



Intake Valve and Feliks' ideas

□ _24 Apr 2021, 02:29

How about you give us the full paper rather than a link to a site that gives only an extract?

□ _24 Apr 2021, 12:18

Just a fan ([./memberlist.php?mode=viewprofile&u=9308](#)) wrote: ↑
([./viewtopic.php?p=966338#p966338](#))

How about you give us the full paper rather than a link to a site that gives only an extract?

I guess he means

<https://mobilityrxiv.sae.org/preprint/new4stroke-engine--sae-pp-00116> (<https://mobilityrxiv.sae.org/preprint/new4stroke-engine--sae-pp-00116>)

It's really something.

□ _24 Apr 2021, 13:35

nzjrs ([./memberlist.php?mode=viewprofile&u=29399](#)) wrote: ↑ ([./viewtopic.php?p=966362#p966362](#))

Just a fan ([./memberlist.php?mode=viewprofile&u=9308](#)) wrote: ↑
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It's really something.

That still just goes to an abstract here.

□ _24 Apr 2021, 14:10



Just_a_fan (/memberlist.php?mode=viewprofile&u=9308) wrote: ↑
(./viewtopic.php?p=966370#p966370)

nzjrs (/memberlist.php?mode=viewprofile&u=29399) wrote: ↑
(./viewtopic.php?p=966362#p966362)

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It's really something.

That still just goes to an abstract here.

There is an arrow download button (on mobile at least) that gives you an interesting pdf.

□ _24 Apr 2021, 17:11

Just_a_fan (/memberlist.php?mode=viewprofile&u=9308) wrote: ↑
(./viewtopic.php?p=966370#p966370)

nzjrs (/memberlist.php?mode=viewprofile&u=29399) wrote: ↑
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It's really something.

That still just goes to an abstract here.

Click the little blue down arrow in the top right. Tooltip "Download preprint".

□ _24 Apr 2021, 22:53

I'm going to love to read the peer review on this. 😊



□ _11 Jul 2021, 13:12

Well, as everyone on the forum knows, I started publishing about my new4stroke engine 15 years ago. By courtesy, this thread exists to this day and everyone who reads it up to that time is already familiar with my structure, and probably many like it, although it requires a deep understanding. I tried to explain it successively. But now, courtesy of SAE, I can also enter the competition. annually organized by her - "Create the Future". Here is my application for this competition.

[https://contest.techbriefs.com/2021/ent ... oke-engine](https://contest.techbriefs.com/2021/ent...oke-engine)

<https://contest.techbriefs.com/2021/entries/automotive-transportation/11384-0704-195728-new-4-stroke-engine>

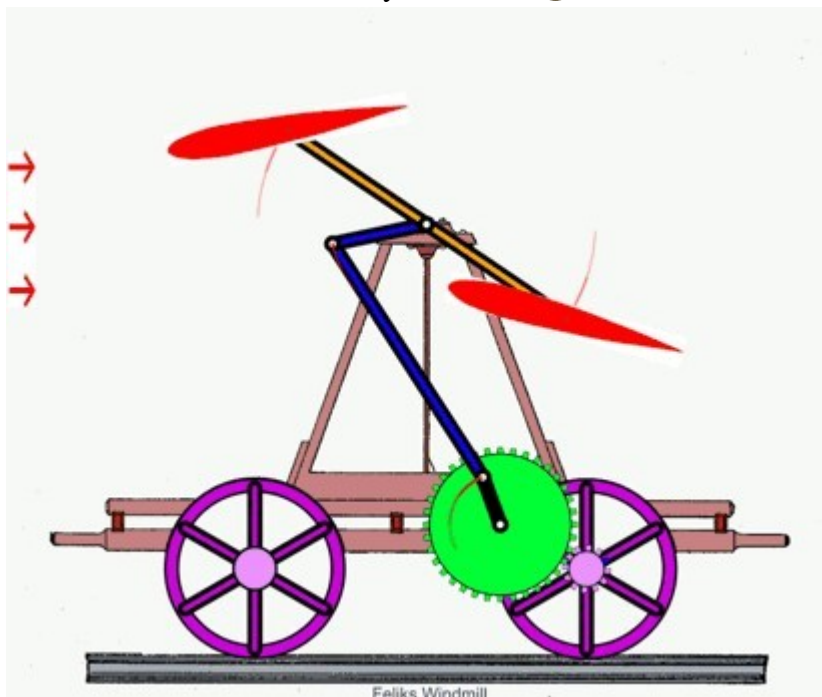
And I think that forum readers know even more about my project than it is described there. Thanks to this, they understand it better and can vote for my project. But for credibility, in order to apply (and not only to mine), you need to register on this page, here: <https://contest.techbriefs.com/account/registration> (<https://contest.techbriefs.com/account/registration>)

I hope that many of you who spoke warmly about my project will vote for my project. Thank you in advance ..

Andrew 😊

□ _18 Jul 2021, 17:07

Well, the Feliks Windmill as you like it .. 😊



<https://www.new4stroke.com/felikswindmillmm.gif>

Andrew 😊

□ _19 Jul 2021, 12:34



Feliks (./memberlist.php?mode=viewprofile&u=5220) wrote: ↑ (./viewtopic.php?p=986185#p986185)

Well, the Feliks Windmill as you like it .. 😊

<https://www.new4stroke.com/felikswindmillmm.gif>

(<https://www.new4stroke.com/felikswindmillmm.gif>)

Andrew 😊

How did you forget to include the aerofoil AoA/pitch-change linkage, Andrew?

What are the force calculations for losses to both pitch-change & stream-wise blanket/buffet?

▣ _19 Jul 2021, 19:06

Linkage, will be controlled by a processor that will calculate the appropriate acceleration and switching speed....

Well, finally closer to nature 😊 Doesn't it remind you of waving birds' wings? 💡

Feliks Windmill

<https://www.youtube.com/watch?v=uMa0MWf4scg>



Andrew 😊

▣ _20 Jul 2021, 14:02



So what happens when the flow from the leading blade interrupts the trailing one every time they pass?

□ _20 Jul 2021, 17:22

Feliks (./memberlist.php?mode=viewprofile&u=5220) wrote: ↑ (./viewtopic.php?p=987308#p987308)

Linkage, will be controlled by a processor that will calculate the appropriate acceleration and switching speed....

Reminds me of a PhD project a friend worked on at university - automatic attitude and altitude control of large flying kites for electricity generation.

tldr; It didn't work out as well as planned.

□ _20 Jul 2021, 17:31

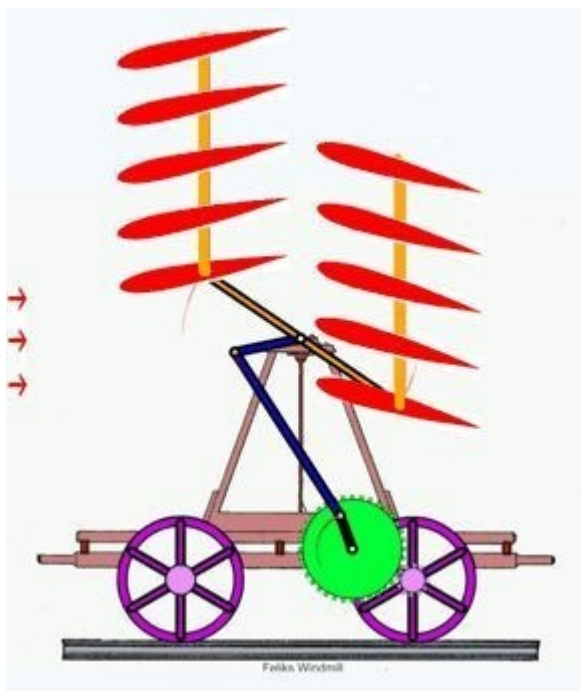
nzjrs (./memberlist.php?mode=viewprofile&u=29399) wrote: ↑ (./viewtopic.php?p=987645#p987645)

tldr; It didn't work out as well as planned.

That's handy, neither will this one 😊

□ _21 Jul 2021, 03:34

And how would you have to increase the power five times ... :tsk



this processor may initially take the form of an ordinary stick, which will turn the direction of the wing... 😊



Andrew 😊

▢ _21 Jul 2021, 03:49

Feliks (/memberlist.php?mode=viewprofile&u=5220) wrote: ↑ (/viewtopic.php?p=987850#p987850)

And how would you have to increase the power five times ... :tsk

<https://www.new4stroke.com/piec3.jpg>
(<https://www.new4stroke.com/piec3.jpg>)

this processor may initially take the form of an ordinary stick, which will turn the direction of the wing... 😊

Andrew 😊

Now you've got 80% overlap and your rear wings have stalled.



Intake Valve and Feliks' ideas

□ _24 Jul 2021, 23:29

PhillipM (./memberlist.php?mode=viewprofile&u=11936) wrote: ↑
(./viewtopic.php?p=987852#p987852)

Feliks (./memberlist.php?mode=viewprofile&u=5220) wrote: ↑
(./viewtopic.php?p=987850#p987850)

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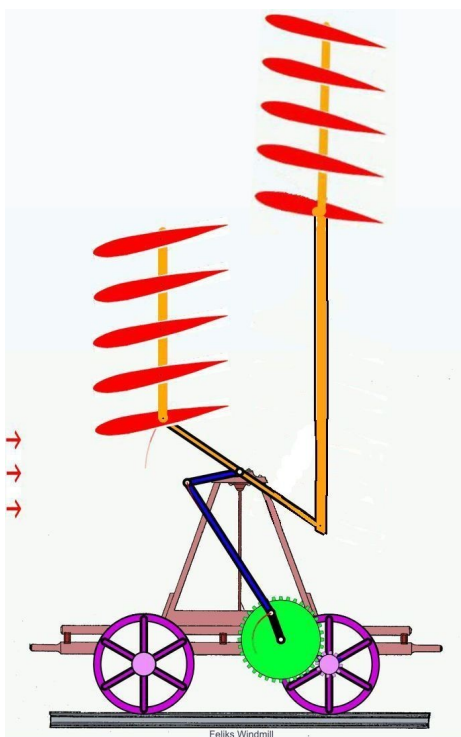
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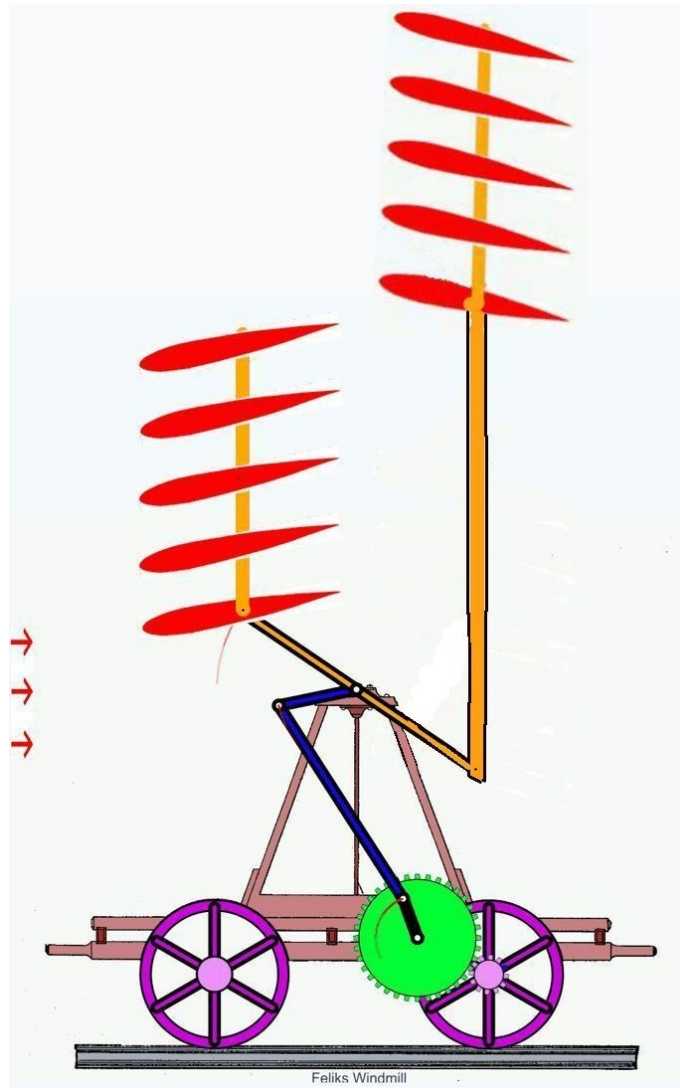
this processor may initially take the form of an ordinary stick, which will turn the direction of the wing... 😊

Andrew 😊

Now you've got 80% overlap and your rear wings have stalled.

Well, if you use a few simple sticks instead of a head, everything will be fine .. 😊





Andrew 😊

□ _25 Jul 2021, 01:36

Okay, but your wings fell over around that pivot at the bottom and now they're on the floor. Now you've got linkages in a parallelogram to hold them straight, linkages to change the AoA, pivots everywhere, shedloads of friction and your efficiency is so low you may as well have fitted a wind turbine like usual.

□ _25 Jul 2021, 03:12

PhillipM (./memberlist.php?mode=viewprofile&u=11936) wrote: ↑
(./viewtopic.php?p=988837#p988837)

Okay, but your wings fell over around that pivot at the bottom and now they're on the floor. Now you've got linkages in a parallelogram to hold them straight, linkages to change the AoA, pivots everywhere, shedloads of friction and your efficiency is so low you may as well have fitted a wind turbine like usual.



No, it's just your concrete head, it doesn't admit a new thought .. First, there is no friction what you are thinking about. Secondly, the lower wings are where they were, always, Thirdly, this childish windmill is much less sparse than my vehicle (with the same contour) fourth, the speed of the propeller's end is a lot of windmill, even after Mach 1 it comes up and kills the birds, So the aerodynamic resistances cannot be efficient at these speeds. Fifth, it is not subject to the idiotic law of Betz, which I refuted a few posts earlier, because this "physicist" Betz, in order to get any bills, introduced a new unit of mass - mass per second. Sixth, the change in the direction of the wing, it is enough that at the end of the movement it rests its front against a permanent obstacle that will prevent it from going any further, and thus it will reverse its direction as a result of further movement.

I think my air hammer crushes this concrete a bit ...

Well, how pleasant a trip can be, how the friction you think about really does not occur

handcar

https://www.youtube.com/watch?v=fAJP6HUm_T0&t=6s



Andrew 😊

□ _25 Jul 2021, 03:24

Feliks (./memberlist.php?mode=viewprofile&u=5220) wrote: ↑ (./viewtopic.php?p=988841#p988841)

First, there is no friction what you are thinking about.

Andrew 😊

Ah, magic, of course.

How about you actually build one of your contraptions one day and save these silly statements?

□ _25 Jul 2021, 03:56



PhillipM ([./memberlist.php?mode=viewprofile&u=11936](#)) wrote: ↑
([./viewtopic.php?p=988842#p988842](#))

Feliks ([./memberlist.php?mode=viewprofile&u=5220](#)) wrote: ↑
([./viewtopic.php?p=988841#p988841](#))

First, there is no friction what you are thinking about.

Andrew 😊

Ah, magic, of course.

How about you actually build one of your contraptions one day and save these silly statements?

Well, it just started with building such a device, which even exceeded the limits of my imagination as its constructor. And I had no choice but to believe that it is wonderful .. So I am not surprised, some people have doubts sometimes. because even I was surprised .. But it is still to be shown .. only by a strange coincidence, nobody wants to watch .. and about this magic, you probably thought about this kind of sawn timber, which is here and it causes a lot of losses. But the worst thing is if you do not distinguish between magic and reality ...

Will you vote for me ? [https://contest.techbriefs.com/2021/ent ... oke-engine](https://contest.techbriefs.com/2021/ent...oke-engine)
(<https://contest.techbriefs.com/2021/entries/automotive-transportation/11384-0704-195728-new-4-stroke-engine>)

Wingcrank

<https://www.youtube.com/watch?v=evC5y0wgOVM&t=3s>



Andrew 😊

□ _25 Jul 2021, 04:15



PhillipM ([./memberlist.php?mode=viewprofile&u=11936](#)) wrote: ↑
[\(./viewtopic.php?p=988842#p988842\)](#)

Ah, magic, of course.

I have a misty ball staring at it and I already know what is magic and what is reality .. 🤔



Andrew 😊

▣ _25 Jul 2021, 04:24

Yes, that's still just a theoretical model, where's the actual, physical model?

Because you benchmark it against a normal rotating turbine and you're going to find out how much of that 'no friction' happens in reality

▣ _25 Jul 2021, 14:14

PhillipM ([./memberlist.php?mode=viewprofile&u=11936](#)) wrote: ↑
[\(./viewtopic.php?p=988848#p988848\)](#)

Yes, that's still just a theoretical model, where's the actual, physical model?

Einstein also had no physical model, only a theoretical one .. 😊

Andrew 😊

▣ _25 Jul 2021, 14:29

Yeah but he didn't wave his hands over all his models and go "No friction, because...magic!"

And his theoretical models contained proofs or ways to prove them. Which is the scientific definition of a theory 😊

▣ _25 Jul 2021, 14:48



Feliks, your 'linkages' seem a bit confused. How is the wind motion transmitted to the crank system? And maybe you should reverse the gears on your drive system. And how are the wings kept at their AoA? And how are they reversed at the end of their cycle? No friction here for sure.....

□ _25 Jul 2021, 15:10

Feliks (./memberlist.php?mode=viewprofile&u=5220) wrote: ↑ (./viewtopic.php?p=988841#p988841)

No, it's just your concrete head, it doesn't admit a new thought .. First, there is no friction what you are thinking about.

I'd say that if you've figured out a way to avoid friction, that should be the thing you should concentrate on selling, not flappy wings.

Do your wings/blades suffer from drag or have you solved that problem too?

□ _25 Jul 2021, 15:14

PhillipM (./memberlist.php?mode=viewprofile&u=11936) wrote: ↑ (./viewtopic.php?p=988888#p988888)

Yeah but he didn't wave his hands over all his models and go "No friction, because...magic!"

How do you know? But while teaching physics at Winterthur High School in 1901, he taught with the physics law of the time that a machine heavier than air could not fly. If he had taught otherwise, he would have been fired and would have nothing to live on. Lord Kelvin likewise claimed, and many "physicists" at that time .. Both had eyes, but somehow did not notice that the bird, which is heavier than air, still flies. They surely thought it was "Divine matter and magic ,that flies" ... And it's not supposed to be magic ... but Science that you supposedly believe in.

You are trying to say that I do not recognize friction, not understanding that this device produces a minimum amount of it compared to the classic connecting rod background, because the piston does not rub against the cylinder, which friction has a significant effect on efficiency .. But with the help of magic, I did not distinguish however, these two disputes from each other. But this is how someone grew up on magic and cannot criticize others 😊

Andrew 😊

□ _25 Jul 2021, 15:22

You have shedloads more friction than anything rotating, because almost every joint you have is in boundary layer, slow, reciprocating movement. But if if you ever actually built things instead of arguing with 10,000 people pointing out just how many flaws almost every one of your designs has had over the years, you'd find it out very quickly.

That's why we do experimental comparisons, for proof. ▲

You see the difference between you and the figures from 150 years ago, was new technology came along and opened up the possibility of much greater power, etc. In your case, there's nothing new, you're just slapping basic parts together with linkages that are well known, well proven, well researched and are nothing nobody hasn't looked at already for the last millennia.

There's a reason we settled on wind mills and not wind seesaws.

Build your seesaw. Physically build it. And build a normal turbine at the side of it, with the same quality of bearings, and frontal area. And test it.

Because I'm 100% certain by the time all the friction in your transmission and AoA changing linkages has been accounted for, and the blockage caused by your multi-foil setup aerodynamically, you're going to see just how inefficient it is very, very quickly.

□ _25 Jul 2021, 15:39

PhillipM (./memberlist.php?mode=viewprofile&u=11936) wrote: ↑
(./viewtopic.php?p=988912#p988912)

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it's just not true what you write .. Each gyroscope has several joints like this, and it works great .. but I see that you also have no eyes and the video I published did not make any impression on you and followed the path of the truth 😊

you remember :



Feliks Windmill

<https://www.youtube.com/watch?v=uMa0MWf4scg>



Andrew 😊

▣ _25 Jul 2021, 15:41

This thread has really blown off course.

Or maybe it's gone off the rails.

Certainly there are a few screws loose.





Intake Valve and Feliks' ideas

□ _25 Jul 2021, 15:46

[nzjrs \(/memberlist.php?mode=viewprofile&u=29399\)](#) wrote: **[↑ \(/viewtopic.php?p=988922#p988922\)](#)**

This thread has really blown off course.

Or maybe it's gone off the rails.

Certainly there are a few screws loose.

It reminds me of a certain other thread except it's not supposed to fly.....

□ _25 Jul 2021, 15:54

It's a pretty easy mathematical proof to test the feasibility. If $LiftForce \times TotalTransmissionRatioToWheels \times TransmissionEfficiency / WheelRadius$ is greater than $TotalDragForce$ then it will work.

Felix has all the geometry and transmission ratios to put numberd to it. There is no need to build anything - just a few physics calcs and less handwaving.

□ _25 Jul 2021, 17:36

[Tim.Wright \(/memberlist.php?mode=viewprofile&u=7218\)](#) wrote: **[↑ \(/viewtopic.php?p=988926#p988926\)](#)**

It's a pretty easy mathematical proof to test the feasibility. If $LiftForce \times TotalTransmissionRatioToWheels \times TransmissionEfficiency / WheelRadius$ is greater than $TotalDragForce$ then it will work.

Felix has all the geometry and transmission ratios to put numberd to it. There is no need to build anything - just a few physics calcs and less handwaving.

Well, thanks for the open head .. but it's not that simple .. but much simpler than it used to be .. finally, there is a great NASA calculator that finally works without any Java .. I recommend you use it .. just move the slider 😊 . We can estimate the force of pressure, because a man does not produce more, so it can never be greater than all his weight ... and a vehicle even with one man is driving ..

Best regards and nice new learning ..

<https://www.grc.nasa.gov/WWW/k-12/airplane/foil3.html> (<https://www.grc.nasa.gov/WWW/k-12/airplane/foil3.html>)

Andrew 😊



□ _25 Jul 2021, 17:56

Feliks (./memberlist.php?mode=viewprofile&u=5220) wrote: ↑ (./viewtopic.php?p=988943#p988943)

Tim.Wright (./memberlist.php?mode=viewprofile&u=7218) wrote: ↑ (./viewtopic.php?p=988926#p988926)

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Best regards and nice new learning ..

<https://www.grc.nasa.gov/WWW/k-12/airplane/foil3.html>

(<https://www.grc.nasa.gov/WWW/k-12/airplane/foil3.html>)

Andrew 😊

Take the lift and drag from the nasa app and put it in my formula to see if you device works. Every other discussion is a waste of time.

Don't forget to include joint friction in the $TransmissionEfficiency$ terms.

□ _25 Jul 2021, 18:42

Feliks (./memberlist.php?mode=viewprofile&u=5220) wrote: ↑ (./viewtopic.php?p=988943#p988943)

finally, there is a great NASA calculator that finally works without any Java...

... which only works for magic infinitely long airfoils and makes serious assumptions about turbulence for best case figures. As anyone with any even basic or cursory form of aero knowledge can tell you.

Something railroad width you'd be lucky to match half of what that calculator says for efficiency.

You see that great big bit of red text on the Foilsim page with *warning - warning - warning - warning* all over it telling you not to use it for design and it's just an approximation for fun. Yep, there you go.

Ironically have some airfoils here I made a little while ago for a project that are almost perfectly the right width, 1500mm, although they're highly cambered and I only have 3 of them, so probably not ▲

much use for testing the oscillating machine.

I would guess Felix is using rather thin, symmetrical airfoils with a really short chord, but I then again I don't think the project has been thought through even that far going on all the past designs.

□ _25 Jul 2021, 20:03

Feliks (./memberlist.php?mode=viewprofile&u=5220) wrote: ↑ (./viewtopic.php?p=191446#p191446)

Feliks wrote:

Well, who would have thought that Newcomen was so close to an adequate solution 😊

Regards Andrew 😊

I also very close to the Technology

<http://www.new4stroke.com/handcar1.jpg>
(<http://www.new4stroke.com/handcar1.jpg>)

Regards Andrew 😊

Anyone can judge, but sometimes it is fitting to read these scraps of Feliks 😊

Check the date of this post....

Feliks has slow thinking, so sometimes he has to go on ... 😊
Andrew 😊

□ _25 Jul 2021, 20:45

***** WARNING ***** WARNING ***** WARNING
***** WARNING ***** WARNING *****

FoilSim is a simulation. It is not reality.

FoilSim is an educational computer program. It is not a design program.

FoilSim was built to help students learn how wings work. It produces the correct trends (for example, doubling velocity will quadruple the lift and drag) but it does not give the exact value of lift or drag. FoilSim uses a very simplified analysis to calculate lift, and it interpolates experimentally measured drag data to determine the drag. The drag data was obtained by students using inexpensive models and an inexpensive wind tunnel. Please do not attempt to design, build, or fly a full scale aircraft using data from FoilSim. It is fine for models, but be careful.

***** WARNING ***** WARNING ***** WARNING
***** WARNING ***** WARNING *****

Hmmmm.....

□ _25 Jul 2021, 20:55

Rodak (./memberlist.php?mode=viewprofile&u=38247) wrote: ↑ (./viewtopic.php?p=988976#p988976)

***** WARNING ***** WARNING ***** WARNING
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***** WARNING ***** WARNING ***** WARNING
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Hmmmm.....

But about the machine that drives the propeller to the plane you're building it, they didn't mention anything, just to be careful .. hmmmm 



Andrew 🗨️

▢ _25 Jul 2021, 21:20

Rodak (./memberlist.php?mode=viewprofile&u=38247) wrote: ↑ (./viewtopic.php?p=988976#p988976)

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***** WARNING ***** WARNING ***** WARNING
 ***** WARNING ***** WARNING *****

Hmmmm.....

Well, better calculate what big wings this propeller driving machine would have to have, since the dedalus flies at 30 km / h and needs 200 watts for this, which is as much as a man can give on average for 4 hours of flight. should be removed as unnecessary, and the plane could fly even around the world ... 😊

https://www.nasa.gov/centers/dryden/mul ... _desc.html

https://www.nasa.gov/centers/dryden/multimedia/imagegallery/Daedalus/Daedalus_proj_desc.html

Andrew 😊

▢ _25 Jul 2021, 23:23

Feliks (./memberlist.php?mode=viewprofile&u=5220) wrote: ↑ (./viewtopic.php?p=988979#p988979)

But about the machine that drives the propeller to the plane you're building it, they didn't mention anything, just to be careful .. hmmm 🤔

Andrew 🗨️



Because they're not simulating any of that, so why would they? It's got literally nothing to do with it. I don't know why you're linking Daedalus, because Daedalus 100% wasn't designed using Foilsim...

□ _25 Jul 2021, 23:58

The discussion of friction is a red herring. Friction loss is a tiny fraction of the power generated by any half decent wind turbine. Linkage joints in Feliks' contraption would also be low friction - could easily be rolling element bearings and besides - the angular velocity is low, so power lost to friction is also low.

□ _26 Jul 2021, 01:29

edit: deleted, was just jokes and spelling mistakes

Last edited by [nzjrs](#) on 26 Jul 2021, 09:15, edited 1 time in total.

□ _26 Jul 2021, 03:15

[gruntguru \(./memberlist.php?mode=viewprofile&u=7435\)](#) wrote: ↑
[\(./viewtopic.php?p=989018#p989018\)](#)
 by any half decent wind turbine.

There's the kicker on that one.

□ _26 Jul 2021, 14:41

[gruntguru \(./memberlist.php?mode=viewprofile&u=7435\)](#) wrote: ↑
[\(./viewtopic.php?p=989018#p989018\)](#)

The discussion of friction is a red herring. Friction loss is a tiny fraction of the power generated by any half decent wind turbine. Linkage joints in Feliks' contraption would also be low friction - could easily be rolling element bearings and besides - the angular velocity is low, so power lost to friction is also low.

In the video you can see that this one man has to overcome all this friction and gives a strong force to drive the whole device forward. It can be estimated that the force he has is half his body weight, i.e. about 30 KG. (300 N) And that's enough for the device to move. So if two wings give a force of 2 x 15 KG (150 N), we can expect the effect to be similar and the device to move forward ... here I present NASA calc simulations, which says that at 5 square meters ($2 \times 2, 5 \text{ m}^2$) of the surface of these wings, we get it already at a speed of 30 km / h, the speed of this device ... how we have to do with the plane to make it fly) Every speed of this device gives us more strength, to be used for any purpose ... and it correlates with the quadrature of this extra speed .. So says mathematics .. and Feliks .. 😊



FoilSim JS Units: metric

Lift N Drag N

CLift CDrag

R# L/D ratio

Flight Test Earth - Average Day

Speed-km/h

Altitude-m

5 meter ²

Lift and Drag

300

Moving Handcar Over Track Switch

<https://youtu.be/CirQW11vtGc?t=10>



Andrew 😊

Well, I have already shown that such a vehicle can move on its own if we accelerate it to such a speed of 30 km / h. but as a windmill I would be useful, not least because the wind blows, when it needs to add any power it wants ... It is an uncomfortable situation ...) 5 m^2 , gives us a lift of 3290 N. Well, but with this speed, we must also take into account the aerodynamic drag plus friction costs .. they are respectively $596 \text{ N} + 300 \text{ N} = 896 \text{ N}$. which we have to subtract from the lift used .. we will have to use 2394 N ($\sim 240 \text{ KG}$), And now, by analogy, that is 300 N will give us about 200 Watt what power manages, these $2394/300 = 8$ times more power to obtain, that is $8 \times 200 \text{ W} = \sim 1.5 \text{ KW}$ of power to obtain at this speed .. By mounting the alternator on such a vehicle, we will get 1.5 KW of power, but all the time, regardless of the weather, and only due to the movement of such a vehicle, $24 / 7$. By building a railway track around the city in which you live, let's say with a diameter of 2 km, we will get 6 km of a closed circuit on which we can put such vehicles in order to generate electricity and distribute it to the network using a pantograph, similar to a locomotive electricity .. But now, such a vehicle may have, let's say, 5 wings as in my drawing, which may cause the amount of electricity it produces to increase by 5 times that is, $5 \times 1.5 = 7.5 \text{ KW}$. for one vehicle .. now, the length of this track, it will be 6000 meters, and if we put 300 such vehicles every 20 meters each, it will give us $300 \times 7.5 = 2250 \text{ Kw}$, or 2.2 MW. but always, without watching the wind blowing .. Of course, you can build 5 such tracks in parallel, for example, and five for the height, then this power will increase by 25 times or 50 MW. Maybe this will satisfy the energy needs of your small town? These are just the first ideas, but for example the track can also go up and down, say 200 meters, like today's windmills, which will give us 400 meters of work. ? The rest depends on your ideas ... 💡

Andrew 😊

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