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A paper (revised and refined)

IDEAS AND SIMPLEST TORUS DEVICES FOR PLUGGING AND RECOVERY OF DAMAGED OIL PIPE PERFORMANCE BY EXAMPLE OF THE DEEPWATER INCIDENT IN THE GULF OF MEXICO

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"This paper was written "at one go" and, therefore, may contain minor non-critical errors, easily correctable and described with respective comments in future deliverables of the author".

The world's longest well has been drilled offshore Sakhalin Island

http://lenta.ru/news/2011/01/28/sakhalin/

Exxon Neftegas Limited, operator of the Russian "Sakhlin-1" Project has drilled a well 12.345 kilometers long. The new well is the longest in the world.
Earlier, the world's longest was the 12. 289 km well in Qatar drilled by Transocean for Maersk Oil in 2008.
Besides, as early as in the Soviet era, geologists drilled the Kolsk well to a depth of 12.261 km.
For comparison, the well explored by the ***Deepwater Horizon platform*** *that sank mid-2010 in the Gulf of Mexico was 10.68 km long of which 1.2 km was water.*

…The major part of Exxon Neftegas Ltd. belongs to ExxonMobil (USA) and Sodeco (Japan), each holding 30%. The remaining stock is owned by Rosneft (Russia) and ONGC (India), each holding 20%.

Mankind will "all perish but the doomed will continue dancing and feasting into the agony" (Michel Nostradamus)

With much brawn he does not need brain (A Russian proverb)

Nature ruthlessly and immediately takes revenge on those who set its laws at defiance (Author)

Introduction

To avoid loss of the engineering and practical information developed "in the fire alarm mode" in April-July, 2010, I made up my mind to describe all I did and include it as a paper into the proceedings of the 7-th International Scientific-Practical Conference "Tore Technologies" held October 27, 2010, at the Irkutsk State University.

To get better acquainted with the contents of the paper, please refer to the video and animation information [1] at http://youtube.com/user/elastoneering, Part 8.

I am a vigorous opponent of using hydrocarbon and nuclear fuel for reasons well-known to many people.

However, in view of the global tragedy that broke out in the Gulf of Mexico I felt bound to come up with my technologies that might be helpful in plugging the damaged pipe and/or recovery of the well performance as well as in solving problems of the coastline cleaning and water purification in the Gulf.

Should the suggested torus technologies and elastic mechanics [2-6] be not used in this particular situation, they could be used later in handling similar accidents/disasters.

It should be remembered that:

1) Any planet is formed by the central part of the VTortex galaxy acting as a helical rolling mill (producing balls).
2) Any planet has an icosahedron-dodecahedron structure.
3) There is super-high vacuum in the center of a planet that keeps the planet from breaking apart.
4) There are natural valves/plugs in the icosahedron vertices consisting of gaseous methane, oil and water layers.
5) **Drilling into the Sakhalin and Arctic shelves is most dangerous since in those areas the Earth's crust is thinner.**
6) Should the plug tightness be damaged the whole atmosphere of the planet or part of it will be sucked into its center, the planet will break apart like it once happened to planet Phaeton which now exists as Kuiper Belt.

Therefore, the main goal of Mankind for today is to make the best efforts **to delay the moment of the Earth's destruction along with intensive preparations for emigration to another planet like our ancestors once did.**

This process will take years but it should start right away. That is what my like-minded colleagues and I are now trying to do.

For practical implementation of these processes the author is establishing (trying to establish) **"The Forced Global Space Emigration Fund**"

(Chicago, Post Office Box 597351, IL 60659-7351, USA), [7, The Fund's Goals and Objectives].

Of course, my whole life will not be enough to solve this task but at least my colleagues and I will be able to lay some basis for processes to be developed in the Future.

It is worth knowing **that any Mankind was controlled, is being controlled and will be controlled by State and other topside "above-human" bureaucratic structures. Functions performed by them do not exist in Nature. Therefore, Mankind always followed (and will always follow) a wrong "bureaucratic" route and then "regaining itself" turned to the right route when "bureaucrats felt mortal danger for themselves".**

I think we are now living through the same transitional period of restructuring when it is possible to realize **the fourth attempt** of Mankind to move to a new level of Natural Science and save its "seed".

In the history of Mankind there were three attempts to reach this goal though unsuccessful because fundamental bases of these processes were not implemented:

- **1-st attempt** - early 20th century, Nikola Tesla (1856-1943),
- **2-nd attempt** - mid-20th century, Viktor Schauberger (1885-1958),
- **3-rd attempt** - late 20th century, Viktor Grebennikov (1928-2001).

Along with preparations for the 4-th attempt, efforts should be made to solve "secondary and auxiliary" problems created artificially by "topside" bureaucratic structures, namely, to:

- Reduce to the minimum the fatal impact of oil, accompanying gas and "dead" water on the vegetation and animal life of the Earth's hydro- and atmosphere.
- Use innovative technologies, such as torus technologies and elastic mechanics to solve problems;
- Gain experience and make use of torus machines and mechanisms for other oil and gas producers whose platforms have both offshore and ground-based locations;
- Prove fatal risks of uncontrollable exploration of coal deposits, particularly those located on the Earth's surface as well as exploration and use of the so called shale gases;
- Give up pumping "near-ground" water (potable water) into exhausted coal mines or oil deposits or flooding them;
- Suggest new power technologies based on ecologically friendly VTortex energy quantitatively unlimited and non-destructive for the Earth's environment;
- Refuse from building power plants that use hydrogen as a component of the Earths' atmosphere. Such power generating processes include cold fusion, etc.

In my opinion, the main reason for the oil spill in the Gulf of Mexico is "economizing on costs" by BP, Halliburton and Transocean, for instance, on costs of oil-production safety in order to get bigger profits.
Other world corporations exploring various mineral deposits behave in a similar way.

«… In this situation only a frightful catastrophe may perhaps bring about order. In the achievement of such generalized order at least 90% of humanity will fall victim…" (Viktor Schauberger).

Communication with Deepwater Horizon Response

My e-mail was sent to Deepwater Horizon Response using a special form given in http://www.horizonedocs.com/artform.php from http://www.deepwaterhorizonresponse.com/go/doc/2931/541843, about 9:0AM, June 6, 2010.

The response came 11:52PM, June 6, 2010

From:	Horizon Support <Horizonsupport@oegllc.com>	Sent: Tue 06/07/10 23:52
	<info@elastoneering.com>	Priority: Normal
Subject:	Horizon Call Center - your recent submission	Type: Text

Dear Valeriy Shikhirin,
Thank you so much for taking the time to think about and submit your proposed solution regarding the Horizon incident. Your submission has been reviewed for its technical merits. Unfortunately, the team has determined that your idea cannot be applied under the very challenging and specific operating conditions we face. All of us on the Horizon Support Team appreciate your thoughts and efforts.

Sincerely yours,
Horizon Support Team

In other words, the examination lasted for only 15 hours (?!).

To grasp the idea of my suggestion takes time; moreover, experts in my technologies are needed who are so far unavailable in the world. On the other hand, the engineering level of oil extraction using offshore rigs is quite primitive – "just suck out and sell".

Today this is the highest "intellectual level" of Mankind.

I declare that 15 hours are absolutely insufficient to examine my and other technologies (there were about a thousand suggestions), and the feedback of the so-called *Horizon Support Team,* - "Unfortunately, the team has determined that your idea cannot be applied under the very challenging and specific operating conditions we face", - is a non-committal reply made by a robot. It is quite the fashion now.

This is a standard formal reply for all who wanted to help plug the well. The plugging job was distributed among the "the near circle".

The oil leakage was stopped only 3 months after the oil rig's explosion of April 20, 2010. But has the well been really capped? If the process of oil leakage from the damaged well under high pressure continues for a long time (several months) there is absolutely no sense in **conservation** of the well, its capping and drilling two new wells at a certain angle to the damaged one to reduce the pressure of the oil flow since the oil pressure value in the deposit will naturally decrease for that period to get equal to the water pressure.

Since the oil density is lower than the water density oil will be slowly rising to the Mexican Gulf surface or/and moving along with marine streams until it has flown out of the oil lens completely.

It will be replaced by water.

Deepwater Horizon will be simply skimmimg oil mixed with the gulf water using tankers specially tailored for this purpose, like a “Whale”, and separate oil from water there by conventional techniques. See, for instance, http://www.msnbc.msn.com/id/38047155/ns/disaster_in_the_gulf/.
These efforts will not improve the environment.
Instead, pits/bubbles are likely to originate under water and oil to provoke huge funnels in the Gulf.

Simplest Torus Devices for Capping/Plugging and Recovery of the Damaged Pipe Performance

Described below is an important technological information for global oil and gas producers such as ExxonMobil, BP, Royal Dutch/Shell, TotalFinaElf, ChevronTexaco, Eni, etc.
The suggested torus devices are intended for sealing damaged wells, recovery of a damaged oil pipe or well performance at different sub-water depths, on the water surface, on the ground, etc., and for neutralization of consequences of ecological disasters by an example of the Deepwater Horizon Incident.
An essential pre-condition for keeping a torus operative at any depth (or height) is fluid medium pressure equalization outside and inside the torus shell. The shell material is the media interface
This principle ensures operation of such natural mechanisms as, for instance, fish which are not smashed by a huge pressure of the water mass, or birds which do not get inflated like balloons in rarefied upper atmospheric layers.

Please go to http://youtube.com/user/elastoneering, Part 8, to see the simplest operation mechanisms of torus plugs for capping a damaged pipe and recovery of its performance by extending the pipe with a torus sleeve coupler.

Some structural components of these devices were not invented by the author, for instance:

1. A conical torus as a device for discontinuous movement of an object (Fig. 1, left) patented by R. Kozhevnikov more than 20 years ago (USSR patent # 604813)

In this case the conical torus does not interact with the peripheral pipe body and the central pipe body, or the core, i.e. does not act as a propulsor when a pressurized fluid medium is supplied into it, namely:

- does not move automatically by enveloping the central pipe body
- does not move automatically by everting (turning inside out) in the pipe, etc.

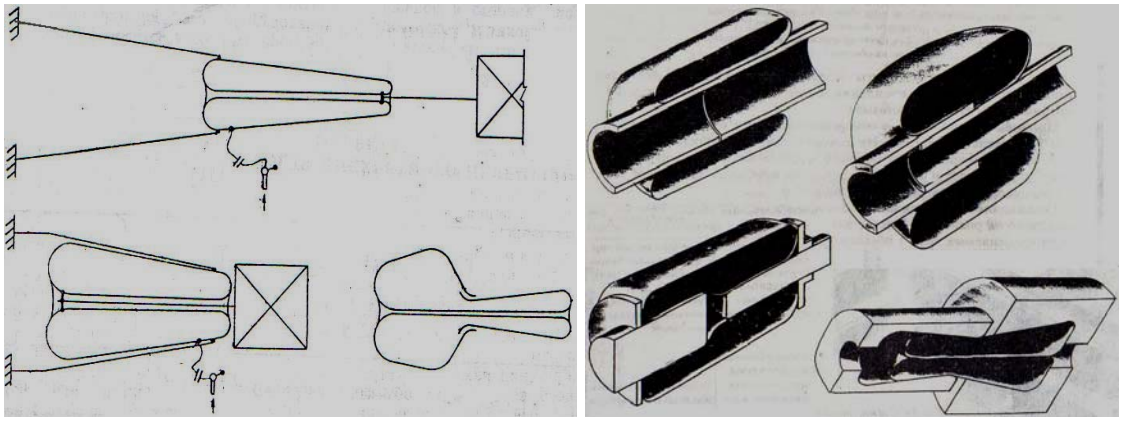

Fig. 1, *left*: A conical torus as a device for discontinuous movement of an object. *Right*: A cylindrical torus as an internal and external elastic sleeve coupler to connect various diameter pipes (*top*) and shafts (*bottom*)

2. A cylindrical torus as an internal and external elastic sleeve coupler to connect different diameter pipes and shafts (Fig. 1, right) patented by V. Shishkin over 20 years ago (USSR patent # 1548548).
In this case we have a static cylindrical torus which remains in its place when a pressurized fluid medium is supplied, namely:

- it does not move automatically by enveloping pipes of equal or different diameters for the pipe connection;
- it does not move automatically by everting into pipes of an equal or different diameter, etc.

3. Moreover, the above torus devices have no function of matching envelopment and everting movements, which is possible only by combining two conical tori in a specific manner.

The author named these structures *multi-component toroids* and made confidential pictures of them in 2002, Chicago, that were later placed in http://youtube.com/user/elastoneering, Part 2, because the main secrets (future patents) of the torus device performance concern the development of:

- Smart composite materials for making the torus shell, namely, its structure functionally approaching natural structures, e.g. the material of the human or animal esophagus [3,4].
- Target sources of excess pressure fluid medium and vacuum for torus devices.
- Various-type valve systems as well as electronic, information and power elements embedded into the shell material without affecting its performance (eversibility).

- Special manifolds as well as power, pressure and vacuum supply and distribution systems, etc.

It should be noted that Russian scientists and inventors, such as:

- Anatoliy Korobov [2], personal acquaintance since 1982;
- Viktor Shishkin [2], personal acquaintance since 1993;
- Larisa Borodina [8], personal acquaintance since 1993;
- Ruvim Kozhevnikov (1924-2007), personal acquaintance since 1996, pioneered development of multiple torus devices of different functionality and were my teachers and fellow thinkers

Torus Devices and Equipment Used for Damaged Well Sealing and Recovery of the Well Performance (Fig. 2)

1. Torus plug/cap, an internal conical torus;

2. Torus pipe sleeve coupler to resume oil extraction, an internal conical torus (not shown in Fig. 3);

3. Torus plug/cap, an external conical torus.

All the three components have a conical torys-shaped elastic/soft shell filled with a pressurized fluid medium fed to the shell at a high feed rate (pulse mode). The following substances may be used for the pressurized fluid medium:

- Water for temporary blocking of a damaged well/pipe;
- Liquid cement, concrete, various polymers, etc., for permanent hard blocking of a well/pipe.

Prior to rolling the torus into or onto a damaged well/pipe, a rod is inserted through its central part to secure the torus rolling into a damaged pipe against being affected by an oil stream flowing out of it under high pressure.

4. Torus sleeve coupler connecting two pipes for resuming oil extraction (an external 2-component torus) made of 2 conical torus-shaped elastic/soft shells connected in a specific manner. The shells are alternately filled with a pressurized fluid medium fed into them at a high feed rate (pulse mode) and consisting of:

- Water for temporary connection of two pipes;
- Liquid cement/concrete for permanent hard connection of two pipes

Prior to rolling a toroid onto a damaged pipe, the second pipe is inserted through its central part, which opens to an oil skimming tanker.

5. System for preparation, delivery and distribution of the pressurized fluid medium and vacuum for:

- Repeated use of torus devices;
- Remedying unsuccessful attempts of the torus rolling onto the pipe or its everting inside the pipe;
- Programmed control over the fluid medium fed into or sucked out from the torus for stepwise "putting on" plugs/caps or couplers by means of sucking out the fluid medium from the torus at a high speed to set the torus device into the initial position.

6. T**orus protective cover** made of net fabric. It is a synthetic string hose (capron, nylon, etc. yarn) fixed onto the exterior surface of the torus (reproducing its surface) or is a torus made of net fabric.

7. Materials of Conical/Cylindrical Elastic/Soft Toroid shells and Protective cover:

- Fabrics – urethane coating and lamination of woven nylon in various custom and width requirements – metric area (footage), www.lamcotec.com, etc,

- Neoprene rubber (sized)-fabric - metric area (footage) etc,
- Glues Desmocoll 140, 176, 306 etc.
- Network material etc.

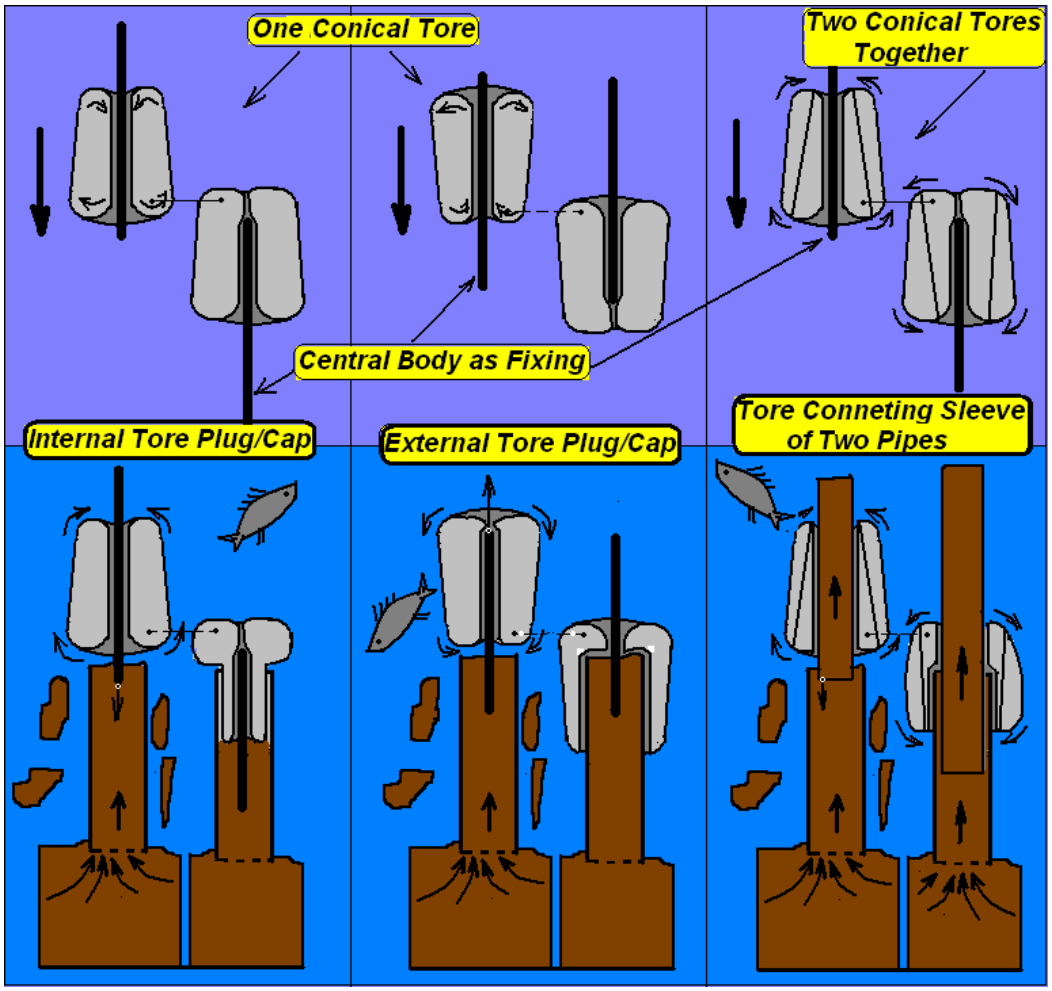

Fig. 2. Simplest torus device functioning patterns tested on acting models. http://youtube.com/user/elastoneering, Part 8

Using Torus Technologies and Elastic Mechanics for Solving Problems on Water, under Water, etc.

1. Torus booms
2. Torus devices for oil pumping from oil lenses located at different depths in rivers, ocean, etc.

3. Sleeve-type torus devices for oil removal from surfaces (sand coast, marshes, vegetation covered surfaces, etc.)
4. Torus well sealing devices
5. Torus devices for delivery of rescue means to a rescued person
6. Torus devices for dragging a conductor (an elastic flexible pipe, etc.) under structures erected on the ground
7. Torus devices for rescuing people from water surface, etc.
8. Torus devices to ensure supplemental buoyancy
9. Torus robotic systems
10. Torus systems for people's evacuation from floating objects on water
11. Torus linking locks, etc.

A Small Digression

After I settled down in Moscow in 1989, I used to go every summer in July from 1990 to 2000 (until my emigration to the USA in 2001) to the city of Izhevsk (1250 km away) visiting, of course, my native village Iyulskoye (July village) 30 km from Izhevsk where I spent my childhood and acquired all habits of diligent labor cultivated in me by my Grandmother Anna Bochkareva. My Grandfather Georgiy went missing in action in 1941 during the WWII. My mother Yelizaveta Shikhirina (nee Bochkareva) was born in Iyulskoye in 1926. Described below are her life milestones:

- *In 1941 she graduated the Iyulskoye village school with a gold medal;*
- *1941-1943 - Izhevsk paramedics college;*
- *1943-1948 - Therapeutic faculty of the Izhevsk State Medical University*
- *1963 - PhD thesis on research into professional skin illnesses at the Izhevsk Machine Works;*

- *In 1979 she established a Center of Plastic Surgery and Cosmetology in the city of Izhevsk, see http://ccps.narod.ru/.*

I buried my father (Nikolai Shikhirin, born in 1920 in Saint-Petersburg) and mother on the Iyulskoye cemetery.

Why have I described part of my biography connected with Iyulskoye village near Izhevsk?

Let me explain. A short road runs from Iyulskoye village downstream the Kama river to the city of Sarapul (appr. 40 km) where my first wife Natalia Shikhirina (nee Zakharova) is buried who was killed in a road accident in November, 1995.

This road runs near the Gremikhinskoye oil deposit, see *http://www.udmurtneft.ru/node/589*, owned by Udmurtneft oil-producing company, *http://www.udmurtneft.ru/*, with "glued" flowers against the background of oil-extracting equipment in the corporate picture, see *http://www.udmurtneft.ru/node/512* .

The shareholders of the company include a major Russian oil producer NC "Rosneft" JSC and Chinese Sinopec Corp.

All the way through one can see nothing but a forest of oil "rockers", "oil" mud; the oil odor is choking, the oil concentration in the air is so high that the tiniest spark seems to be enough for the whole vicinity to blow up at a moment.

I remember "acid" rains falling every year since 1960ies and later after which all greenery; for instance, potato tops grew yellow in a day. In situations like that potato fields had to be cleared immediately to save potato crops from getting rotten.

Where do acid rains come from?

Just about that time in the sixties a new Izhevsk airport was constructed. Planes used to land just over Iyulskoye village. I watched landings repeatedly both from the earth and aboard an aircraft. Perhaps, "superfluous" hydrocarbon fluid dropped from an aircraft also caused acid rain.

But why did it happen one time every year one day in late August?

I have a sufficient experience of working with "oils" in Russia in the last century 90ies.
The work was concerned with rheological oil properties control in "revival" of abandoned oil deposits by effecting them with different field generators. The goal was to increase the oil recovery rate of a stratum by its dilution. The work was carried out by a Russian company Graderika Ltd (established and owned by the author) in cooperation with Udmurtneft oil producer, and I used to carry oil samples in 3-liter jars from Izhevsk to Moscow for subsequent analysis.

At those times I did not even guess that oil is an indispensable protection element that saves the Earth planet from destruction (breaking apart)!

Short characteristics of some emulsions (oil + water).
Samples taken March 2, 1993, @ $T_{AMB} = 20^oC$

Properties	***Unit***	***Gremikhinskoye deposit, well # 912***	***Kiengop deposit, well # 498***
Degassed oil			
Density	*g/cm^3*	*0.9257*	*0.8947*

Viscosity	cPs	*173*	*39*
Content:			
Sulphur	*% (wt)*	*3.4*	*3*
Silica-gel resin	*% (wt)*	*20.9*	*19.8*
Asphalthenes	*% (wt)*	*6.7*	*5.5*
Paraffins	*% (wt)*	*2.3*	*3.6*
Water cut	*%*	*17.6*	*36.4*
Stratum water			
Density	g/cm^3	*1.17*	*1.17*
PH		*5.4*	*4*
General mineralization	*g/l*	*206137*	*210500*

The following questions had to be answered after the field application to emulsions (oil and water):

- *How much can the viscosity be decreased?*
- *Does this process depend on the temperature of the liquid?*
- *Can the viscosity be decreased before the emulsion breaking in the 20^oC to 40^oC temperature range and, if yes, under what conditions?, etc.*

Subsequently the work was stopped since customers understood that with some rework the source of the field impact on emulsions and other objects was a VTortex energy source itself, i.e. a self-supported source!

Given below is a conversation between an oil boss (B), a very narrow-minded person, and a researcher (R), overheard by the author not once:

B *(haughtily): "Chief! Make me "a thing" to dilute oil under the earth. Then the efficiency of the well and the pipe will skyrocket".*
R*: (with a modest air but competently): "It's going to be a device capable of controlling rheological properties of any fluid medium including oil. It 'll be simultaneously an energy source!"*
B *(scared and shouting): "Then don't!!!"*

The above and similar work, e.g. on Tyumen deposits (1989), was also carried out by my colleagues N. Karpov and V. Sokolova [11, 12].
The end of the digression

Reference note:
The research and production "Graderika" Limited Partnership was one of the first companies established in Russia in the "hard nineties", namely on January 17, 1992 in Moscow Zelenorad. Later, on August 16, 1995 it was restructured into Graderika LTD, see http://baza-r.ru/firm/48062.html.
The company had licenses of several Russian ministries and Moscow government for conduction of research in the field of non-traditional technologies.
For the information from my old non-working Moscow site www.tortech.moscow.ru you can visit http://www.mathframe.com/technologies/tore/index.html.
I did not give a permission to use my information contained at this site

References:
Valeriy Shikhirin has more than 250 publications (1971 – 2010).
1.Valeriy Shikhirin, http://youtube.com/user/elastoneering, part 1-10 etc.

Working models video and animations. **This is very important for understanding**:

- Part 1: Tore Technologies, Single-component toroids (2008), **video**;
- Part 2: Tore Technologies, Multy-component toroids (2009), **video**;
- Part 3: Torus and VTortex Surface Structurization. VTortex as Free Energy and Information Source. Basic Torus Knots knotted Torus and VTortex (2009), **animation**;
- Part 4: Ideal Natural VTortexes Galaxy and Tornado as Free Energy and Information Source (2009), **animation**;
- Part 5: TorArt. Imaginations (2009), **animation**;
- Part 6: Torus and VTortex Bodies Structurization by Shikhirin Cell[7] or Color Cell[7] (2009), **video**;
- Part 7: Torus Algorithmic Spirals, Angular Toruses, and Global Cooling (2009), **animation**;
- Part 8 Damaged Oil pipe/well sealing and recovery of efficiency under water (July 2010), **video [**24];
- Part 9: Color/Shikhirin Structure of Platonic Solids, **video (pending)**.
- Part 10: Global Natural Toroidal Phyllotaxis Process, **animation (pending);**
- Part 11: Skeleton/Frame/Ether Structure of Regular (Typical) forms of working fluid medium in Nature: Sphere-4D, Torus-5D, Torus-7D, Mobius Band-6D, Klein Bottle-6D and other polyhedrons (Shikhirin Cells[1,2,3,4,5,6,7] or Color Cells[1,2,3,4,5,6,7]), **video (pending).**

2. Hose and Torus Converters. Prospects of Their Use in Broad-Spectrum Machines and Devices. A series of papers edited by V. Shikhirin and A. Korobov, VIMI, Moscow, 1995, pp.1-84. http://www.alt-tech.org/index.php?module=content&func=folder_view&id=46.

3. V. Shikhirin. Elastic Mechanics as the Basis of Future Machines and Mechanisms. Electronika: Science, Technology, Business, No.5, 2001, pp. 10-14, http://www.alt-tech.org/files/fizika/shikhirin1.pdf.

4. Valeriy Shikhirin. Elastic Machines and Mechanisms of the Future. The Summary of Technologies, № 2(6), 2001, p.37-42, http://www.alt-tech.org/files/fizika/shikhirin2.pdf.

5. V. Shikhirin. Tore Technologies as the Basis for Elastic Mechanics. Proceedings of 1-st International Scientific-Practical Conference "Tore Technologies", 30 June – 2 July, 2004, Irkutsk State Technical University, plenary report, pp.22-48., http://www.evgars.com/mechanik.htm, http://www.alt-tech.org/files/fizika/shikhirin/TORTECH_R.pdf.

6. V. Shikhirin, V. Ionova, O. Shalnev, V. Kotlyarenko. Elastic Mechanisms and Designs. A Monograph. Irkutsk State Technical University Publishing Office, 2006, 286 p. http://www.alt-tech.org/files/fizika/shikhirin/ElastBook.pdf.

7. V. Shikhirin. Development of Perfect Energy Sources for Survival of Mankind under Global Climate Change – Space Cooling Phase. Proceedings of 4-th International Scientific-Practical Conference "Tore Technologies", 24 October, 2007, Irkutsk State Technical University, pp. 3-28, http://www.alt-tech.org/files/fizika/shikhirin/EnergingR.pdf , www.evgars.com/energy3.htm .

8. V. Shikhirin. Development of Perfect Architectural and Construction Technologies (by Example of Tore Technologies) for Survival of Mankind under Climate Cooling on Earth. Proceedings of 4-th International Scientific-Practical Conference "Tore Technologies", 24 October, 2007, Irkutsk State Technical University, pp. 28-49,

http://www.evgars.com/buildr.htm, http://www.alt-tech.org/files/fizika/shikhirin/BuildingR.pdf.

9. P. Petrov. A Bag of Inventions … in a Bag. A journal "Tekhnika Molodezhi", #10, 1974, pp. 62-64.

10. V. Zavortnov. Another Bag of Inventions… in a Bag. A journal "Tekhnika Molodezhi", #1, 1978, pp. 62-64.

11. Report on Results of Research Work " A Study of Ψ- Impact on Rheological Properties of Water-Emulsion Systems and Chemical and Biological Activity of Water". Ministry of Oil Industry, Siberian Research Institute of Oil Industry, Tyumen Branch of "Neftekhimavtomatika" Design Office, "Orion" Production Cooperative, 1989, 26 p.

12. V. Sokolova. First Experimental Proof of Torsion Fields Existence and Prospects of their Use in National Economy. Moscow, Triada Plus, 2005, 52 p. (XXI Century Phenomena), http://www.alt-tech.org/index.php?module=content&func=doc_view&id=272