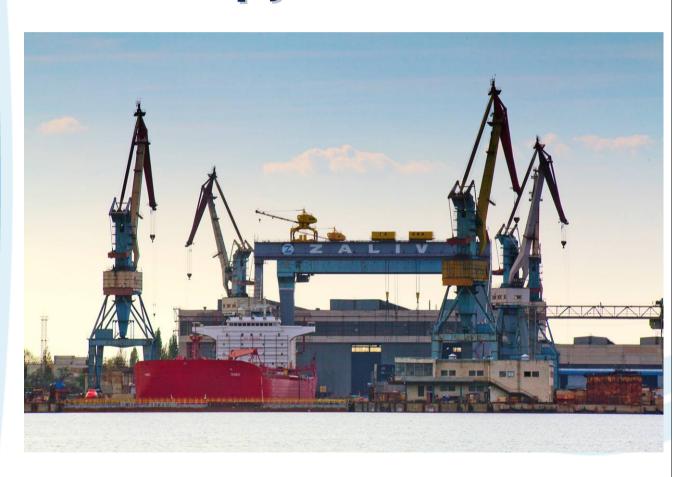


### PUBLIC JOINT STOCK COMPANY

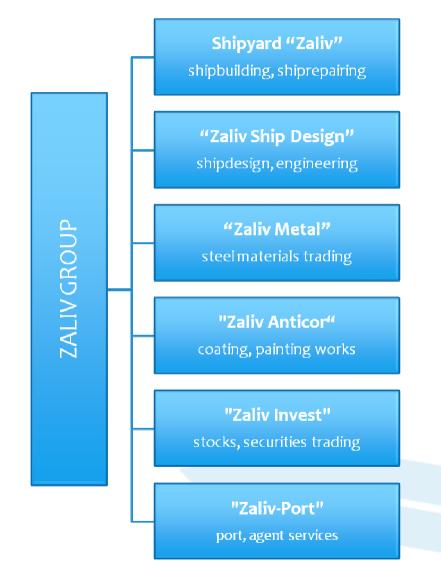
# **Shipyard ZALIV**



Kerch, April 2013



### **ORGANIZATIONAL CHART OF "ZALIV" GROUP**





**Public Joint Stock Company "Shipyard Zaliv"** is one of the leading shipbuilding enterprises in the Eastern Europe.

Located in the closed bay between two seas, Zaliv occupies the area of 140,0 hectares and possesses unique technological facilities. Production facilities of the yard has the following capacity:

#### **Pre-assembly production** includes:

- \* Metal pre-treatment workshop with warehouse. Equipped with GUTMANN plate and profile automatic shotblasting and priming line. The line was put into operation in 1995 and provides for shotblasting and priming of steel according to ISO standards;
- \* Plate cutting facilities equipped with automatically operated two plasma thermal steel cutting machines type "Suprarex SXE-P2" (ESAB), machines of type "KRISTALL" and "GRANAT" for cutting of steel plates;
- \* Profile cutting automatic machines PROFISEC and VERTISEC;
- \* Bending area equipped with 5000 t, 1250 t, 800 t and 400 t presses;
- \* Sorting area;
- \* Production capacity of a hull processing shop is 60.000 t of steel per year.





- \* Welding-assembly production is equipped with power-operated TTS (Norway) block and panel line for assembly and welding of flat sections and blocks (production area 75.240 sq. m), equipped with cranes with lifting capacity from 70 tons up to 200 tons, welding equipment of ESAB (Sweden) company, which was commissioned in 1994. The line provides fabrication of panels up to 12x18 m, weight up to 100 t, hull blocks 18x24 m, weight up to 300 t;
- \* The shops have cranes with lifting capacity up to 200 t and trolleys to transport sections up to 350 t, sufficient number of indoor building areas, and it is possible to assemble blocks up to 300 t and provide for work in two shifts. Total production capacity of welding-assembly facilities is up to 40 thousand tons of steel structures per year;
- \* The shipyard is investigating possibilities to increase production output through automation assembly and welding of units, usage of universal robots for fabrication of sections and blocks, bow and aft sections.





- \* **Pipe production.** Pipes are treated with a highly productive equipment.
- Cutting of big size pipes by the gas-cutting machine BUG–2;
- Bending of pipes by pipe bending machines TGSV-1/2;
- \* SCHWARZE-ROBITEC pipe-bending complex processes pipes with diam. from 42 mm and up to 220 mm;
- Workshop is equipped with equipment for flushing of pipelines and hydraulic systems, and for testing of hydraulically pipes and fittings;
- \* Available production tools for treatment of GRE/PPFR/PB pipes.
- \* **Galvanic production -** allows to execute hot dip galvanizing of pipes and other components with capacity of 1.200 tons per year or 70.000 m of pipes.





- Machine-building, hull fitting, mechanical-assembly and outfitting productions have availability of necessary equipment and professional skills for realization of projects on "turnkey" basis. Mechanical-assembly production is located in several areas. There is a separate area for assembly of the ME in the scope of 100 % at the shop. About 70 % of all machinery is installed on board in assembly.
- \* Outfitting of New Buildings Outfitting of vessels after launching is performed at two deep water outfitting quays, serviced by cranes: 2 cranes of 32 t lifting capacity and 1 crane of 50 t, and 1 of 80 t lifting capacity. The shipyard has outfitting shops to do insulation works, paneling of pipes and living rooms.

To provide for dock and sea trials Zaliv has its own floating facilities: a tug and a diver' boat.





\* Coating works. High quality level of execution of paintworks at Zaliv is secured by painting production. Total production capacity is 410.000 sq.m of coating surfaces on standard vessel structures per year.

#### \* Facilities:

painting workshop equipped with blasting and coating compartments; technological equipment of «KIESS» (Germany);

Painting production has necessary equipment for painting of internal surfaces of pipelines, possesses mastered and approved by paint manufacturers technologies for painting of cargo tanks for product tankers and chemical tankers.

Zaliv has full complex of technical equipment providing the execution of requirements for corrosion protection on the all stages of vessel construction in accordance with world standards using modern paint material.





#### \* Graving Dock and Building Berths

The graving dock (364 x 60 x 13.2 m) is serviced by two gantry cranes, 320 t capacity each and 5 portal cranes, 80 t capacity each.

The cranes enable to assemble a hull from large sections and blocks weighing up to 600 t.

It is possible to divide the graving dock into two spaces by a caisson and repair vessels in parallel with ship construction.



#### **Building berths** complex includes:

Two horizontal building berths, **400 m** long. Equipped with cranes – lifting capacity up to **80** tons, and transverse slipway with lifting capacity up to **2.500 tons**;

Provides construction up to 6 vessels annually with the deadweight up to 8000 DWT each.





**Complete Shipbuilding at Zaliv** - Zaliv disposes of the following capabilities to build vessels on a "turnkey" basis:

- All kinds of works on rudder propeller unit, including fabrication and coupling of rudderstock with rudder blade;
- Mounting of ship's equipment;
- \* Mounting and testing of hatch covers;
- \* Mounting and testing of anchor and mooring appliances;
- \* Mounting of all hull fittings and appliances onboard;
- \* Mounting of fitter's equipment, pre-insulation and electric fitter's outfitting;
- \* Mounting and testing of all piping systems;
- Complete range of coating works, including shot blasting to SA 2.5;
- \* Arrangement of deck sheathing and flooring;
- \* Development and approval of design documents, arrangement of insulation and sheathing in crew quarters (by subcontractor company ISD);
- \* Fabrication and fitting of furniture in crew quarters. Appliances for crew quarters and cabins (by subcontractor company ISD);
- \* Design, installation and wiring works, start-up and commissioning of electric equipment including duty watches and carrying out of mooring and sea trials (by subcontractor company Allewijnse).







During the period from 2008 to 2010 the modernization program of the technical reequipment of production facilities was realized on Zaliv.

The main target of this program was increasing of production capacities of the yard, in order to expand production output, manufacturing of competitive shipbuilding products for external markets.

Within the frames of this investment program the following modern technological equipment were purchased by Zaliv:



#### TWO PIPE-BENDING MACHINES

**Manufacturer:** "SCHWARZE-ROBITEC GMBH" (GERMANY)

**Type of equipment:** CNC80HD-MW,

CNC220HD-MW

Results from innovation: high productivity, capability of execution of pipe-bending works with wide range dimensions and bending radiuses, in order to satisfy different requirements of various customers.

Value: 1 956 000 USD



### ONE MULTIWHEELER SELF – TRAVELING PLATFORM

Manufacturer: "TTS" (NORWAY)

**Type of equipment:** TTS 320 Multiwheeler **Results from innovation:** elimination of needs to divide large sections and shift of assembly-welding works from assembly workshops to open air slots, dependable from unfavourable weather conditions, like building berth and graving dock, reduction of production cost.

Value: 840 000 USD







### TWO PLASMA THERMAL STEEL CUTTING MACHINE

Manufacturer: "ESAB" (Sweden)

**Type:** SUPRAREX SXE-P2

**Results from innovation:** high productivity (three times higher in comparison with normal machines), high accuracy of steel cutting,

flexibility in usage.

Value: 1 053 400 USD

### ONE OVERHEAD CRANE WITH MAGNETIC BOOM

Manufacturer: "Famak" (Poland)

Lifting capacity: 25 tons

**Results from innovation:** provision of

continuous work for two plasma steel cutting machines in reverse mood with using of two

positions.

Value: 971 050 USD

#### **ONE STEEL CARRIER**

Manufacturer: "GREAT LAKES POWER" (USA)

**Type:** Hyster RM600

Lifting capacity: 30 tons

**Results from innovation:** provision of yard's needs in transportation of steel materials around

the territory of the yard

Value: 600 000 USD



### **CERTIFICATION, QUALITY CONTROL SYSTEM**

















Zaliv has its own oxygen, acetylene and compressed air stations, providing for the shipyard' needs.

Zaliv has the NDT laboratory, welding laboratory, laboratory for mechanical tests, and measurements laboratory. The laboratories are certified by the State Standard of Ukraine and MRS. As well, the laboratories provide for monitoring and measurement of the following parameters:

- -chemical composition of metals
- -and materials (paints, oils, gases, etc);
- mechanical properties of metals and welds;
- monitoring of welded metals and alloys;
- dimensions;
- parameters of el.current;
- parameters of air.

In 2008 Bureau Veritas successfully certified quality control system of Zaliv according to international standard ISO 9001:2008.



The leading Class societies (Lloyd's Register, Germanischer Lloyd, Bureau Veritas, Det Norske Veritas) issued their certificates of approval for technological process used by Zaliv for newbuildings and ship repair.



### **CUSTOMERS**

Technical potential and available qualified personnel provides the yard possibility to export 100% of products to the Netherlands, Spain, United Kingdom, Greece, Norway, Russia, Romania and other countries.

Some of our customers are first-class Western European shipbuilding holdings.



**ULSTEIN GROUP (Norway)** 





**BERGEN GROUP (Norway)** 



**ARGALI HOLDINGS LTD (Norway)** 



**ESTALEIROS NAVAIS DE PENICHE (Portugal)** 



### Past, Present, Future...

#### **ZALIV** Yesterday:

- -Supertankers DWT 182000;
- The first in the world environmentally safe tankers of PANAMAX type with double sides;
- Nuclear powered transporting vessel of ice-breaking type "Sevmorput", having the IAEA certificate;
- Various projects of naval vessels including the flag-ship of Ukrainian Navy large anti-submarine vessel "Het'man Sagaydachniy".

#### **ZALIV Today:**

- Introduction of modern shipbuilding technologies;
- Quality assurance certificates of leading Classification societies;
- Cooperation with the world leaders in shipbuilding;
- Merchant shipbuilding, vessels for oil-and-gas sector, offshore structures, production of ship's machinery.

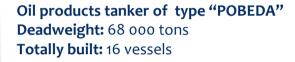
#### **ZALIV Tomorrow:**

- Mastering the new shipbuilding production range;
- Development of own shipbuilding projects;
- Creation of specialized research and training center.





Supertanker of "KRYM" type Deadweight: 150 000 tons Totally built: 6 vessels.







Nuclear powered transporting vessel of icebreaking type "SEVMORPUT" Deadweight: 33 780 tons Totally built: 1 vessel





Platform supply vessel project PX-105.

Buyer – Ulstein Hull AS.

Totally built: 2 hulls

Delivery time: 2010

Offshore construction vessel project SX-121.

Buyer – Ulstein Hull AS.

Totally built: 2 hulls

Delivery time: 2008, 2010





Platform supply vessel project PX-121.

Buyer – Ulstein Hull AS.

Totally built: 6 hulls

Delivery time: 2011, 2012, 2013





Inspection, Maintenance and Repair vessel project SX-148.

Buyer – Ulstein Hull AS.

Totally built: 1 hull

Delivery time: 2012

Seismic research vessel project SX-134.

Buyer – Ulstein Hull AS.

Totally built: 2 hulls

Delivery time: 2011



Platform supply vessel project HAVYARD

832 CD.

Buyer – Argali Holdings Ltd.

Totally built: 1 hull

Delivery time: 2012





Combi – freighter project CF7200.

Buyer – Damen Shipyards Bergum

Totally built: 10 hulls

Delivery time: 2007-2011







Field support vessel project VS465.

Buyer – Bergen Group BMV

Totally built: 1 hull

Delivery time: 2012



### **Our financial partners**







Financing of the newbuilding projects is carrying out by JSC "Shipyard Zaliv" together with the following partners' banks:

- -JSC "UkrSibbank" (BNP Paribas Group);
- -JSC "OTP Bank" (OTP Group);
- -PJSC "UkrSotsBank" (Uni Credit Group);
- -JSC "Bank "Finance and Credit".

At this moment JSC "Shipyard Zaliv" has the following financing limits:

- -JSC "UkrSibbank" (BNP Paribas Group): 21 mln. Euro;
- -JSC "OTP Bank" (OTP Group): 30 mln. US Dollars;
- -PJSC "UkrSotsBank" (Uni Credit Group): 25 mln. US Dollars;
- -JSC "Bank "Finance and Credit": 25 mln. US Dollars.

The bank guarantees were issued by the abovementioned banks and confirmed by the first-class European banks – such as, Raiffeisen Bank International, ING Bank, BNP Amsterdam, Uni Credit Bank Austria AG.

Meanwhile, the European Bank for Reconstruction and Development arranged necessary covering of the issued bank guarantees.

By such scheme OTP Bank has financed several shipbuilding projects for "Damen Shipyards Bergum" in previous years, and in 2011-2012 for "Bergen Group BMV".



## **Orders portfolio**

Buyer (Country)	Yard number/ Project	Type of the vessel	Comment
Ulstein Hull AS (Norway)	295/SX 148	Inspection, Maintenance and Repair vessel	Delivered in April, 2012
Ulstein Hull AS (Norway)	296/PX 121	Platform supply vessel	Delivered in November, 2012
Ulstein Hull AS (Norway)	297/PX 121	Platform supply vessel	Delivered in September, 2012
Ulstein Hull AS (Norway)	298/PX 121	Platform supply vessel	Delivered in January, 2013
Ulstein Hull AS (Norway)	299/PX 121	Platform supply vessel	Delivered in March, 2013
Bergen Group BMV (Norway)	168/ VS 465	Field support vessel	Delivered in June, 2012
Argali Holdings Ltd. (Norway)	832/Havyard 832	Platform supply vessel	Delivered in April, 2012
Estaleiros Navais de Peniche (Portugal)	10184	Floating dock	Delivered in May, 2012
Damen Shipyards Bergum (The Netherlands)	9456/PSV 3300	Platform supply vessel	Under construction
Damen Shipyards Bergum (The Netherlands)	9457/PSV 3300	Platform supply vessel	Under construction
Ulstein Hull AS (Norway)	300/SX 121	Inspection, Maintenance and Repair vessel	Under construction



### **Trends of production output**

(tonnage of the treated steel structures)



