

On the subject of Basalt Technology

How to Recover a Robbed Nation?

there is only one way:

With the LaRouche Principle!

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The LaRouche Principle? Is there such a thing?

Yes there is, maybe not by name. The principle was first put on the table in the 1980s at the height of the Cold War when it became impossible to defend mankind against Intercontinental Missiles carrying nuclear warheads.

Well, LaRouche didn't see it that way. He proposed that if one creates a strategic defense that is based on "new physical principles" of types that are "orders of magnitude" more efficient than the offensive systems, then the Cold War threat could be eliminated. He proposed that the whole world get together to discover the new physical principles and develop the technology that would protect mankind from nuclear war.

One might call this the *LaRouche Principle* for overcoming seemingly impossible barriers. Unfortunately, by the insanity of little minds and the power of the imperial rulers who profited from war-tensions, nothing was done. LaRouche was railroaded into jail for half a decade. To the present day the world remains vulnerable to ICBMs.

However, the principle remains valid. For example, while the little minded are crying about an energy crisis, LaRouche has consistently proposed nuclear power development that is orders of magnitude more efficient than coal fired power, and has called for nuclear fusion power development that promised at the time to be ten-fold as efficient again.

Finally, after decades of refusing to even hear about nuclear power society is beginning to wake up to the LaRouche Principle (except for a few who are drunk with ethanol corn liquor). Ultimately, society really doesn't have any other choice.

Now we are in new situation with the US automobile industry largely dismantled and its production machinery scrapped or sold at auction for pennies on the dollar. How does a nation recover from that? The USA may have to face that situation if the destruction cannot be halted before everything is gone.

The obvious answer that applies here is: *The LaRouche Principle*. There is no point in crying over the loss. That's water down the creek. Nor is there any point in recreating what was lost. The answer is to build a new automobile industry on the platform of new physical principles, new materials, and new manufacturing processes for which the old machine tools probably wouldn't have been suitable anyway.

It's like a family living in an old house, and the house burned down. Would they recreate it as old and inefficient as it was before? Of course not. Why then would we do this with the automobile industry. We need a more efficient industry. Right now it takes nearly a year's wages for the average family to buy the family car. That's inefficient. It's intolerable. It shouldn't cost more than a month's wages, of a person's average income, to buy a car. Can this ten-fold efficiency be achieved? The answer appears to be in the affirmative. The automobile needs to be reborn, and it can be reborn.

The piston engine is an ancient relic. Let's give the car a new heart. Let's make the car electric with hydrogen powered fuel cells. The technology already exists. Let's use it. Let's build the new industry around it.

Also, let's give the new car a new skin and new bones. Right now the biggest cost item is steel. But why use steel? Steel is hard to make, hard to work with, and it rusts. There is no need to build rust buckets out of steel when 90% of the use of steel can be replaced with high technology basalt products. And basalt is better. It is lighter, stronger, doesn't rust, is harder, and quieter. Of course a whole new technology process needs to be built around this new material, involving nuclear power. But once this is built, making cars becomes much simpler.

Yes, you did read this correctly. Basalt is the new material of choice.

But isn't basalt a stone? Indeed it is, but what a stone! Basalt is a hard, extremely fine grained, black volcanic rock that is dense while it contains less than about 52% in weight in silica (SiO_2), which gives it a low viscosity (resistance to flow) when it is melted.

Basalt erupts in volcanoes at temperatures between 1100 to 1250° C, but for processing into manufactured fibers or technology castings the basalt is heated to 1400° C to achieve high fluidity. From that point Basalt technologies open the horizon to products that are barely imaginable, especially considering all the other, nearly ideal qualities of basalt.

- Basalt is one of the hardest materials known. (8 on the Mohs hardness scale - diamond=10)
- It is scratch and abrasion resistant, and oil and grease resistant.

- It has 3 times the heat insulating value of asbestos.
- It has a higher specific strength than steel and is 89% lighter. (one ton of basalt reinforcement rods for concrete provides the reinforcement equivalent of 9.6 tons of steel rebar.)
- It is non-corrosive and operates in high temperature environments without significant loss of strength.
- When extruded into fibers it becomes a high quality feed stock for a wide variety of manufacturing applications with high strength (almost equal to carbon fibers - the strongest fibers in the world) and durability that supersedes glass fibers.
- The fibers typically have a filament diameter of between 9 and 13 μm which is far enough above the respiratory limit of 5 μm (to make basalt fiber a suitable replacement for [asbestos](#)).
- Basalt fibers can even be woven into textiles, or wool for insulation.

And better still, the quarried material is ready for manufacturing. It doesn't have to be pre-processed.

Oh, but do we have enough of it? Indeed we do.

The USA has 175,000 cubic km of it (enough to cover the entire continental USA with basalt 36 feet deep). The resource is located in surface deposits in The Columbia River Flood Basalt Province. Only India has a 'larger' resource of this type, located at the Deccan Traps, with a basalt volume of 512,000 cubic km.

See: http://volcano.und.nodak.edu/vwdocs/volc_images/north_america/crb.html

http://volcano.und.nodak.edu/vwdocs/volc_images/europe_west_asia/india/deccan.html

The LaRouche Principle would also need to be applied to the melting of the basalt material. While propane can reach flame temperatures of 1400° C it would be an inefficient method for large scale high temperature heating. High power microwave processing might be more efficient, driven by nuclear power. Process temperatures of 2000° C have already been attained in [microwave kilns](#) for sintering high temperature ceramics. For more conventional methods, the hydrogen/oxygen torch can deliver 2600° C of process heat, almost twice of what would be required. High temperature centrifugal heat pumps might also be constructed to pump up the output heat of High Temperature Gas Cooled nuclear reactors (700-900° C) to the 1400° C process temperature with little or no energy conversion losses.

The beauty is that the high temperature process open up a whole new dimension for manufacturing, like for example fibre glass reinforced basalt panels with far superior strength and stiffness, less weight, and produced for less cost. Glass has a higher melting point (1600° C) enabling basalt/glass composites that might easily obsolete aluminium for aircraft construction, certainly the old iron automobile panels. A common misconception is that glass is a very weak and brittle material. While its impact strength as a solid panel is not as high as steel, its tensile strength in fibers may exceed 5 times that of the best steel.

Would these amazing characteristics qualify to meet the LaRouche Principle for a qualitative improvement of product in orders of magnitude by cost, endurance, ease of manufacturing, and availability of materials. I think it would and it might even bring the price down by an order of magnitude from a year's wage of a worker to a single month wage.

The point is that the present manufacturing technology has been lagging behind, and has been kept that way for numerous profit reasons. But in times of a National Recovery Crash Program all the imperial factors of profit and greed, and private monetarism that strangles development, are cast aside, and this time permanently. This requirement is also an element of the LaRouche Principle. By the nation taking its current back out of the hands of the private banking empires, and extending itself financial credits into specific development areas where a high gain in productive capacity is required, the nation would realize a near hundred-fold improvement in its economic power that under the present regime of privatization for profit cannot even be considered in dreams as a possibility. Nuclear power processing won't ever be happening in an imperial looting environment.

In other words: Under the present regime the world is hopelessly lost and recovery will never happen or even be possible. But under the LaRouche Principle, the now impossible becomes the most naturally achievable and a lot of fun as well.

Of course there is no rational reason for applying the LaRouche Principle only to the automobile industry. The same automated high technology manufacturing with new materials, like basalt, can also be applied to the manufacturing of modular housing units. Would anyone be interested in buying a new house for \$3,000.00 with the services installed? That's not a dream from fairy tale worlds. That's achievable with automated production of modular units that meet a variety of needs. Even the manufacturing of furniture's could be revolutionized in this manner. In fact, I wouldn't be surprised if the basalt micro fibers find their way into textiles for clothing and into traction products to replace rubber tires.

Nor would one have to stop there. The same LaRouche Principle can be applied to automated production of transportation systems, such as light-weight magnetic levitated trains traveling on long, pre-cast elevated guide-ways.

And what about food? Could we improve agricultural efficiency by two orders of magnitude? I don't think we have even begun to explore the potential that opens up when we put agriculture into controlled indoor environments with optimized temperature, lighting, moisture, soil conditioning, CO2 concentration, etc., in buildings 30 stories high.

The difference between what we do not have today, and what we have the potential to create, is a philosophical difference. LaRouche suggests that we are human beings with a wide open horizon to discover universal physical principles, and with the ability to apply the

discoveries in the most efficient manner. Mr. LaRouche says, the human being is not a slave to anyone, because human labor by itself gets us nowhere. He suggests that we apply our technological potential to multiply the effectiveness of our labor a thousand-fold, or a million-fold. This means that until this principle is understood the greatest building material in the world, which basalt is for many applications in automated processes, remains in the ground, just as the thorium remains presently in the ground that could give us the cleanest nuclear power with near endless resources, with we go on struggling all day long in ever-less efficient drudgery. This is doomed to continue until society wakes up to the LaRouche Principle. Maybe the present trend of losing the auto industry might give us a good incentive to do some waking up before we have to bring the bicycles back out of the woodshed.

Actually the LaRouche Principle wasn't invented by LaRouche

It merely reflects the nature of the American System of economics. It was applied to some degree by President Eisenhower long before Lyndon LaRouche's own days. Can anyone still remember [Eisenhower's "Atoms for Peace" proposal](#) (1953) to use atomic power to advance civilization?

Quite early in the development of nuclear power the concept of the [breeder reactor emerged](#). There may be still a few people alive today who remember the headlines of the science promise of those days:

Question: What does one get from burning 4 tons of nuclear power fuel?

Answer: One gets a lot of electric power and 5 tons of more reactor fuel.

This kind of breeding efficiency (120%) was actually achieved in the Russian BN350 liquid-metal-cooled reactor, and in the world's first large commercial-scale (1000 mw) reactor of this type, the [Super Phoenix in France](#) (put in service in 1984) Theoretical models of gas-cooled breeders show that breeding ratios of up to 180% are possible as an upper limit.

Optimum breeding allows about 75% of the energy of the natural uranium to be used, as compared to 1% in the standard [light water reactor](#). And that is most likely why the breeder reactor program has been shut down by imperial demands, in order to artificially prevent the development of a new renaissance in our time that would threaten the existence of every empire on the planet. The LaRouche Principle, when applied, invariably leads to a new renaissance. The Super Phoenix was shut down, and America's leading edge Fast Flux Test Facility, an essential tool in advancing breeder technology, was recently shut down as well, and physically destroyed in such a manner that it can never be reused, leaving a \$2 billion cleanup bill in the wake.

Right now the world's nuclear power industry uses only 0.5% of the natural uranium that is mined. The rest is considered waste, called 'depleted uranium', a kind of radioactive trash that's left over from the production of enriched fuel and the reprocessing of spent fuel. The waste has created storage problems. This 'poverty' is an example of what typically results when the LaRouche Principle is prevented. And it gets worse still. This 'trash' called "depleted uranium," or "[DU](#)," which is actually a valuable nuclear power resource according to the original nuclear fuel-cycle design, is now loaded into bombs and munitions. Starting in a big way in 1991 with the first Iraq war 300,000 kg of this radioactive material was used in armor piercing munitions. The extreme weight and density of uranium enables it to flow through the steel of armor like a hot knife through butter.

And it gets 'better' still. Uranium explodes in the high temperature of the impact and burns everybody in sight while it becomes vaporized by its own explosion and blows away with the wind, causing horrific biological destruction in people leading to cancers and birth defects and a long list of diseases. [The DU weapons use](#) is fast becoming the ultimate crime against humanity. We know from the asbestos days that airborne items smaller than 5 microns are dangerous as they get past the body's natural defences. Half of the DU particles by mass are over ten times smaller, smaller even than the wavelength of light. They have become a [worldwide, invisible, radioactive pollution](#), a silent killer on every continent.

There is no real status quo possible in real world. When the LaRouche Principle, which is really the renaissance principle, is rejected, the scene is automatically open to imperial domination and war. The level of DU pollution that was unleashed with the First Iraq War was increased almost ten-fold with second wave of war (Iraq and Afghanistan). This ten-fold increase for which the results are just beginning to show, is staged to be [increased 50-fold](#) again with the next wave of war that is already prepared. In other words, without the LaRouche Principle, society is prepared to committing suicide. Even without the DU danger, the planned bombing of Iran as an imperial act of religious warfare, has the potential to destroy civilization and reduce the world population to less than a billion people. Iran is just the stepping stone. The long term targets are Russia, India, and China, and those nations will have to respond to protect themselves. They know that they are on the list. And that takes us deep into the territory of nuclear war. That way lies insanity! It should be noted that imperial rule has never involved rational action, but actions of insanity. An element of similar insanity is found in the US population that allows insane leaders to remain in power, who have their hands on the nuclear trigger and the power to activate it. That way lies insanity indeed. Our current situation is that precarious.

The unfolding insanity is best seen coming to the surface in the current disintegration of the world financial system. The focus has been on looting the world to feed the imperial pirates that are never satisfied. But the looting has destroyed the economies from which the loot has been extracted. That's the process by which the Roman Empire collapsed. It still has the same effect. It is a denial of the LaRouche Principle. The same happens with free trade. Free trade is trade that is 'free' of the result of the principle of fairness that develops all partners. Free trade is enforced to exploit the weak, but it also kills the strong that the imperials want to destroy. Free trade has killed the automobile industry in the USA and in the West in general. We get cheap slave-labor products from the poor nations and throw away our industries, our skilled labor, and our prosperity, and then we pay the poor countries with a currency that is intrinsically worthless, since the value of any nation's currency reflects the value of its productive economy. Free

trade is a Ponzi scheme that destroys the productive power of the global economy. We may soon have to resort back to riding bicycles.

The LaRouche Principle goes the opposite way.

The LaRouche Principle was first applied in America before the USA was even formed. It was used in the Colony of Massachusetts. The people needed iron products to improve their living. Instead of importing, they extended financial credits to themselves to build a first-class iron works. They said, let's do this as a gift to ourselves. And they did it. They issued a scrip and build the best ironworks in the world. The scrip then became money that was used for building more and more things. Eventually the British King stopped the process. But when the USA was founded, this credit system was reinstated, primarily by Alexander Hamilton. It made the USA the most prosperous nation on the planet and the envy of all the others whenever it was applied. That's the power of *The LaRouche Principle*. It once literally 'infected' the world. Economic development, for a time, became the new watchword.

Naturally, the imperials did everything possible to shut *The LaRouche Principle* back down again, especially in America. The masters of empire know what they are dealing with. They know that the American System credit-society principle is designed to bootstrap and advance an economy out of the people's human resources. The imperials understood the power of *The LaRouche Principle* better than the American society did (and still doesn't). The imperials feared it. They saw the end of imperial rule on the horizon. So they fought like the Venetian Empire had fought in the time of the Renaissance - they had fought with sophistry and had scored their first victory after having put the America society asleep. That first faint victory was the Specie Resumption Act passed in Congress in the 1870s. It undermined the 'LaRouche Principle.' After decades of more sophistry the big victory was achieved at Christmas time in 1913 when the Federal Reserve Act passed in Congress that by law put the nation's currency and credit creation into the hands on the imperial, private banking empire.

With the world-shaping victory over '*The LaRouche Principle*' the imperials set out to destroy the world. Within a year after the Federal Reserve Act, World War I was arranged, and before Europe could recover from that war, the private financial empire financed Hitler into power who destroyed the world again. And after Hitler was defeated, the role of the imperial lackey to destroy the very notion of a new renaissance was assigned to the USA, which became a fascist nation for this policy, beginning with President Truman.

Franklin Delanor Roosevelt had temporarily rescued the USA from the 1913 mistake, but he didn't shut down the Federal Reserve Act and the private banking empire. He recovered the USA and turned it into the greatest industrial power on the planet by partially reinstating the American System of economy (the system that reflects *The LaRouche Principle*). As soon, however, as Roosevelt had died in 1945 the entire recovery was overturned and the imperial system was fully reinstated. Even the Glass Stegall Act was repealed that had been created as a firewall against the looting forces of empire.

To this day Lyndon LaRouche is the only major political 'power' in the world that is committed to an all-out fight to reinstate the credit-society principle, and to do this completely this time, with overturning of the Federal Reserve Act, creating a National Credit Recovery Act, ending private imperial monetarism, free-trade slavery, and the looting of the world, and ending the wars that the imperial rulers have unleashed.

That is why in modern times the historic American Systems principle deserves to be called *The LaRouche Principle*, and also in part for the reason the Mr. LaRouche extended this principle into a full commitment to develop the entire world as is exemplified in his Eurasian Land-Bridge Development Proposal and a range of other great projects, without which mankind might not survive, but collapse into a new dark age or something far worse than that.

The LaRouche Principle therefore is presently the most critical item of the table for humanity's future. *The LaRouche Principle* is unique as an extension of the historic renaissance principles, and it will be remember as such in the same manner as the music of Johann Sebastian Bach will be forever remembered for its unique concentration of profound musical principles that reflects the renaissance 'atmosphere' that was created with the Treaty-of-Westphalia principles in the 17th Century. Bach's pioneering work set the stage for Haydn, Mozart, Beethoven and later Brahms, which opened up the potential for creating a profound quality of music that became known as "classical music."

In the same manner will *The LaRouche Principle* be extended one day by other pioneers. Unfortunately, just like Bach's musical principles were rejected initially during his time, but prevailed in the end to change the world of music, so is *The LaRouche Principle* currently still rejected. However, this might not be the case much longer. [The breakout is happening](#). With its unmistakable potential to change the world becoming evermore apparent, and becoming evermore widely recognized as a critical necessity, a momentous transformation of the would is poised to happen. But will it happen? Nobody knows the answer, not even LaRouche. All that LaRouche can do, and has consistently done, is present the critical choices.

Also see: [About LaRouche](#)

Some useful web links about basalt technologies

Cast Basalt floor tiles are a material with decorative appeal and exceptional physical performance characteristics. It is one of the hardest ceramic materials known. They are selected for two key reasons: unique aesthetics and high performance.

Basalt tile is excellent in Pharmaceutical Labs, Auto Showrooms, and Shop areas. Basalt is oil and grease resistant and will not create dust. Basalt has zero absorption, will not stain or scratch and requires little or no maintenance. Basalt has NO CHEMICALS and is ENVIRONMENTAL SAFE.

<http://www.decorativebasalt.com/>

<http://bspmat.com.previewyoursite.com/documents/Techtexitil+2002+Basalt+paper1.pdf>

<http://bspmat.com>

SUPERIOR ALTERNATIVE TO CONVENTIONAL STEEL REBAR

Rods made of a unidirectional composite of basalt fibers offer significant advantages over steel rebar in a variety of applications.

- Higher specific strength than steel rebar
- 89% lighter in weight: one ton of basalt reinforcement rods provides the reinforcement of 9.6 tons of steel rebar.

<http://www.sudaglass.com/rods.html>

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Our basalt fibers show 15-20% higher tensile strength and modulus, better chemical resistance, extended operating temperature range, better environmental friendliness than regular E glass - all in one material - getting close to and sometime outperforming high strength glass and other specialty fibers but beating them price wise. Our basalt continuous fibers are ideally suited for demanding applications requiring high temperatures, chemical resistance, durability, mechanical strength and low water absorption.

<ul style="list-style-type: none">• Structural:<ul style="list-style-type: none">○ Linoleum base○ Roofing○ Separating elements○ Construction material	<ul style="list-style-type: none">• Composite:<ul style="list-style-type: none">○ Accumulators○ Hydrophobic mould layer	<ul style="list-style-type: none">• Transport and motor-car construction:<ul style="list-style-type: none">○ Spare parts○ Containers○ Tanks○ Choke tubes○ Car body and interior	<ul style="list-style-type: none">• Marine:<ul style="list-style-type: none">○ Boats○ Yachts
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Manufacture

The manufacture basalt fiber requires the melting of the quarried basalt rock to about 1,400°C. The molten rock is then extruded through small nozzles to produce continuous filaments of basalt fiber. There are three main manufacturing techniques, which are centrifugal-blowing, centrifugal-multiroll and die-blowing. The fibers typically have a filament diameter of between 9 and 13 μm which is far enough above the respiratory limit of 5 μm to make basalt fiber a suitable replacement for [asbestos](#).

History

The first attempts to produce basalt fiber date to [1923](#) in the [United States of America](#). These were further developed after [World War II](#) by researchers in the USA, Europe and the [Soviet Union](#) especially for [military](#) and aerospace applications. Since declassification in [1995](#) basalt fibers have been used in a wider range of civilian applications.

See: http://en.wikipedia.org/wiki/Basalt_fiber

[About LaRouche](#) - the American economist and statesman that has become a legend in our time in the fight to advance civilization,

protect mankind, and create a new renaissance:

"We are at a point in world history. At the present time, the international monetary financial system of the world is in the process of disintegration. That does not mean the end of the world. It means that we either make certain changes, or this planet will go in fact into a prolonged new dark age, comparable to what happened to Europe during the middle to late part of the 14th century."

(LaRouche, June 15, 2006)
