

Energomontaż-Północ Gdynia

Offshore installations – prospective activity and production precesses of the components customized for domestic and foreign clients.



**BALTEXPO 2013** 

### **Company history and ownership**



Energomontaz-Polnoc was established in 1953 and at the beginning was significantly involved in mechanical erection of utilities, industrial and municipal power generating stations, modernisations and overhaul works in power plants, production of steel structures, tanks and pipelines.

The turn on 80s and 90s was a time of profound economic and political transformation, that changes the company's face. Energomontaz-Polnoc Gdynia Ltd. (EPG) expanded the service offer on marine sector, i.e. ports, shipbuilding, ship repairing, as well as on chemical, petrochemical and nuclear industry. Since 2001 we are involved in production for offshore sector.

Energomontaż-Północ Gdynia is a part of MARS Shipyards & Offshore Group.







### Offshore installations – prospective activity



#### Oil and Gas:

- Floating drilling and processing units
- Topsides on foundations
- Subsea equipment
- Onshore processing plants

#### Renewable energy:

- Wind mills
- Tidal current turbine
- Wave pawer generators
- Transformers topsides

#### Servicing floating units









Floating drilling and processing units











Topsides on foundations



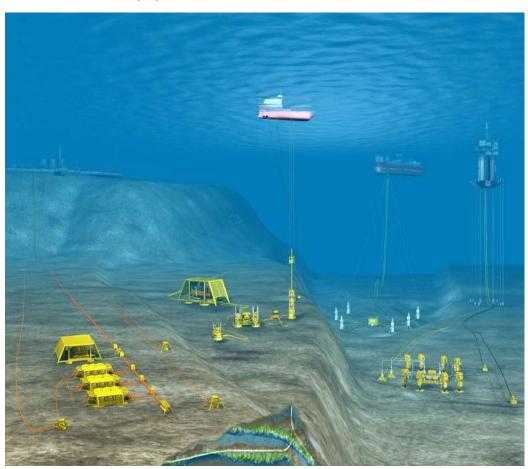








Subsea equipment











Onshore processing plant





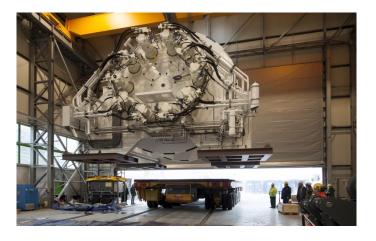






Servicing floating units





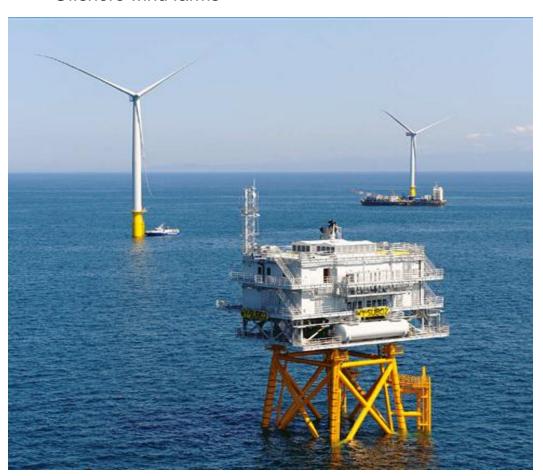


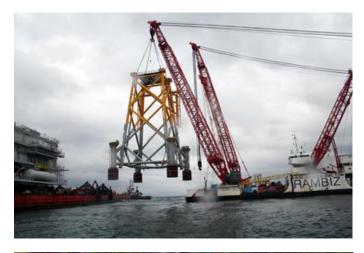


# Offshore installations – prospective activity Renewable Energy



Offshore wind farms





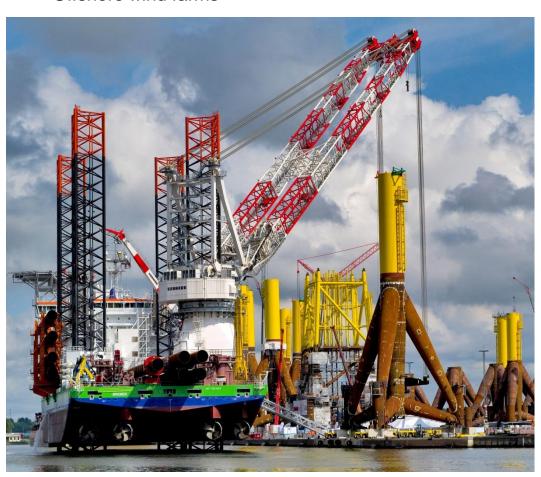




# Offshore installations – prospective activity Renewable Energy



Offshore wind farms









# Offshore installations – prospective activity Renewable Energy



Tidal & wave





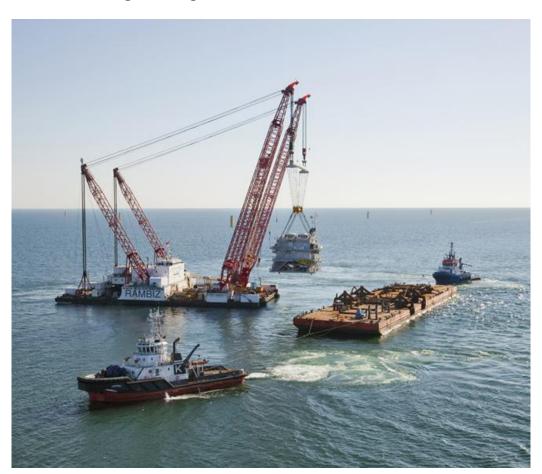




### Offshore installations – prospective activity



Servicing floating units











Energomontaż-Północ Gdynia

Production processes
of large components for offshore sector
at Energomontaz-Północ Gdynia



### Offshore installations - production processes Engineering



Energomontaż-Północ Gdynia Ltd. has established it's own Engineering Office working under name - EPG Design - located at the same location as EPG Workshop.

Company possess 18 fully equipped design stations, working with following systems:

- Nupas
- Cadmatic
- Nestix
- AutoCAD







# Offshore installations - production processes Workshop fabrication



#### Fabrication facilities:

Total production and storage area: 82.000sqm

Workshop halls area: 10.200 sqm

• Roofed storage area: 3.900 sqm

Technological line for corrosion protection: 1.800 sqm

Equipment for processing of plates up to 150 mm,







## Offshore installations - production processes Yard assembly



- Total assembly site area: 43.969 sqm.
- 352 m of the wharf, 9 m of water depth.
- Drydock with the dimensions: 240 x 40 x 8 m.
- Gantry crane with the lifting capacity up to 500 tons, and with the 41 m height up to the hook.
- Shore cranes with the lifting capacity 20 and 80 tons.
- Admissible loads capacity of the assembly yard: up to 50 tons/sqm.
- Capability for on-the-wharf assembly of large size structural blocks with the weight up to 4.000 tons.







### Offshore installations - production processes Load-out



- Cranes with lifting capacities of 80, 40 and 20 tons,
- Floating crane with the lifting capacity up to 300 tons available upon request.
- Gantry crane (passing over the drydock and the assembly yard) with the lifting capacity up to 500 tons,
- Hydraulic skidding onto the transportation barges of structures with the weight up to 4.000 tons.







## Offshore installations - production processes Continuous development and investments



- own engineering office,
- construction of a production hall (abt. 2.400 sqm) inclusive:
  - Installation inside the hall of two gantry cranes with the lifting capacity of 63 tons each (total 126 tons),
  - Installation of a turning and boring lathe
     FKD 60/ 80Y CNC machining center with the following machining parameters:

turning diameter up to 12 m,
height of the object up to 5 m,
table load capacity up to 120 tons.







## Offshore installations - production processes Continuous development and investments



- Drilling, boring and milling FLF16 CNC machining center:
  - travel alongside the X axis = 16 m
  - travel alongside the Y axis = 4,5 m
  - travel alongside the Z axis = 2 m
- Rolls for cold rolling of plates with the thickness up to 150 mm,
- High efficiency multiwire welding automates.



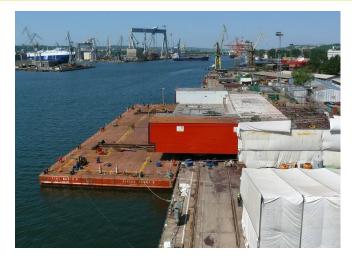






#### Large multidisciplinary sections and modules

- Fabrication and assembly of sections and modules for H6e Drilling Rigs Alfa & Beta (presently Aker Spitsbergen and Aker Barents)
- Total weight of steel structures: 4.500 tons









#### Offshore multydisciplinary sections

- Fabrication and assembly of sections for GJOA
   Semi Platform.
- Total weight of steel structures: 2.700 tons









#### Offshore steel sections and nodes

- Fabrication and assembly of steel deck sections and nodes for project EKOFISK 2/4 Z
- Total weight of steel structures: 1850 tons









#### **Subsea structures**

- Fabrication of subsea hatches and covers for the Goliat Project.
- Total weight: 350 tons









#### **FPSO Modules**

- Fabrication, assembly and tesing of gas compression module & cooling module for FPSO "Sevan Voyageur".
- Weight: 430 tons & 270 tons









#### **FPSO Modules**

- Fabrication, assembly and testing of FGRU modules for PETROBRAS FPSO P58 & P62.
- Weight: 2 x 47 tons







#### Offshore module and bridge

- Fabrication, assembly and testing of modules and bridge for ELDFISK 2/7 S project for Conoco Phillips.
- Total weight of steel structures: 3200 tons









#### **Modules for AGMP Platform**

- Fabrication and assembly of Separator Module, Cantilever Structure, Pig Trap Module and Pig Receiver Module for Total – project Anguille.
- Weight: 80 + 75 + 53 + 26 tons







#### **Cranes for AHTS Vessel**

- Fabrication and installation of A-Frame structure on AHTS vessel Skandi Skansen
- Weight: 232 tons







#### Module handling tower for offshore vessels

 Fabrication and assembly of module handling tower for offshore vessel "Scandi Aker".

• Weight: 429 tons

• Dimensions: 43 x 18,5 x 12,7 m









#### **Pipe laying towers**

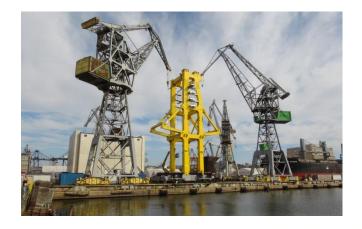
Fabrication of J-type pipe lay towers
 (2 pcs) for Odebrecht PSLV

• Weight: 800 tons/pc

Height: 36 m











#### **Winches**

- Fabrication of main winches for offshore vessels
- Weight: 115 tons/pc
- Dimensions: 6,1 x 4,4 x 4,3 m









#### **Onshore modules**

- Fabrication and assembly of 15 completly equipped pipe racks for Ormen Lange project.
- Weight: 2200 tons









#### **Topside for offshore wind farms**

- Fabrication of transformer platform for offshore Rødsand Wind Farm (DK)
- Weight: 350 tons









#### **Topside for offshore wind farms**

- Fabrication of two substation topsides for Walney Offshore Wind Farm (UK)
- Weight: 1.300 tons









- Fabrication of transition piece elements groutskirts for London Array Offshore Wind Farm (UK)
- Total weight: 2.560 tons









#### Steel structure for offshore wind farms

 Fabrication of transition piece pedestals for London Array Offshore Wind Farm Barges (UK)









- Prefabrication of cathodic protection structures for London Array Offshore Wind Farm (UK)
- Total weight: 2.072 tons









- Fabrication and installation of seafasteing beams on three vessels for transportation of TP and MP for Gwynt y Môr Offshore Wind Farm (UK).
- Total weight: 335 tons









- Fabrication of external platforms and TP covers for Gwynt y Môr Offshore Wind Farm (UK).
- Total weight: 800 tons







### Offshore installations – Realizations Conversions



#### Offshore vessels

 Repair and Conversion of "Willem de Vlamingh" from stone dumping into cable laying vessel.

• DWT: 6500

LOA/LPP: 115 m

Draft: 5,4 m







### Offshore installations – Realizations Conversions



#### **Geophysical vessels**

 Conversion and repair of geophysical vessel "Kommandor Calumn".

DWT: 620

LOA/LPP: 76 m

• Draft: 4,5 m







### Offshore installations – Realizations Conversions



#### Offshore vessels

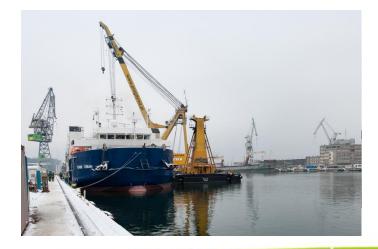
Coversion of cable laying vessel "Team Oman"

• DWT: 4800

LOA/LPP: 86 m

• Draft: 3,6 m







## Example of recent activity of vessels converted and built by MARS companies



#### **Northwind Offshore Wind Farm**

 Heavy lift jack-up vessel "Innovation" built by Crist installing of wind towers.



 Willem de Vlamingh – cable laying vessel converted by Energomontaż-Północ Gdynia - installing of 245kV cable connecting the offshore farm with the coast







### Energomontaż-Północ Gdynia

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Thank you for your attention

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