

Tug building by Open JSC Pella Shipyard

In 1930's a truck trailer plant of the Ministry of forest industry was built in Leningrad. After the World War II the plant was reconstructed and renamed as Leningrad mechanical plant No 4. In 1950 the plant located on the left bank of the river was stated a task of arranging of a shipbuilding production.

Soon tugs, speedboats, pilot boats and other small size vessels became the major products of the plant. In 1957 the plant was renamed as Leningrad ship engineering plant. In the 1960s the plant developed new production line – GRP production. The first prototypes of such vessels were catching vessels *Nadezhda (Hope)* for the fishing boat *Vostok (East)*, hydrographic vessels *Kayra*, work boats *Bekas*, light hulls for all national deep-submergence vehicles for exploration of the world's ocean and seas. In 1992 the plant was privatized and became Open Joint Stock Company Leningrad shipyard Pella as from 21 June 1996.

The shipyard today

More than 10 years Open JSC Pella occupies a leading position on the Russian tug building market. European and Russian ship owners are attracted by reputation of the Open JSC Pella as a reliable and responsible partner as well as compliance of production of PELLA with modern standard and technical equipment. The stock of Pella's orders is estimated to provide the annual output of at least 12-14 vessels per year. Tugs of PELLA's new generation are successfully operating in all main Russian harbors. High quality and modern techniques of PELLA's tugs are appreciated by customers from Norway, Italy and many other countries. Pella is a joint stock company, with 13 hectares of manufacturing facilities. The company employs 1500 people. Structurally, Open JSC Pella is a holding company with a central parent company uniting a number of subsidiaries and

affiliates, which are independent entities that constitute a single technological chain of production. The structure of management and cooperation of the companies of Open JSC Pella makes it possible on the one part to use initiative and enterprise of each company for efficient operation in a competitive business environment and, on the other part, provides integration of assets and concerted actions for fulfillment of a mutual strategic task. All products manufactured by PELLA constitute a result of many years of experience, engineering and technical creativity of specialists, and their collaboration with leading design

offices in different countries. For the further progress with innovation and development the company recently decided to build an additional shipbuilding complex for Open JSC Pella in the area of 19,9 hectares. The implementation of this new shipbuilding complex for the construction of high-tech vessels up to 120 meters in length and a displacement of up to 3.000 tons is scheduled for 2013-2014. The estimated annual production program will double the output of the yard.

Overview of the standard tug designs

PELLA produces a wide range of high maneuverable tugs with capacities from 1.500 to 5.000 kW, of designs RAScal 2000, 90600, 16609, PE-65 and PS-45. Moreover Open JSC Pella constructs modern pilot boats, hydrographic boats and high speed special purpose boats.



WESTERN SEQI is Pella design 16609

photo: Pella Shipyard



Navy tug PB-395 is Pella design 90600

photo: Pella Shipyard



RASCAL 2000 tug is designed by Robert Allan Naval Architects of Vancouver image: Pella Shipyard



DIR is a PE-65 escort tug design

photo: Pella Shipyard

RAscal 2000 tug

The RAscal 2000 is designed by Robert Allan Naval Architects of Vancouver in Canada. This escort tug has a length of 20,40 meters, a breadth of 8,50 meters and a draught of 3,30 meters. The tug is powered by two Caterpillar C18 main engines each of 395 kW, C32 main engines each of 650 kW or equivalent, which drive two Rolls-Royce full revolving Z-drives. The bollard pull is 14-20 tons and the free running speed is 10,5 knots. For electrical power two diesel generators of 86 kW, 380 V, 50 Hz each are installed. Tank capacities are as follows: fuel oil 24 m3 and fresh water 5 m3. The deck equipment comprises of a electro-hydraulic anchor-towing-mooring winch on the foredeck and on the afterdeck a G M H type towing hook and a electro-hydraulic cargo crane. The firefighting system consists of a diesel fire pump with the capacity of 425 m3/h, two water-foam monitors with

a capacity of 100 m3/h each and a water curtain system. This system satisfies with FF3 WS class according to RMRS rules.

The radio equipment is provided in accordance with GMDSS requirements for A1 navigation area. The bow fender consists of vertical plane rubber profile and the stern and side fenders consist of 300 mm D-shaped rubber profile. There is accommodation for a crew of 3 persons.

PELLA 90600 tug

This shiphandling tug is designed by Open JSC "Pella". This escort tug has a length of 25,40 meters, a breadth of 8,80 meters and a draught of 3,80 meters. The tug is powered by two Caterpillar C32 or 3512B main engines each of 746-1.194 kW or equivalent, which drive two Rolls-Royce full revolving Z-drives. The bollard pull is 23-35 tons and the free running speed is 12 knots. For electrical power two diesel generators of 86 kW, 380 V, 50 Hz each are installed. Tank capacities are as follows: fuel oil 70 m3, lubrication oil 1,6 m3, fresh water 12 m3 and ballast water 18 m3. The deck equipment comprises of a electro-hydraulic anchor-towing-mooring winch on the foredeck and on the afterdeck a G M H type towing hook and a electro-hydraulic cargo crane. The firefighting system consists of a diesel fire pump with the capacity of 800 m3/h, two water-foam monitors with a capacity of 300 m3/h each and a water curtain system. This system satisfies with FF3 WS class according to RMRS rules. The radio equipment is provided in accordance with GMDSS requirements for A1 navigation area. The bow fender consists of one row of 600 mm round rubber profile and the stern and side fenders consist of 300 mm D-shaped rubber profile. There is accommodation for a crew of 8 persons.

PELLA 16609 tug

This shiphandling and escort tug is designed



PS-45 multifunction rescue tug was introduced in 2012

image: Pella Shipyard



PS-45 multifunction rescue tug was introduced in 2012

image: Pella Shipyard

by Open JSC "Pella". This escort tug has a length of 28,50 meters, a breadth of 9,50 meters and a draught of 4,30 meters. The tug is powered by two Caterpillar 3512B or 3516B main engines each of 1.305-1.585 kW or equivalent, which drive two Rolls-Royce full revolving Z-drives. The bollard pull is 39-54 tons and the free running speed is 12,5 knots. The tug is capable of escorting operations up to 10 knots. For electrical power two diesel generators of 86 kW, 380 V, 50 Hz each are installed. Tank capacities are as follows: fuel oil 80 m3, lubrication oil

1,5 m3, fresh water 18 m3 and ballast water 16 m3. The deck equipment comprises of a electro-hydraulic double-drum anchor-towing-mooring winch on the foredeck and on the afterdeck a G M H type towing hook and a electro-hydraulic cargo crane. The firefighting system consists of a diesel fire pump with the capacity of 800 m3/h, two water-foam monitors with a capacity of 300 m3/h each and a water curtain system. This system satisfies with FF3 WS class according to RMRS rules. The radio equipment is provided in accordance with GMDSS requirements

for A1+A2 navigation area. The bow fender consists of two rows of 600 mm round rubber profile and the stern and side fenders consist of 300 mm D-shaped rubber profile. There is accommodation for a crew of 8 persons.

PELLA PE-65 escort tug

This escort tug has a length of 33,50 meters, a breadth of 12,10 meters and a draught of 5,00 meters. The tug is powered by two Caterpillar 3516B main engines each of 1.800-1.900 kW or equivalent, which drive two Rolls-Royce full revolving Z-drives. The bollard pull is 60-65 tons and the free running speed is 13,5 knots. Holding force at escort, not less than 76 tons at a speed of 10 knots. For electrical power two diesel generators of 150 kW, 380 V, 50 Hz each are installed. Also a emergency diesel generator 36 kW, 380 V, 50 Hz and a harbor diesel generator 86 kW, 380 V, 50 Hz. Tank capacities are as follows: fuel oil 190 m3, lubrication oil 2,5 m3 and fresh water 19 m3. The deck equipment comprises of a electro-hydraulic double-drum anchor-towing-mooring winch on the foredeck and on the afterdeck a electro-hydraulic towing winch with spooling gear, a G M H type towing hook and a electro-hydraulic cargo crane. The firefighting system consists of a diesel fire pump with the capacity of 800 m3/h, two



KLASKO-2 and KLASKO 1 were built for AB Klaipėdos jūrų krovinių kompanija

photo: coll. Lekko



TAK-6 was built for UAB Towage & Marine Assistance, Lithuania

photo: coll. Lekko

water-foam monitors with a capacity of 300 m³/h each and a water curtain system. This system satisfies with FF3 WS class according to RMRS rules. The radio equipment is provided in accordance with GMDSS requirements for A1+A2+A3 navigation area. The bow fender consists of two rows of 600 mm round rubber profile and the stern and side fenders consist of 300 mm D-shaped rubber profile. There is accommodation for a crew of 8 persons.

PELLA PS-45 multifunction rescue tug

In 2012 Open JSC "Pella" introduced a new project into the line of tug designs. This design is a multi-purpose rescue tug of project PS-45 having an unrestricted navigation area, which is able to solve a number of complex problems at sea, such as: to supply offshore floating objects with equipment and materials, to deliver staff and cargoes to remote objects at sea, to conduct rescue operations, to provide assistance to vessels in distress, to conduct search, rescue, evacuation and accommodation of people and for provision of medical care, towing of marine vessels and floating objects and structures in ice and open water, fire fighting in the water and on shore, fire extinguishing of burning fuel on the water surface, performing underwater maintenance works. This large multifunctional tug has a length of 48,00 meters, a breadth of 13,00 meters and a draught of 5,40 meters. The tug is powered by two Caterpillar C280 main engines each of 2.400-2.500 kW or equivalent, which drive two Rolls-Royce full revolving Z-drives. The bollard pull is 80 tons and the free running speed is 14,5 knots. The tug is capable of breaking ice of 1 meter with a speed of 2-3 knots and escorting

operations up to 10 knots. For electrical power two diesel generators of 160 kW, 380 V, 50 Hz each are installed. Also a harbor-emergency diesel generator 85 kW, 380 V, 50 Hz. The deck equipment comprises of a electro-hydraulic anchor-towing-mooring winch on the foredeck and on the afterdeck a electro-hydraulic towing winch with spooling gear, a G M H type towing hook, a electro-hydraulic cargo crane with a capacity of 2,9 tons at 13 meters and room for two 20 feet containers for diving equipment . The firefighting system consists of two diesel fire pumps with the capacity of 2.000 m³/h, three water-foam monitors with a capacity of 1.200 m³/h each and a water curtain system. This system satisfies with FF3 WS class according to RMRS rules. The tug has an endurance of 20 days at sea or 3.500 miles. The radio equipment is provided in accordance with GMDSS requirements for A1+A2+A3 navigation area. The bow fender consists of one rows of 600 mm round rubber profile and one row of flat rubber profile. The stern and side fenders consist of 300 mm D-shaped rubber profile. There is accommodation for a crew of 8 persons and 35 extra staff during rescue operations. The tug is equipped with six life rafts for rescue operations with a capacity of 25 persons, a high speed rescue boat with outboard motor. Further a special device for lifting people from water on board, a removable helicopter platform and a device for lifting people from the deck of a vessel on a helicopter. The tug is also equipped with a medical block for 6 persons.

Building list tugs 2003 – present

thanks are due to Rimma Kolontay for the facts and figures.

Nr.	Year	Projectnr.	Name
1	2003	90600 tug	Flagman
2	2004	90600 tug	Tolyattiazov
3	2004	90600 tug	Azot
4	2004	90600 tug	V.Beltsov
5	2004	16609 tug	Rusich
6	2004	16609 tug	Vyaticn
7	2004	90600 tug	Favorite
8	2005	90600 tug	Petergof
9	2005	90600 tug	Pavlovsk
10	2005	16609 tug	Skif
11	2005	90600 tug	Sestoretsk
12	2006	90608 pusher tug	Dioniso
13	2006	90608 pusher tug	Eracle
14	2006	90600 tug	Beluga
15	2006	90600 tug	Grifon-5
16	2006	90600 tug	Navaga
17	2007	16609 tug	Bikin
18	2007	16609 tug	Taman
19	2007	16609 tug	Piter
20	2007	90600 tug	Akmal
21	2007	90600 tug	Pioner
22	2007	90600 tug	Kommunar
23	2007	16609 tug	Western Seqi
24	2008	90600 tug	Polyarniy
25	2008	90600 tug	Sevryga
26	2008	90600 tug	Grifon-7
27	2008	16609 tug	Klasko-1
28	2008	16609 tug	Tugnuy
29	2008	16609 tug	Urgal
30	2009	16609 tug	Taymen
31	2009	16609 tug	Tak-6
32	2009	16609 tug	Klasko-2
33	2009	16609 tug	Radomir
34	2009	16609 tug	Ratibor
35	2009	90600 tug	RB-34
36	2009	90600 tug	RB-47
37	2009	90600 tug	RB-48
38	2010	16609 tug	Dobrynya
39	2010	16609 tug	Dunai
40	2010	90600 tug	Aleut
41	2010	90600 tug	Hasan
42	2010	90600 tug	RB-386
43	2010	90600 tug	RB-389
44	2010	PE-65 tug	DIR
45	2011	90600 tug	Pomorie
46	2011	90600 tug	RB-43

Owner
Mahachkala Maritime Trade Harbor
Tolyattiazot, Novorossiysk
Tolyattiazot, Novorossiysk
Admiralty Shipyards, St.Petersburg
Primorsk Trade Harbor
Primorsk Trade Harbor
Mahachkala Maritime Trade Harbor
Port fleet, St.Petersburg
Port fleet, St.Petersburg
Primorsk Trade Harbor
Port fleet, St.Petersburg
Pietro Barbaro Volga Limited, Italy
Pietro Barbaro Volga Limited, Italy
Ust-Luga Company, Ust'-Luga Harbor
Tug Company Gryphon Ltd. St.Petersburg
Ust-Luga Company, Ust'-Luga Harbor
Rosneft Oil Company, Nakhodka
Taman Neftegaz, Temruk
Taman Neftegaz, Temruk
Baltic fleet, St.Petersburg
JSC Sodrugestvo-soy, Kaliningrad
JSC Sodrugestvo-soy, Kaliningrad
Western Bulk, Norway
Open JSC MMC Norilsk Nickel"
Ust-Luga Company, Ust'-Luga Harbor
Tug Company Gryphon Ltd. St.Petersburg
AB Klaipėdos jūrų krovinių kompanija, Lithuania
SUEK AG, port Vanino
SUEK AG, port Vanino
Ust-Luga Company, Ust'-Luga Harbor
UAB Towage & Marine Assistance, Lithuania
AB Klaipėdos jūrų krovinių kompanija, Lithuania
Sovkomflot
Sovkomflot
RF Navy
RF Navy
RF Navy
Sovkomflot
Sovkomflot
Federal unitary government enterprise Rosmorport
Federal unitary government enterprise Rosmorport
RF Navy
RF Navy
JSC "Primorsk Oil Terminal"
RF Navy
RF Navy

47	2011	90600 tug	RB-45	RF Navy
48	2011	90600 tug	RB-20	RF Navy
49	2011	90600 tug	RB-27	RF Navy
50	2011	90600 tug	RB-42	RF Navy
51	2011	16609 tug	Sfinksa	Free Port of Riga
52	2012	16609 tug	Delfin	RF Navy
53	2012	16609 tug	Kasatka	RF Navy
54	2012	90600 tug	Putorani	Open JSC MMC Norilsk Nickel"
55	2012	90600 tug	RB-381	RF Navy
56	2012	90600 tug	RB-394	RF Navy
57	2012	90600 tug	RB-385	RF Navy
58	2012	PE-65 tug	Alexandr Zryachev	Open JSC SC Zvyozdochka
59	2013	90600 tug	RB-392	RF Navy
60	2014	Grifon-?		Tug Company Gryphon Ltd, St.Petersburg



GRIFON-7 is Pella design 90600

photo: Leo Varekamp



PETERGOF also Pella design 90600

photo: Leo Varekamp