



RUSSIA OFFERS NEW VESSELS TO FIGHT AGAINST PIRACY & GLOBAL TERRORISM AT THE SEA

According to the pundits in the anti-terrorism filed the unity of a state can be threatened by some extremist groups which ideology is based on religion, national or ethnic contradictions. These contradictions could be easily developed into clashes and used to undermine the political and economical regime of a country. Furthermore it can lead to violation of the territorial integrity of a state. It looks very realistic when the economy of a state, which depends on sea trade and delivered by sea energy supply, is paralyzed by terrorist, acting in the in-shore waters. Also a vulnerable target for terrorists are big oil tankers, which could be used for threatening a state.

Extremist groups live not only on inner sources but also are widely supported from abroad. Often terrorism and separatism are combined with crime industry in ugly and cruel forms.

The relatively ease way to acquire medium and long range precision

weapons for irregular paramilitary formations as well as for pirates and terrorists deeply changed the threat scenario in coastal waters.

Thereupon a state should be ready to fight against terrorism everywhere and the fighting at the sea is not an exception. Moreover, the state has to take into account that terrorists or pirates (the edge between the two terms is getting blended) can use not only surface vessels but

also small submarines and assault landing ships (the latter were used by terrorists in Bombay).

In the framework of the Special Operations Forces Exhibition and Conference enterprises of the Russian Military-Industrial Complex offer great number of unique systems and vessels that could be used against piracy and face the challenges of the global terrorism as the newest line of defense in the coastal waters.



***Steregushchy
class corvette***

Today, when fighting on piracy is gaining momentum, corvettes are flagged up. Russia is interested in its building and development. On March 31, 2010 JSC Shipbuilding plant "Severnaya verf" floated off the first commercial corvette "Soobrazitelny", project 20380. The leading ship of this project, the Steregushchy class corvette, was commissioned to the Baltic Fleet in October 2008. "Soobrazitelny" is a unique ship. She is designed to conduct warfare in coastal waters against surface vessels and submarines as well as to exercise artillery support for amphibious troops, involved in landing operations. The speed, armament, range and ability to fulfill various tasks make type 20380 a good battleship to fight against piracy.

The ship has a steel smooth deck and a composite superstructure made with the use of stealth technology.

The Project 20380 corvette allows using its weapons at sea state of up to 5, which is 1.5–2 numbers more than in case of ships with the similar displacement, which is especially important if it carries helicopters. For the first time in similar Russian ships, the corvette's stern has a hangar with a helipad for the Ka-27 antisubmarine helicopter and a 20-t fuel reserve for it.

A special attention was paid to the ship's protection and survivability. It features advanced radar and IR signature reduction solutions based on design features and special coatings, built-in missile and antenna systems, radar absorbent materials, local

protection of single hull parts, weapons and equipment forming physical fields of the ship's upper hemisphere. The average circular radar cross section is three times lower than in case of similar ships.

The Project 20380 ship is equipped with a complicated weapons system including attack, air defense and an-

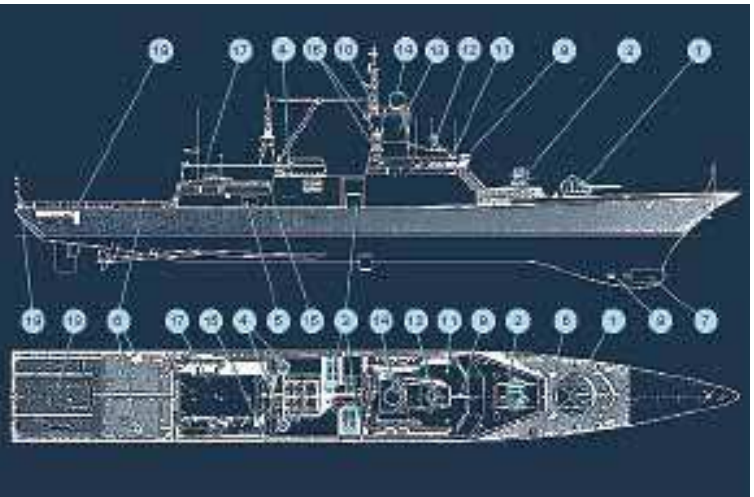
tisubmarine weapons, means of combat control, detection, target acquisition, communications and protection. The basis of the armament system is the "Uran" anti-ship missile system comprising two four-container launchers (one ammunition load includes eight Kh-35 anti-ship missiles with a combat range of 130 km) placed

MAIN CHARACTERISTICS OF PROJECT 20380

Class and type	FFGHM
Type	Project 20380
Displacement	1,900 full load
Length	104.5 meters
Beam	11.1 meters
Draught	3.7 meters
Propulsion	2 shaft CODAD, 4 16D49 diesels 24.000hp (17.9 MW), power supply AC 380/220V, 50 Hz, 4x630 kw diesel generator set
Speed	26 knots
Range	4,000 nm at 14 knots, 15 days endurance
Complement	100
Sensors and processing systems	<i>Air search radar:</i> Furke-E 3D, E/F band <i>Surface search radar:</i> Granit Central Scientific Institute Garpun-B/3Ts-25E/PLANK SHAVE radar <i>Fire control radar:</i> Ratep 5P-10E Puma for A-190 HOT FLASH radar <i>Sonar:</i> Zarya-ME suite, bow mounted. Vinyetka low frequency active/passive towed array <i>Navigation:</i> GORIZONT-25 integrated navigation system
Electronic warfare and decoys	TK-25E-5 ECM, 4 x PK-10 decoy
Armament	1 x Arsenal A-190 100mm 2 x MTPU pedestal machine gun 14.5 mm 1 x Kashtan CADS 2 x AK-630 CIWS 6 x 3M54 Klub or 8 x 3M24 Uran 4 x 400mm torpedo tubes SS-N-29 / RPK-9 Medvedka-VE anti-submarine rockets
Aircraft carried	Helipad for Ka-27 Helicopter

ARMAMENT CONFIGURATION OF TYPE 20380

- | | |
|--|---|
| 1 — 100-mm cannon A-190 | 11 — MTK-201M2.2 multipurpose thermal imaging system |
| 2 — "Kortik-M" AA Artillery-Missile Complex | 12 — 5P-10 "Puma" AA and Artillery fire control radar antenna |
| 3 — "Uran" anti-ship missile system quadruplicate launcher | 13 — "Monument-A" anti-ship missile system fire control radar antenna (in radome) |
| 4 — AK630M 30-mm six-gun AA mount | 14 — "Furke-2" three-dimensional radar |
| 5 — The port of "Paket-NK" anti-torpedo protection launcher | 15 — "Anapa-M" dipping sonar room |
| 6 — PK-10 chaffs launching system | 16 — TK-25-2 radio-electronic warfare system |
| 7 — "Zarya-2" underkeel sonar | 17 — Hangar for Ka-27 antisubmarine helicopter |
| 8 — Target detection sonar for "Paket-A" anti-torpedo system | 18 — Helipad |
| 9 — "Pal-N" navigation radar | 19 — "Minotavr-M" towed sonar compartment |
| 10 — MP-231-2 navigation radar | |



across the lateral plane in the central part. The ship's air defense is provided by means of the Kortik-M combat module placed in the bow, Iгла MANPAD (shoulder-launched) and two aft-mounted 30-mm AK-630M artillery guns. The main artillery weapon is the versatile 100-mm A-190 artillery gun (its ammo load is 332 rounds, maximum rate of fire — 80 rpm, range — 21.3 km and altitude — 15 km). The advanced 5P-10 Puma system is designed to control 100-mm and 30-mm guns. The unique Paket-NK antitorpedo system includes two four-tube 330-mm units. Its torpedoes can be used both against enemy torpedoes approaching the ship or submarines. The Ka-27 deck-based helicopter is designed to detect and destroy submarines, too.

In addition to the Sigma Combat Information Management System, the ship's radioelectronic equipment includes the Furke-2 general-purpose radar and Monument-A missile target designation radar in a radiotransparent radome coupled with the foremast, two non-linear radars, bow-mounted Zarya-2 sonar system, Minotavr-M sonar station with a long trailing antenna, Anapa-M dipping sonar system, Ruberoid automated system as well as electronic warfare and navigation systems. The ship is equipped with four PK-10 launchers of the Smeliy decoy dispensing system to protect from enemy detection systems and antiship missiles. The Project 20380 corvette features two 14.5-mm pedestal machine guns and two DP-64 grenade launchers to protect it from pirates and frogmen. The ship's armament can be employed at sea state of up to 5. Antennas of the OSPV-20380 station are mounted on the hangar roof to provide radio navigation of the antisubmarine helicopter.

The modular architecture of Project 20380 vessels allows installing new weapons and radioelectronic warfare systems on newly-built and upgraded ships, which reduces production cost and provides high modernization potential within a 30-year life cycle.

In general, the Project 20380 corvette differs from the antisubmarine ships, which are in service now, by

its multifunctionality, small size, low signature and high level of automation. Its range is 4,000 nm at a cruise speed of 14 knots (the maximum speed is 27 knots). Its complement including the helicopter service crew numbers 99 people.

In this line the Albatros class, project 1124M, (NATO reporting name: Grisha III) can be put as an effective vessel to fight against piracy and terrorist groups in coastal waters as well.

The burden to fight against terrorists and pirates in coastal waters is on the shoulders of Coastal Guard. Russian law enforcement units successfully use the "Mirazh" craft, PK-500 patrol boat, (project 14310). In mid-1980s then the Soviet Union sea border guards faced the problem with smugglers, drug traffickers, pirates and poachers, who trespassed exclusive sea economic zones. The Border Guard Command asked for a modern speedy patrol



Albatros

boat which was able effectively act against newly emerged challenges and had have combination of qualities that contradicted each other: high speed and seagoing ability, powerful armaments, various surveillance and detection means. The ship should have the ability to remain at sea for several days, with comfortable living conditions for the crew, while providing at the same time, limited displacement.

"Mirazh" met all these requirements. She can develop a speed of 50 knots



Mirazh

MAIN CHARACTERISTICS OF PROJECT 1124M

Builder	Zelenodol'sk Zavod, Kazan and Komsomol'sk SY
Displacement	990 tons full load
Speed	34 knots
Dimensions	71.2 meters long 10.15 meters beam 3.4 meters draft
Propulsion	CODAG 2 x cruise diesels, 20,000 hsp 2 x shafts 1 x boost gas turbine, 18,000 hsp
Missiles	1 x Osa-M SAM system (20 9M-33/SA-N-4 Gecko SAM)
Guns	1 x dual 57mm DP/70cal and 1x30 mm AA
Antisubmarine	4x21 inch torpedo tubes 2xRBU-6000 ASW RL 2x DC/mine racks
Electronics	RADAR: MR-302 Rubka/Strut Curve air/surf. Search SANAR: MGK-335M Argun/Bull Nose hull mounted MF and Shelon'/Elk Tail MF dipping FIRE CONTROL: MPZ-301 Baza/Pop Group SA-N-4 control EW: Bizan-4B suite with Watch Dog intercept



Murena-e

MAIN CHARACTERISTICS OF TYPE 12061

Displacement, t	Standard 104 full load 148
Principal dimensions, afloat, m	31 x 12.9 x 1.1
Main machinery gas-turbines	2 x 10,000
Power, hp	
Propellers	2, fixed-pitch, shrouded
Speed, knots	55
Range, miles	200 (at 55 knots)
Electric power source	gas-turbine generator
Power, kW	2 x 100
Crew	11
Armament	air-defense gun-missile systems: 30mm AK-306 AD gun mount 2 x 2 (1,000 rounds); 30mm Plamya grenade launcher 2 x 1 (800 grenades); 12.7mm Utes machine gun 1 x 2 (1,000 rounds)
electronic	radio communications aids for three channels; navigation radar
Military lift	one T-72M tank, or T-80, or two BTR-70, or two PT-76 tanks, or 130 assault troops



and armed with the “Shturm” missile system, portable anti-aircraft system, the AK-306 artillery mount and two machine gun pedestal mounts.

For successful war on piracy and terrorism at the sea, special operations cannot be limited by a sea theater of operations and should be expanded to the coast. For rapid and sudden landing as well as for covert amphibious entry special forces widely use air-cushioned landing craft.

This type of landing craft widens the choice of landing spots. The air-cushioned landing craft considerably increases the percentage of coastline which can be used for landing assault operations.

Russia produced the Murena-class landing craft (type 12061), which is characterized by high strength and float-ability. Russian and foreign specialist evaluated her high performances in their merits. As a result Kuwait authorities recently took a decision to buy two Murena-class vessels. She is an air cushion landing craft designed to transport amphibious landing equipment and troops onshore while providing fire support. The Murena landing craft can transport up to 24-t of payload including: 130 fully equipped troops; two medium armored vehicles; three light armored vehicles; or one medium main battle tank. The craft can operate with a wind velocity of up to 12 mps and a waves of up to 1.5 meters in height.

The Murena-class vessels weapon system includes two 30mm six-barrel AK-630 guns and eight Igla-1M surface-to-air missiles and can be equipped with 10 to 24 mines. The propulsion system is based on two MT-70M gas turbines each developing 10,000-hp. The gas turbines drive two AV-96 reversible variable-pitch air propellers and inflate the air cushion. Two Volvo Penta diesel generators provide the electrical power supply. All in, the 150-t Murena craft achieves a top speed of 55 knots and has a cruising range of over 200-nm. The hull is made of high-strength non-corrosive aluminum-magnesium alloy.

Taking into account the growing number of conflicts where governments face guerrillas and narcot-



ics traffickers, like in Latin America or Iraq, and the intention of these groups to use the rivers for their illicit activities, special forces and counter-terrorist units should have the ability to travel up river to intercept and inflict damage upon insurgents. More over, frequently terrorists operate on isolated areas impenetrable to ground vehicles and covered by huge vegetation and trees that make helicopter landing totally impossible. To reach such locations special units must use boats.

At the same time rivers are characterized by challenging operational environment due to steep banks, vegetation — ideal place for a sniper. On the way a boat can be hit by an explosive device hidden under the water surface.

Bearing in mind all these challenges Russian specialists designed special craft operating in this domain and currently widely used by border guards and other law-enforcement

MAIN CHARACTERISTICS OF PEGAS CRAFT	
Principal dimensions, afloat, m	5.25 x 2.55 x 1.78
Clearance	0.3 m
Military Lift	5 armed troopers
Propellers	2, fixed-pitch, shrouded
Speed, km/h	
water	50–60
snow (ice)	80–90
ground	40–50
Range, km	Up to 450
Ascending Angle, degrees	10
Sea state	0.4
Armament	Depend on combat task

units. The craft are armed with robust armament (heavy machine gun or a gun), have ballistic protection, high speed and maneuverability and capacity to carry troops and their equipment to and from their destination.

Among various types of the speed boats produced in Russia, air-cushioned speed boats firmly take a niche in this domain and widely used by law-enforcement units, EMERCOM,

Coast Guard, Interior Troups etc. they could be used during all seasons and under different temperatures. The main tasks the craft fulfill are patrols, reconnaissance operations, transportation. The craft is able to travel up swamps, relatively flat unaccessible terrains, snow surface, sandy areas, grass, ice, etc. ▣

Anton Chernov

