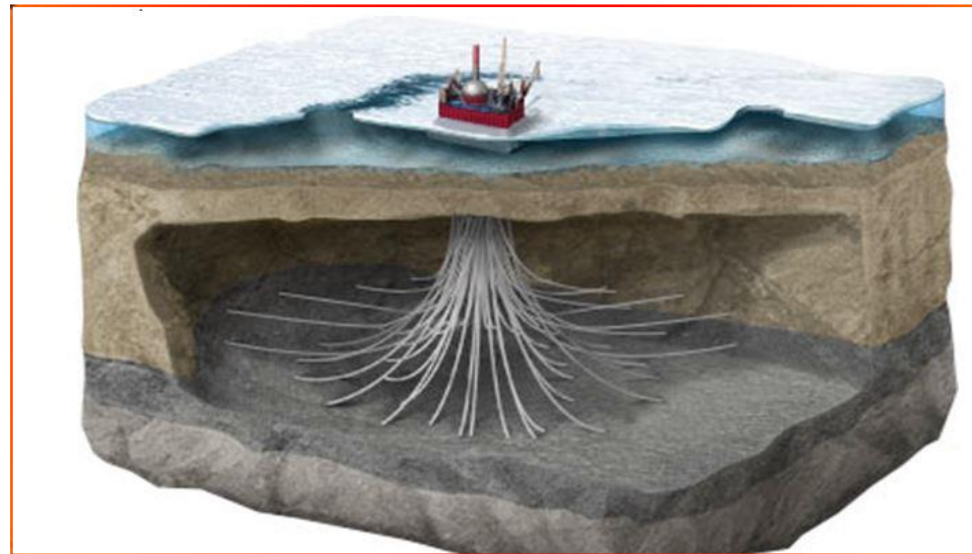


An aerial photograph showing a large offshore oil rig operating in a field of sea ice. The rig is a complex structure with a tall central tower and several cranes. A support vessel is visible in the lower-left corner, navigating through the ice. The text "Marine complex hydraulic fracturing of reservoir" is overlaid in a white box in the center of the image.

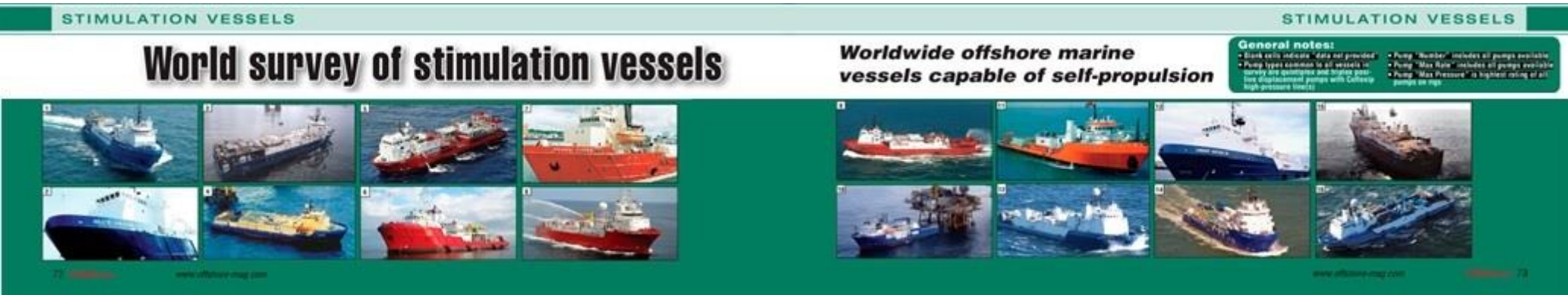
**Marine complex
hydraulic fracturing of reservoir**

Marine complex hydraulic fracturing of reservoir – a set of technological equipment for marine applications, providing for enhancement and acid hydraulic fracturing, offshore oil and gas fields, including on the Arctic shelf.



Marine complexes hydraulic fracturing ensure the carrying out of technological operations include high-tech engineering products and instrumentation, software, special materials.

The world fleet of oil service vessels to stimulate oil extraction methods of hydraulic fracturing



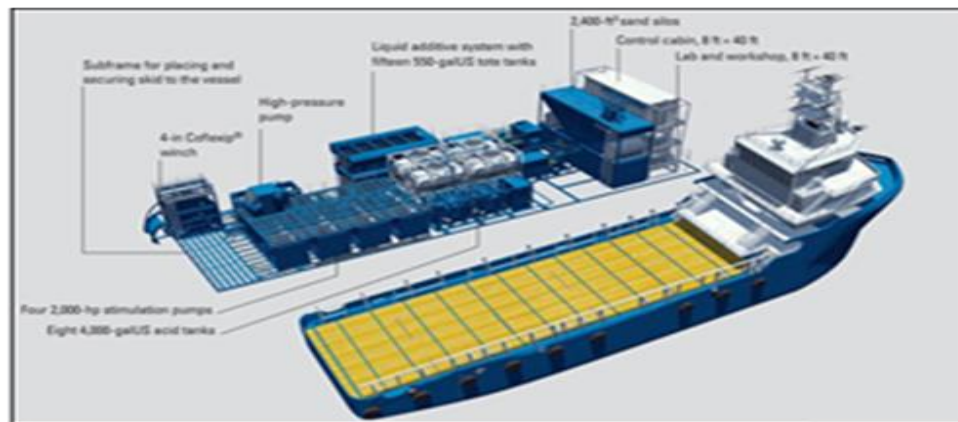
In the Russian Federation first established the ship's complex hydraulic fracturing of oil and gas reservoir

Currently, the global market for oilfield services marine operated the ship's deck and stationary complexes of the execution of the following manufacturers:

Service company	Affiliation (country)	The number of ship complexes of hydraulic fracturing
Baker Hughes	USA	10
Halliburton	USA	12
Schlumberger	USA-France	10
StimWell Services	Britain	1

Comparative table of available versions

Deck complex



The complex is temporarily located on the deck of the ship standard service platforms

Advantages

Flexibility modular design
Low cost

Disadvantages

Limited performance equipment
Limited capacity on the volume of transactions

Stationary complex



Complex integrated the composition of the special service ship

Advantages

High performance equipment
The possibility of multiple operations hydraulic fracturing without returning to base

Disadvantages

The high cost
The need for large volumes of work

According to the analysis, a decision was made about the appropriateness of placing the deck of a ship complex of hydraulic fracturing, but the combination of the best characteristics of both versions of ship complexes of hydraulic fracturing. This decision is based the ability of Russian companies, using unique and innovative solutions, to produce high-tech Russian equipment marine complex, hydraulic fracturing, combining the best characteristics:

- high performance equipment (with the ability to extend the operating time of the Russian pump units (from part of the marine complex fracture) in top gear without the risk of equipment failure, the performance in the "fracking" increases by 25-35% (depending on the conditions of the works);
- the flexibility of the modular design (allows you to place equipment marine complex on vessels of different classes with capacity (not less than 200 tons), deliver them to the ship (or location) different types of transport;
- low cost equipment is cheaper import by 15-20% (the estimated value of Russian marine complex (1st quarter 2018) will reach 900-950 million rubles (depending on configuration)).

The concept of creating marine complex hydraulic fracturing of reservoir

Deck complex



Stationary complex



Autonomous container modules



The modules in the "open" version
with incomplete autonomy

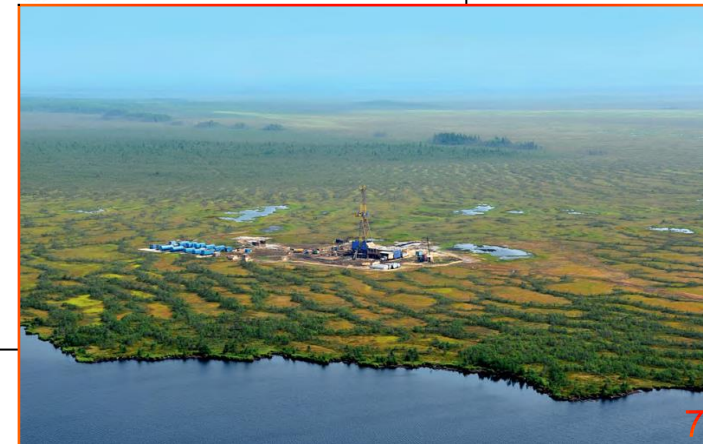
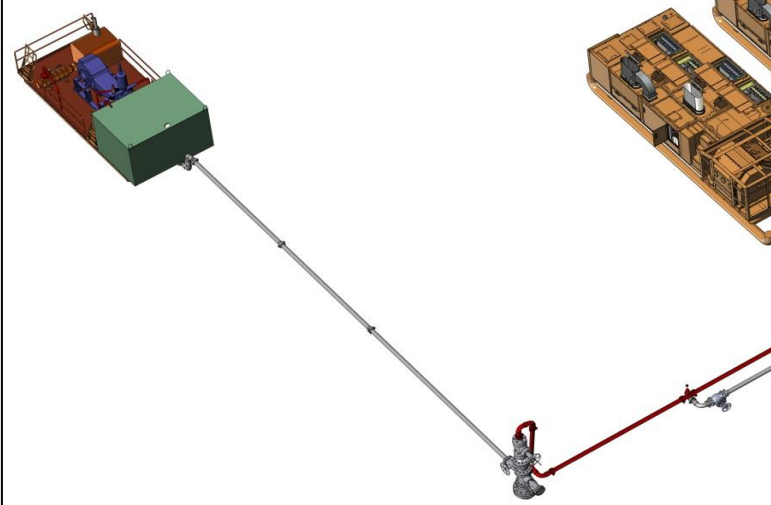
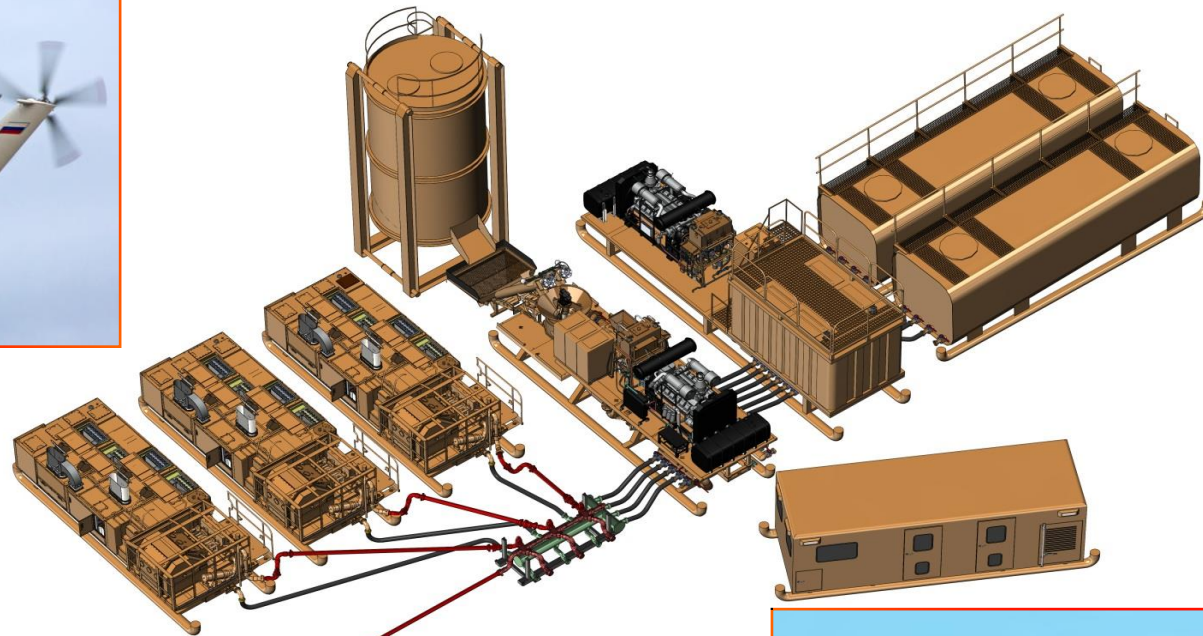
The concept of creating marine complex hydraulic fracturing of reservoir

Binding equipment to existing and prospective vessels provide ice-class



The concept of creating marine complex hydraulic fracturing of reservoir

Adaptation of modular equipment for delivery to ships at sea and remote coastal deposits air transport



Thank You for your attention!

We will be glad cooperation!



**Ilinskoe highway, 2 kilometer, Krasnogorsk, Moscow region, Russia, 143405,
phone: +7 (495) 777-80-48, Email: spdst@mail.ru, office@becema.ru, <http://www.becema.ru/>**