SFS-technology.

Patents : 2033200, № 2045881, № 2047301, № 2057552, Russian Federation,

№ 006751 Eurasian Patent Convention, № 703833, Australia.

1. The terms and concepts.

• **The SFS-technology** means the technology of Special Form Signal (SFS) and is the quantum-resonant technology with the elements of nanotechnology, digital computer technology, laser and plasma technology, coherent chemistry, nonlinear oscillations theory, stochastic resonance, and the effects of ultra minor doses and is focused on the controlled change of properties of objects of different nature and complication.

On a macro level, the result is achieved by the conversion of the required parameters of the effected object (that is components participating in chemical, physical or physiological processes) to the given coherent, selectively excited metastable condition. When the SFS is acting to reduce the entropy of natural and technological processes with simultaneous enhancement of given properties, "the distribution function" of the molecular state is changed as well as the object's characteristics are changed on the whole. The effect of the SFS realizes the selective resonance regime and has a duration that is necessary and sufficient to provide the required cumulative effect with regard to the possible relaxation of the object (or a system).

• The SFS produced under the original technology with the following record on the information carriers is the spectrum of a cold hydrogenous plasma mission modulated with regard to an individual task to be decided. The technology of SFS production is not transferable to anyone.

For a user, the prepared SFS is the author's video file recorded on a CD or any other information carrier.

The constructive role belongs not to representation that occurs during translation of the video file, but to the emission of a computer monitor screen. When the SFS reproduction with the application of the original software, the specified parts of the own emission of a display transform in accordance with the spectrum of resonant absorption of the required parameter of the effected object (for example particular chemical compound).

• **The effected object** means physical, chemical and biological objects such as seeds, plants, soil, fertilizing, preparations, water, different

physicochemical compounds, constructive elements, technological phases of production and etc. the technological and consumers' properties of which the SFS is aimed to improve.

• **The acting complex** means a computer with the original software that provides the technology of representation of the SFS and the object to effect. For the SFS technology a series-produced technique that does not demand additional specification is used.

It is supposed to have a standard quality production control that is archived by the application of the SFS-technology and is an additional factor to increase the efficiency of production.

For realization of the distant effect the computer is equipped with the passive resonator-screen with the grounding contact that is disposed on the display. In this case, the object may be situated at any distance from the acting complex and to be practically of any scale. To reach the required SFS effect a preliminary video filming of the object on a series-produced video camera and according to a special methodic is necessary. Than the video file of the object is prepared. The received video file for the SFS-technology is an analog of a sim-card for a mobile telephone.

## Physical aspects of SSF technology.

**SSF-technology** - technology of contactless remote control of objects state of different nature and complexity through the transfer of atoms (molecules, ions) and subatomic structures (electrons, protons, atomic nuclei) recipients in a coherent selectively excited metastable state (SVM-state) under the influence of "special signal form" (SSF).

**SSF** - specially modified electromagnetic radiation of cold hydrogen plasma, which contains parts of the spectrum, the amplitude-frequency characteristics of which correspond to their own (resonance) characteristics of the radiation-absorption of atomic and subatomic structures of recipients. Generation of SSF is carried out by information-affecting complex (IVK-SSF), which is used for non-contact, remote or direct impact on the object or material, which acquires the properties of the secondary source of SSF (SSF-mediator).

The choice of the source of the SSF, the IVK-SSF or SSF-mediator and material for the preparation of the latter - for practical purposes is solved in each case individually, based on the specific production conditions.

The principal functional difference between the SSF from material substances:

if the substance depending on the conditions can change its state and properties, then SSF is able to transmit single, and only the one, which corresponds to the state and the intrinsic properties of the model at the time of formation of its amplitude-frequency characteristics for SSF.

**Recipient** - a component of the system, receiving in quantum-resonant mode, SSF impact as a whole or its individual modes and changing to the SVM-state of the given state of the sample used in the formation of the SSF, the amplitude-frequency characteristics.

Recipients are divided by type of participation in three types:

• directly involved in the processes of metabolism in organisms, or change the material composition of the medium;

• perform the functions of the factors that control processes. In the body - these are enzymes and hormones, in other systems (environments) - catalysts, enzymes;

• mediators, i.e., material carriers, sources of secondary SSF radiation. It should be noted that there are a number of substances, heterogeneous environments on the basis of which are the universal mediators. These substances, in particular, include: water, alcohols, silica and alumina, and many others.

**SVM-state** - corresponding target settings (activation or inhibition, acquisition of new properties, etc.) are allowed in certain fixed conditions of atomic-molecular and subatomic structures of the components of the recipient system.

Thus, to solve many problems using the diversity of potential states and the properties inherent in the nature of the object of exposure. The obtained results are a consequence of factors:

a) transition of ensembles of atoms (molecules, ions) and subatomic structures in to SVM-state, and

b) coherence of the heterogeneous set of atoms (molecules, ions), transferred in to SVM-state.

SSF-technology allows optimizing of transient transformation of the environment in to a given state through the transfer of component-recipient matching SVM-state. This feature is due to the presence in the environment of system-forming, coercing forces relationship, between its structural components.

The efficiency of SSF technology depends on the correctness of the choice of component-recipient, the knowledge of their desired SVM-state, correctness of reflection of the frequency response in the "special signal form" (SSF), compliance with relevant exceptions for exclusion of relaxation of duration of exposure (" Kramers-time "). The closer to the beginning of production processes (raw material) are objects of SSF-effect, the more efficiently the raw materials are converted into finished products and less waste production.

## Integral result:

• Transition to a qualitatively new state with lower entropy for a topical area of states and a higher level of free energy. Extensive quantum-resonant electromagnetic effects on the homogeneous atomic and subatomic structure, transform them into a coherent set of SVM-state, initiating the transformation of the hierarchical structure system-forming bonds (SFS-bonds) of the object and change its qualitative characteristics (properties). From the standpoint of thermodynamics SSF technology provides the change in entropy in the system to lower level. By definition, the entropy change is information. That is the second law of thermodynamics can be written as:  $\delta F = \delta U T \times I$ , where F - free energy, U - internal energy, T - thermodynamic temperature, I - information. Therefore, transmit-receive information at the atomic and subatomic structures accompanied by changes in free energy of the system, and accordingly, the technology can be characterized as an energy-information based;

 change of the characteristics of the thermodynamic, chemical, biological and other processes;

• increasing of the exchange interaction with the environment, in relation to which the system becomes an acceptor of the energy of background electromagnetic field and generator of the SSF-effects.

**The physical base** of the SEF-technology is a combination of different physical effects, including:

• quantum-resonance effects of a source of electromagnetic radiation on matter. This external influence in the physics of open systems is characterized as a specific, imposing a system structure or function;

• a relatively recent discovery of a phenomenon is extremely important for understanding the nature of what is happening - stochastic resonance, defined as a "cooperative effect in nonlinear systems in which the noise energy distributed over a wide range, is pumped into the output energy at signal frequency;

• exchange interactions, including those reflecting the characteristic patterns of different levels of resonance effects (cyclotron or diamagnetic, ferromagnetic, nuclear magnetic, and others, collectively defined as a stochastic resonance);

• transition of the set of molecules of matter in a coherent state and the acquisition, as a consequence, of new properties, etc.

#### The uniqueness of the SSF-technology:

• the universality of the application due to the fact that the impact is carried out using physical fields at the atomic (molecular, ionic) and subatomic (electron, atomic nucleus) levels;

• the possibility of using different heterogeneous substances processed by SSF technology, as a secondary means of generating SSF or mediators (active carriers of SSF).

# Methodical basis for performance of work on the adaptation of SSF technology to improve technological processes.

Technique is based on adaptation of SSF technology for its use as an additional factor enhancing the effectiveness of existing technology is implemented in a simplified form of the following algorithm:

1. Perform analysis of the selected object and establish the dependence of its characteristics from the state of the main components.

2. Determine the target state of component.

3. Define a list of components-recipients of the SSF, i.e. those components that must be tansfered into a target state with the use of SSF technology.

4. Revise the requirements for SVM-state component-recipients.

5. Find a substance that has in its structure similar to, the recipients, components in the desired SVM-state.

Note: please be aware that if the substance depending on the conditions can change its state and properties, then SSF is able to transmit single, and only the one, which corresponds to the state and the intrinsic properties of the model at the time of formation of its amplitude-frequency characteristics for SSF.

6. To generate the SSF, using a complex (set) of equipment and applying analytical methods for targeting of the spectral characteristics.

7. Choose the best version of the source of the SSF-effects

- SSF-mediator.

8. Prepare SSF-mediator.

## Preparing SSF-mediator

Preparing SSF-mediator under the technology protected by patents / N<sup>o</sup> 2033200, N<sup>o</sup> 2045881, N<sup>o</sup> 2047301, N<sup>o</sup> 2057552, Russia, N<sup>o</sup> 703833, Australia / and includes the use of complex (set) of equipment and special methods of processing the amplitude-frequency characteristics of the modified radiation of cold hydrogen plasma, modulated by spectrums radiation (absorption) of the substance.