



## TECHNICAL DESCRIPTION

Madrid, 9<sup>nd</sup> of September 2024

Installed capacity	6 x 9,73MW, 11 kV, 50 Hz
Fuel	Natural gas (consumption approx. 2200 m3/h per unit at full load)
Engines	6 x W20V34SG, running at 750 rpm
Alternators	6 x AKV 21 162 KVA, 11 kV, 50 Hz, p.f. 0,8
Year of manufacturing	2011
Working hours	21.000 hours
Servicing	Wärtsilä, 16000 hours
Cooling system	Closed loop radiators
Control system	UNIC, supported system by Wartsila
Status	In excellent condition, dismantled in 2021, professional conservation, available in a warehouse

### TERMS OF PAYMENT:

- Advance payment of 30% - upon signing the contract and upon receipt of the invoice.
- Advance payment of 70% - at the loading of the vessel.

### DELIVERY:

- EXW Radomir, Bulgaria /INCOTERMS 2020).
- All costs for transport, loading, storage after the delivery of the equipment in the city of Radomir (Bulgaria) are at the expense of the Buyer.



## APPENDIX № 1

### SCOPE OF SUPPLY – 6 units of WARTSILA gas engine, model 20V34SG



#### A. POWER GENERATION EQUIPMENT

##### A1 GENERATING SET

###### A1.1 ENGINE

- Wärtsilä 20V34SG engine, 750 RPM
- Flywheel cover
- Common base frame
- Flexible connections between engine and external piping
- Generating set assembly
- Set steel springs

###### A1.2 GENERATOR

- Generator - 50 Hz, 11 kV, F/B, 0,8 P.F.
- Flexible coupling

#### A2 MECHANICAL AUXILIARY SYSTEMS

##### A2.1 AUXILIARY MODULES

- Engine auxiliary module EAM
- Exhaust gas module NHA 051
- Engine auxiliary module platform

##### A2.2 FUEL SYSTEM

##### GAS SYSTEM



- Main safety shut off valve - engine specific
- Gas regulating unit RGM
- Flow meter for gas regulating unit

#### A2.2.2 GAS SYSTEM PIPING

- Piping and valves - gas system

#### A2.3 LUBRICATING OIL SYSTEM

- Lubricating oil used/service tank
- Lubricating oil used/service tank equipment
- Lubricating oil transfer pump – stationary
- Lubricating oil transfer pump - mobile
- Oil mist separator
- Lubricating oil heat exchanger (mounted on the engine)
- Lubricating oil thermostatic valve (mounted on the engine)

##### A2.3.1 LUBRICATING OIL SYSTEM PIPING

- Piping and valves - lubricating oil system dismantled

#### A2.4 COMPRESSED AIR SYSTEM

- Instrument air compressor unit Instrument air bottle
- Starting air compressor unit – Sperre single, electric
- Starting air bottle

##### A2.4.1 COMPRESSED AIR SYSTEM PIPING

- Piping and valves - compressed air system

#### A2.5 COOLING SYSTEM

- Set cooling radiator (7.5 kW fans)
- Set cooling radiator ladder and railings
- Low temperature circuit expansion vessel
- Maintenance water tank unit
- High temperature circuit preheating unit (mounted on the Engine auxiliary module)
- Low temperature thermostatic valve (mounted on the Engine auxiliary module)
- High temperature thermostatic valve (mounted on the Engine auxiliary module)

##### A2.5.1 COOLING SYSTEM PIPING

- Piping and valves - cooling system dismantled

#### A2.6 INTAKE AIR SYSTEM

- Charge air filter AAF
- Charge air silencer
- Charge air ducting

#### A2.7 EXHAUST SYSTEM

- Exhaust gas branch pipe (mounted on the exhaust gas module)



- Exhaust gas silencer
- Safety vent
- Exhaust gas ventilation fan (mounted on the exhaust gas module)
- Exhaust gas ducting - insulated, outdoor auxiliary area
- Exhaust gas ducting - insulated, engine hall
- Exhaust gas stack pipe – insulated

#### **ELECTRICAL SYSTEMS**

- CONTROL SYSTEM
- CONTROL PANELS
- CABLES AND ACCESSORIES
- MEDIUM VOLTAGE SYSTEM + CABLES
- LOW VOLTAGE SYSTEM + CABLES
- DC SYSTEM

Madrid, 9<sup>nd</sup> of September 2024

Sincerely,

Victoria Carlota Benitez – Director of Vipe Power Energy