

Re: High strength fibers for high pressure tubes.

## Re: High strength fibers for high pressure tubes.

---

*Source:* <http://sci.tech-archive.net/Archive/sci.physics/2005-04/msg04136.html>

---

- *From:* bz <bz+sp@xxxxxxxxxxxxxxxxxxxxxx>
  - *Date:* Fri, 29 Apr 2005 09:12:19 +0000 (UTC)
- 

Mitchell Jones <mjones@xxxxxxxxxxxxxxxx> wrote in  
<news:mjones-223160.01354929042005@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>:

> In article <Xns9646861EC47E2WQAHBGMXSZHVspamnote@xxxxxxxxxxxxxxxx>,  
> bz <bz+sp@xxxxxxxxxxxxxxxxxxxxxx> wrote:  
>  
>> Mitchell Jones <mjones@xxxxxxxxxxxxxxxx> wrote in  
>> <news:mjones-72AA33.12394628042005@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>:  
>>  
>> > In article <Xns964641AC76568WQAHBGMXSZHVspamnote@xxxxxxxxxxxxxxxx>,  
>> > bz <bz+sp@xxxxxxxxxxxxxxxxxxxxxx> wrote:  
>> >  
>> > [snip]  
>> >  
>> > ....  
>> > \*\*\*{In a market economy, the measure of when that point has been  
>> > ....  
>> > in the world, have set up as an obstacle course, to prevent the  
>> > engineers from getting at the oil. --MJ}\*\*\*  
>>  
>> When you must expend 100 Joules of energy to extract oil that will  
>> yield less than 100 Joules of energy, the politics doesn't matter, the  
>> economics doesn't matter. You are at the point where you are better off  
>> to use the 100 Joules directly and not convert it into crude petroleum.  
>  
> \*\*\*{The only fixed and irreducible energy costs are those imposed by the  
> necessity to lift the oil from its point of origin to its point of use.  
> A typical barrel of oil, back in the old days, had a capacity of 55  
> gallons, and contained about 44 gallons of crude, with the excess space  
> being left to allow for expansion. A run-of-the-mill barrel of Texas  
> crude contains 19,460 Btu's/lb and weighs 7.286 lbs/gal. Therefore its  
> total weight is (44)(7.286) = 320.6 lbs, and its total energy content is  
> (320.6)(19,460) = 6.25x10<sup>6</sup> Btu's.

There is also the cost of cleaning up the environment. That has been  
ignored, up until now. Factor that in, also.

>  
> The continental crust of the Earth is typically about 30 km thick (see

Re: High strength fibers for high pressure tubes.

> <http://quake.wr.usgs.gov/research/structure/CrustalStructure/>), which is  
> 98,425 ft. Therefore in an extreme case scenario the energy investment  
> to get a barrel of oil to the surface would be  $(320.6)(98425) =$   
>  $3.16 \times 10^7$  ft–lbs. Since each Btu contains 777.9 ft–lbs of energy, it  
> follows that the barrel of oil contains  $(777.9)(6.25 \times 10^6) = 4.86 \times 10^9$   
> ft–lbs of energy. That is in excess of two orders of magnitude more  
> energy than its fixed and irreducible costs of extraction, even under  
> these worst case assumptions.

You are assuming that the carbon is in liquid pools rather than scattered as grains of carbon scattered in the rocks.

> I would add that those are truly worst case assumptions, because as soon  
> as a drill bit came anywhere near a pool of oil at that depth, the  
> enormous pressure would spit out all of the casing, the bit, the 30 km  
> of drill stem, and blow the derrick to hell, in a gusher the likes of  
> which the world had never seen! You wouldn't need to invest energy  
> pumping it out of the ground. What you would need to do would be invest  
> energy running like hell, as soon as you heard the sounds of the casing  
> and drill stem blowing back up the hole!  
>  
> To sum up, when you actually run the numbers, when you actually develop  
> a clear grasp of what oil \*is\*, all worries about getting anywhere near  
> ultimate breakeven stand revealed as pure fantasy. The reality is that  
> sub–marginal reserves are not sub–marginal because there is less energy  
> in the oil than must be invested to lift it out of the ground, but  
> because, AT THE PRESENT TIME, the technology that allows us to get to it  
> and separate it from its impurities is too costly.  
>  
> Bottom line: the politicians are the only thing standing between the  
> engineers and the oil.  
>  
> --Mitchell Jones}\*\*\*  
>  
>> What about waste heat, you might say. What about heat left over after  
>> you burn fuel to make electricity?  
>>  
>> When you convert heat into useful energy, the amount you can convert  
>> depends on your starting and ending temperatures. When you try to use  
>> the 'waste heat' you decrease the power out of the generator. You can  
>> use SOME of the waste heat to do useful things, like recover oil from  
>> oil shale, but I was already considering that in my original statement.  
>>  
>> Assume we are already making the best possible use of all of our energy  
>> resources, you eventually (and that day is closer than you think) reach  
>> the point where it takes more energy to extract energy than you have  
>> available. Tech improvements will not solve this problem.  
>  
> \*\*\*{That "problem" does not exist. See above. --MJ}\*\*\*  
>  
>> Again, better to move our industries into space.

Re: High strength fibers for high pressure tubes.

Re: High strength fibers for high pressure tubes.

>  
> \*\*\*{\*All\* of our industries?}

Start with the heavy industry.

>That would require the use of massive  
> force, because it would make no economic sense at all, with the  
> consumers and raw materials mostly on Earth, to move the industries into  
> space. And, of course, to persuade Earth's population to leave Earth and  
> stop using raw materials from Earth would require even more massive use  
> of force.

I am not advocating the use of force.

> But why? What goal are we pursuing, that justifies killing so  
> many people? ---MJ}\*\*\*

The future of the human race.

>  
>> There, if you want more  
>> energy, you use a bigger mirror.  
>  
> \*\*\*{A mirror? At high Earth orbit you would need, at minimum, a square  
> meter of mirror for every 1360 Watts. Let's see: American industrial  
> power consumption at the end of 2004 was running at about 2.918  
> quads/month (see  
.....  
> alternatively, we would need for each orbital  
> factory to have its own, smaller mirror,

Exactly.

> its own smaller power plant,  
> etc., together adding up to the same thing. And we would need to somehow  
> get raw materials up to the factories,

That is easy.

Capture the earth busters before they can hit the earth. Turn them into  
factories and habitats.

Take the factories to the raw materials (the asteroid belt).

> and get the finished goods to  
> retail outlets and thence to end users who, presumably, would not be on  
> Earth. But why would we do all of this?

To ensure the future of the human race.

> To turn the Earth into a park?  
> Are we back to that again? For what possible reason would we want to

Re: High strength fibers for high pressure tubes.

Re: High strength fibers for high pressure tubes.

> turn the Earth into a park? --MJ}\*\*\*

Because it would be a nice place to visit.

>

.....

>> NO! man would increase the sea level rise by speeding up the melting of

>> glaciers and the southern ice cap.

>

> \*\*\*{The CO2 is rapidly taken up by plant growth. The plant growth is  
> mostly water, and, by eliminating or reducing standing thermals, brings  
> about increased rainfall in the area where it takes place, causing the  
> water table to rise. Result: icemelt that would otherwise have  
> contributed to rising sea levels contributes to increased plant biomass  
> and rising water tables instead. --MJ}\*\*\*

data?

.....

> That means the ban on DDT kills about 3 million children a  
> year, and has been doing so since 1972, for a cumulative total, very  
> conservatively estimated, in excess of 50 million. Should every  
> environmentalist be executed who, after being apprised of these facts  
> and allowed time to verify same, continues to support the DDT ban? You  
> decide. --MJ}\*\*\*

There are better insecticides to use.

>

>> Insects develop immunity and THAT kills more innocents.

>

> \*\*\*{Insects adapt to threats which appear in their environments, but  
> adaptation does not always involve developing immunity. Flies, for  
> example, have had hundreds of millions of years to develop immunity to  
> being eaten by birds, and have failed miserably to do so. They have,  
> however, adapted to the threat--by becoming adept at dodging, by  
> developing camouflage coloration that renders them difficult to see,  
> etc. And, likewise, mosquitos have adapted to the threat posed by  
> DDT--by fleeing as fast as they can from any area where even the  
> slightest whiff of DDT is in the air. And, since DDT is a perfect  
> pesticide, meaning it reacts only with insects,

False.

It accumulates in the fatty tissue of mammals and birds. You have some in your body right now. It increases the chance you will die of cancer. It causes thinning of birds egg shells. If the use of DDT had continued at the rate it was in use, the world would look much different now.

> it remains in the

> environment long after being sprayed. That means if you spray a village

Re: High strength fibers for high pressure tubes.

Re: High strength fibers for high pressure tubes.

- > with DDT, the mosquitos that are there at the time will be killed, and
- > any that come into the vicinity later will avoid that village like the
- > plague. Result: the incidence of malaria in the area will drop, like
- > clockwork, by from 90 to 95%. --MJ}\*\*\*

BTW, global warming will make tropical diseases available over much more of the world and will kill tens of millions more people.

- >
- >> > , which kills an
- >> > innocent child somewhere on Earth every 10 seconds, and virtually
- >> > every other bovine, drooling stupidity they have perpetrated or
- >> > attempted to perpetrate over the years. --MJ}\*\*\*
- >>
- >> We will have to agree to disagree on many things.
- >
- > \*\*\*{Yup. For example, Hitler

Godwin's Law.

[http://en.wikipedia.org/wiki/Godwin's\\_Law](http://en.wikipedia.org/wiki/Godwin's_Law)

- > murdered 6 million Jews, and
- > environmentalists have murdered more than 50 million children. I say
- > environmentalists are worse than Hitler, and you, apparently, disagree.

Every time you use your computer, you become responsible for the deaths of coal miners, etc. You are partaking of the fruits of all the deaths that have taken place in the development of civilization. But you can't avoid that, even by living as a hermit in the wilderness, because you still have the knowledge in your head.

- > --MJ}\*\*\*
- >
- >> Have the best of all possible days. It is a beautiful day to be alive,
- >> isn't it? Every day.
- >
- > \*\*\*{Yup, environmentalists murder 8,640 children every day. What is
- > there not to like about such a day? --MJ}\*\*\*

Environmentalist, anti environmentalists, Luddites and industrialists all share in the blaim.

--  
bz

please pardon my infinite ignorance, the set-of-things-I-do-not-know is an infinite set.

Re: High strength fibers for high pressure tubes.

Re: High strength fibers for high pressure tubes.

bz+sp@xxxxxxxxxxxxxxxxxxxx remove ch100-5 to avoid spam trap

---

• **References:**

- ◆ **Re: High strength fibers for high pressure tubes.**  
◇ From: Mitchell Jones
- ◆ **Re: High strength fibers for high pressure tubes.**  
◇ From: bz
- ◆ **Re: High strength fibers for high pressure tubes.**  
◇ From: Mitchell Jones
- ◆ **Re: High strength fibers for high pressure tubes.**  
◇ From: bz
- ◆ **Re: High strength fibers for high pressure tubes.**  
◇ From: Mitchell Jones
- ◆ **Re: High strength fibers for high pressure tubes.**  
◇ From: bz
- ◆ **Re: High strength fibers for high pressure tubes.**  
◇ From: Mitchell Jones
- ◆ **Re: High strength fibers for high pressure tubes.**  
◇ From: bz
- ◆ **Re: High strength fibers for high pressure tubes.**  
◇ From: Mitchell Jones
- ◆ **Re: High strength fibers for high pressure tubes.**  
◇ From: bz
- ◆ **Re: High strength fibers for high pressure tubes.**  
◇ From: Mitchell Jones

- Prev by Date: **Re: Black Holes**
- Next by Date: **Re: electron as point particle.**
- Previous by thread: **Re: High strength fibers for high pressure tubes.**
- Next by thread: **Re: High strength fibers for high pressure tubes.**
- Index(es):
  - ◆ **Date**
  - ◆ **Thread**