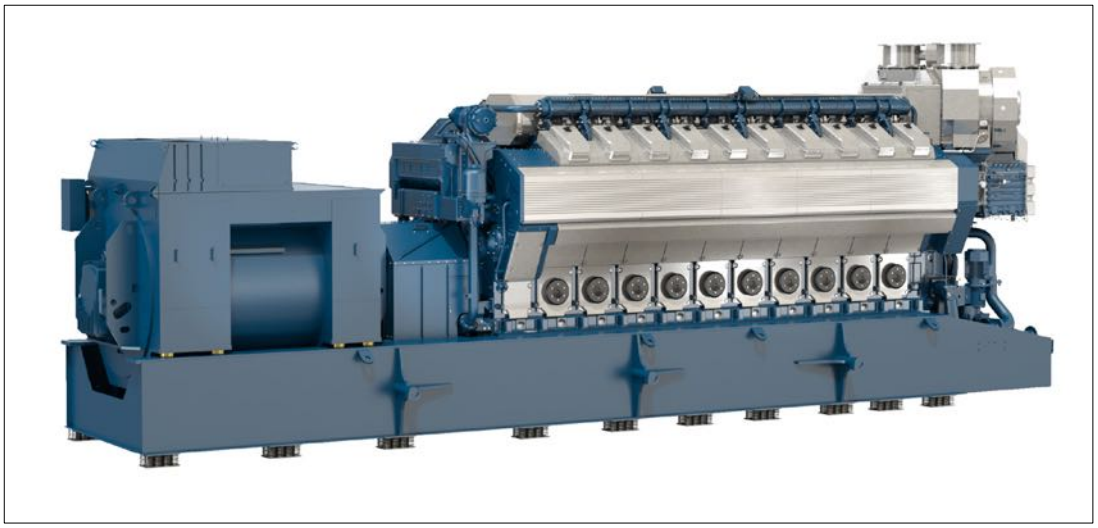
USP&E

17.5MW Natural Gas Power Plant

ZERO Hour. Uninstalled.
2 x Wartsila 20V34 SG Generator Sets



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Overview

USP&E Global hereby presents **zero-hour, uninstalled Wartsila 17.5 MW Natural Gas power Plant with 2 x 20V34 SG generators**.

Delivered by Wartsila in 2009 and NEVER installed. All equipment is intact and is complete with installation & operation manuals, other documentation and spare parts. The generators have the original preservation from the factory, as they are never installed. Wartsila has inspected these machines and they were in flawless condition according to that inspection.

This complete power plant equipment including building structures is still in original shipment crates. The two Wartsila 20V34 SG natural gas engine driven generators have a total gross electrical output 17.46 MWe at site condition (100 m elevation, temperature 20 °C). The plant has a heat recovery system for hot water production, and it has radiator cooling system for 100 % of heat load. Power plant has advanced Wartsila control and supervision system with centralized Wartsila Operator's Interface System (WOIS). The engines are controlled with Wartsila Engine Control System (WECS).

Total shipment includes 2 generating sets, 10 oversized parcels packed on 5 x 40-feet flat track container and 30-35 x 40´ containers.

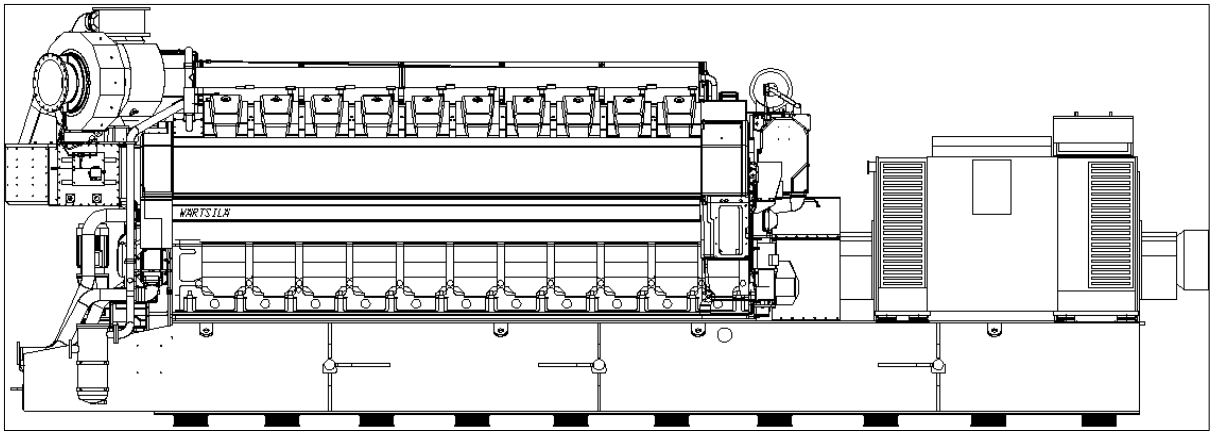
1. Plant Description and Operation

1.1 Technical Characteristics

Power generation:	2 x 8 730 kW at 11 kV, 50 Hz
Hot water (90 °C) production:	2 x 6450 kW (from 70 to 90 °C)
Fuel:	Natural gas
Engines:	2 x W20V34SG, running at 750 rpm
Alternators:	2 x AKV 10913 kVA, 11 kV, 50 Hz, p.f. 0.8
Operating hours:	ZERO
Original heat rate (at alt.)	8124 kJ/kWhe (44.5 %)
Plant own consumption:	389 kW
Cooling system:	Closed loop radiators

1.2 Dimensions

The Wartsila 20V34SG engine and the generator are mounted on a common base frame. The common base frame is flexibly mounted on a concrete foundation by means of steel springs.



The Wärtsilä 20V34SG generating set main dimensions are:

Length	12.700 m
Width	3.300 m
Height	4.650 m
Weight	131,500 kg

(The dimensions and weight may vary depending on the generator make and type.)

1.3 Design Philosophy

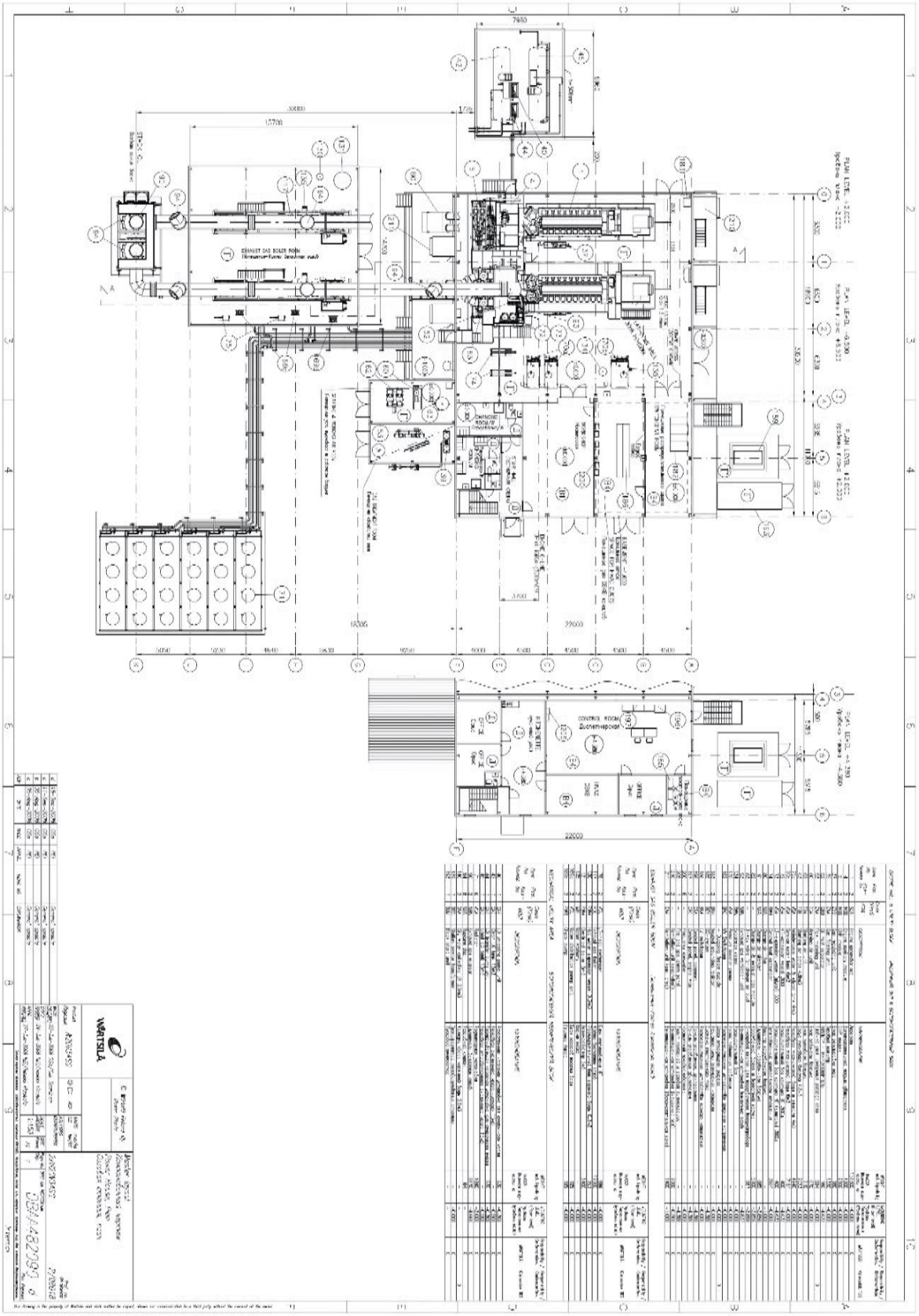
The Wartsila 34SG was developed in response to the market need for bigger gas engines. Its design principles are based on the well-proven technology of the 18V version but with substantial improvements. The Wartsila 34SG lean-burn gas engine utilizes the frame of the new Wartsila 32 diesel/heavy fuel engine with its advanced integrated lube oil and cooling water channels. The bore has been increased to 340 mm to fully utilize the power potential of this engine block.

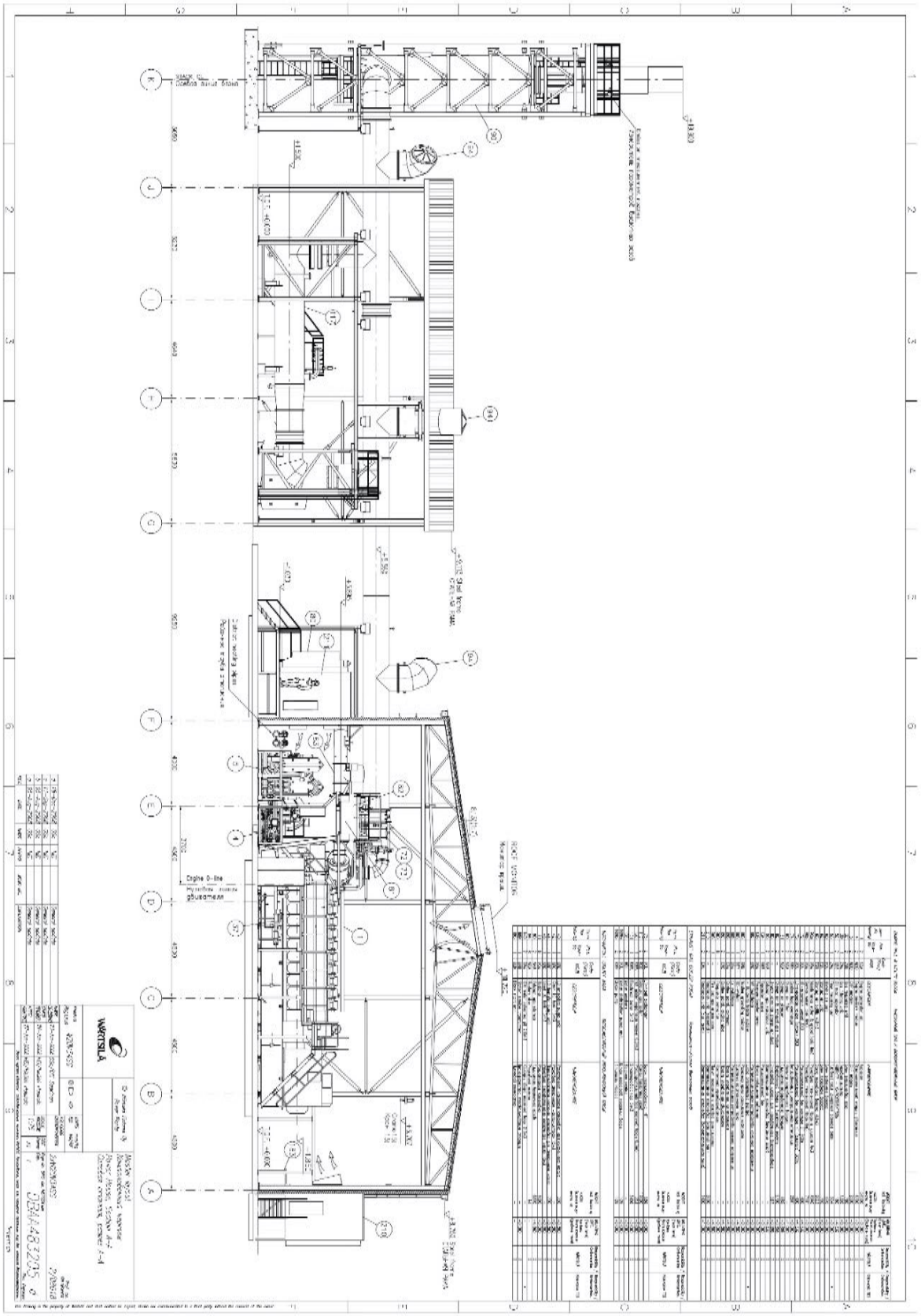
The Wartsila 34SG meets current and future requirements for overall cost of ownership. It is designed for flexible manufacturing methods and long maintenance-free operating periods. The engine is fully equipped with all essential ancillaries and a thoroughly planned interface to external systems.

The Wärtsilä 34SG combines high efficiency with low emissions. This is achieved applying state-of-the-art technology with features including:

- use of a lean gas mixture for clean combustion
- individual combustion control and monitoring, providing even load on all cylinders
- stable combustion, ensured by a high-energy ignition system and pre-combustion chamber
- self-learning and self-adjustable functions in the control system
- efficient heat recovery design
- minimal consumables.

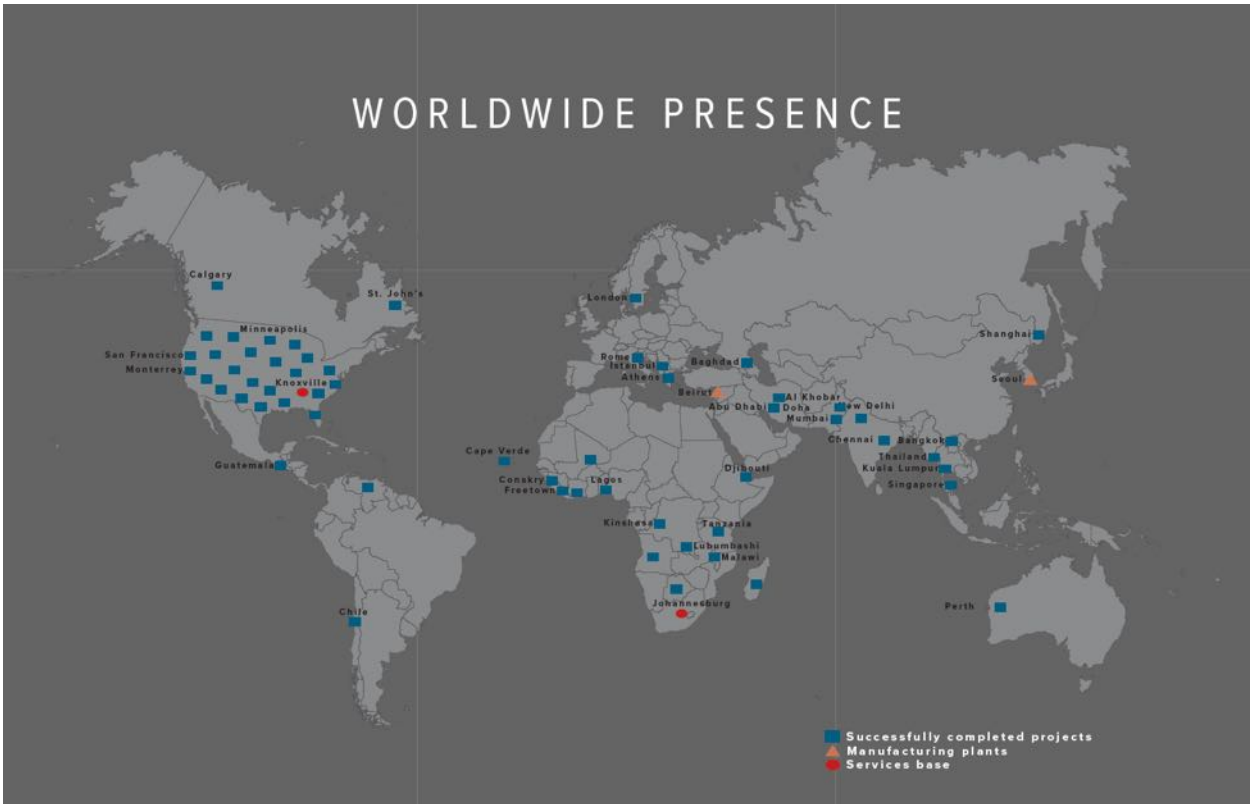
1.4 Plant Layout





2 Photos of the Generator Sets

Contact Us



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