the work of Anton Flettner,
director of the Institute of Aerodynamics at
Amsterdam, Holland.

When finally the explanation came, the world
gasped in amazement. For Dr Flettner calmly
announced that he had returned to the wind as a
source of energy. He had harnessed it in a new way.
He had developed an invention that may permit
ocean liners to reduce their crews two-thirds and
save 90 percent in fuel. He and these spinning
surfaces, presented to the wind, provided a means of
propulsion. This statement, after steamboats, oil-
driven ships, and electrically operated ships had
relegated sailing vessels into dim obscurity,
immediately challenged international attention.
Several authorities, including officials of a great
steamship line, pronounced the invention the most
startling maritime development since Fulton's
steamboat. Others were more skeptical, asking how
the Buckau would perform in a heavy sea, and are
yet to be convinced of the value of the invention.
They also pointed out that the most that can be
claimed for the new ship is that it will apply to better
advantage the power available for a ship supplied
with sails. It cannot replace, in any case, the ship
driven by steam or internal-combustion engines. In
the United States most experts have adopted an

attitude of watchful waiting with regard to the
invention.

The scientific principle upon which Dr Flettner
based his invention has been known for nearly three-
quarters of a century. Briefly, this is that a cylinder
revolving in the wind will exert pressure at right
angles to the current. This principle, known as the
Magnus law, can be understood readily by any one
who is familiar with baseball. The giant cylinders, or
rotors, spinning in the wind, increase air pressure on
one side and suction on the other, just as the surface
of a rapidly spinning baseball from the hand of a
pitcher piles up a difference of pressure on its two
sides that deflects the ball into a curve. In the case of
the baseball, of course, the equivalent of wind is
produced by the swift passage of the ball from
pitcher to catcher.

Each of the two spinning towers on the Buckau
rests on a fixed pivot and moves on ball bearings.
The towers are built of sheet iron about one-half
inch thick, are 60 feet high and 9 feet in diameter.
Two electric motors of 10 horsepower each, placed
inside the pivots, drive the towers. Current for the
motors is generated by a Diesel engine. The total
weight of the complete mechanism --- towers,
engine and motors --- is about 15,000 pounds, just
one-fifth the weight of the discarded sails and
rigging on the same ship.

In propelling a sailing boat, suction, rather than
pressure, Flettner explains, is the important factor in
producing motive power. His aim was to produce
artificially, by means of the revolving towers, a
greater suction power than that produced on the
vessel equipped with sails.

When wind strikes a sail, it divides equally, and in
this division there results what is called a circular
current. This works with the original current of wind
on one side of the sail and against it on the other
side. On the other side where the current whirling
around the sail is added to the original current,
suction or pulling force is created, while on the other
side the clashing of the two currents results in a
pressure or pushing force. Of the two forces, suction
is the greater factor in making the boat move
forward.

The revolving cylinders on the sailless boat impel it
on exactly the same principle as sails do, but more
effectively, it is claimed, because a greater suction
power is produced. As the wind hits one of the

rotating towers from the side, one side of the cylindrical surface naturally is going against it. There is very little friction on the side where the surface goes with the wind, and much friction on the other side.

The wind chooses the easier pathway, avoiding the side producing friction, and most of it goes in the direction in which the cylinder was originally traveling. Because the moving cylinder offers less resistance than a rigid sail, the wind, whirling around a cylinder, produces a much greater circular current than is created around a sail. Thus the suction is greatly increased, the inventor asserts, and the boat moves more swiftly than one with sails.

Twenty horsepower is produced by the two motors that spin the towers at the rate of 120 rpm. They take out of the wind about 1000 horsepower. The inventor claims that each tower produces about 15 times as much propulsive power as that of a similar surface of canvas. An auxiliary engine is used for getting the ship in and out of the harbor.

When the two cylinders are turning at the same speed and the helm is not put on, the Flettner ship sails normally at right angles to the wind. Changing the speed of one cylinder is said to alter the ship's course just as changing the helm would.

N.W. Akimoff, general manager of the Akimoff Propeller Company, Philadelphia, recently has given an explanation of the Magnus Law as applied to the Flettner ship. He begins by considering what would occur if the two cylinders on the Buckau were stationary and the longest dimension of the ship were at right angles to the wind. In that case, says Mr Akimoff, the wind going around each cylinder would be evenly divided so that there would be no action on the ship.

Then, suppose there were no wind, but that the cylinders were spinning at the rate of 120 rpm.

The layers of air directly in contact with the moving cylindrical surface would revolve with practically the same velocity as the cylinder.

But in the case of the Flettner ship, there is a combination of the two preceding cases --- the cylinders spinning and at the same time wind acting upon the ship. Then on one side of the cylinder, the velocity of the wind is opposed by the velocity of the air adjoining the cylinder, thus retarding the velocity of the wind. This means an increase in

pressure.

On the other side of the cylinder, the opposite is true. The velocity of the wind combines with the velocity of the air layers next the cylinders, resulting in a decrease in pressure. On one side of the cylinder there is an increase of pressure, on the opposite side a decrease, so that there results a strong force from the stronger to the weaker pressure. This causes the ship to move forward.

The magnitude of this effect, Mr Akimoff says, may be computed by multiplying the following quantities: the density of the air, the velocity of the wind, the peripheral or surface velocity of each cylinder, the circumference of each cylinder, and the height of each cylinder. In the case of the Buckau, considering the velocity of the wind at 40 feet/second, the forward thrust due to the moving cylinder would be 12,000 pounds. Actually, this would be reduced, on account of various losses, to the extent of 10 percent.

Tests are said to have demonstrated that nearly double the speed made by a sailing vessel equipped with sails can be made by one with the rotor equipment. ON its trial voyage the Buckau developed an average speed of 4.5 knots (5.2 mph) in unfavorable weather and in later tests the ship was able to make 8 knots (9.2 mph).

The inventor estimates that with a vessel somewhat larger than the Buckau, it would take only 18 days to sail across the Atlantic. He is planning to make the trip late this year after further experiments.

A notable feature of the ship is said to be its ease in changing direction. With its towers reversed it is possible for it to sail backward. A three-bladed rudder enables it to turn around on its own length. Any change in course can be made without coming to a stop or slackening the speed.

Supporting Flettner's claim to practicality is his own reputation. Anton Flettner is not a newcomer in marine invention. He is recognized by scientists as an experimenter along original lines. An automatic rudder that he invented a few years ago is widely known and used.

Prof. Albert Einstein, originator of the theory of relativity, has pronounced the rotor principle of great practical importance. The Hamburg American Steamship Company, for example, became so convinced of its economic value that it has decided

to use the rotors in 10 new freighters of 10,000 tons each to be employed on its East Asia route.

On the East Asia route, wind conditions are so favorable to the operation of the rotor ships that the company hopes to save fuel amounting to 60 percent of that consumed now. Ships equipped with the device sailing from Germany to Brazil will make a saving of 50 percent, it is estimated, while those to New York will save from 35 to 40 percent.

One of the largest shipping companies in the world is reported to be contemplating using rotor ships as oil-tankers, and steamship lines even are considering them as possibilities for passenger-carrying vessels.

The inventor himself does not assert that his device will be a substitute for steam or electric power on the high seas. But he declares that while the speed of an ocean liner equipped with revolving towers would not be increased, the invention would save a large percentage of its coal and oil, resulting in a great saving in storage space, as well as in the cost of fuel.

An extremely important line of inquiry developing in the consideration of this device, is whether it will be possible to store electrical energy, created by the rapidly revolving cylinders, in batteries for future use. If this is possible, the world will have a remarkable new means for producing electrical current. Wind, the vast, unknown, unmeasured element, could be harnessed in this easy way to propel anything from farm machinery to an electric power plant.

Flettner has hinted of this. Wind power, he says, eventually may supersede both coal and water power on account of its cheapness.

DISCLAIMER: All information given in this newsletter is for educational purposes only. No claims are made on or for the validity or correctness of the material provided. ASTRO S.A. Incorporated accepts no responsibility for any mishaps or accidents incurred by any persons utilising this information.