



Vapour Processing System

IPCO Power provides the shipping, power and petrochemical industry with environmental solutions.



Vapour Processing System

The storage, loading and discharging of (petro)chemicals leads to the generation of vapours. These vapours are harmful to the environment and mankind. In the past, these vapours have been released into the atmosphere in an uncontrolled manner, resulting in atmospheric pollution and product loss.

The Vapour Processing System (VPS) is designed to avoid these emissions. At the same time the VPS contributes to the sustainable development of bulk-handling companies by reducing their electricity consumption.



Vapour Processing System at Total, Lyon, FR

How does the VPS work

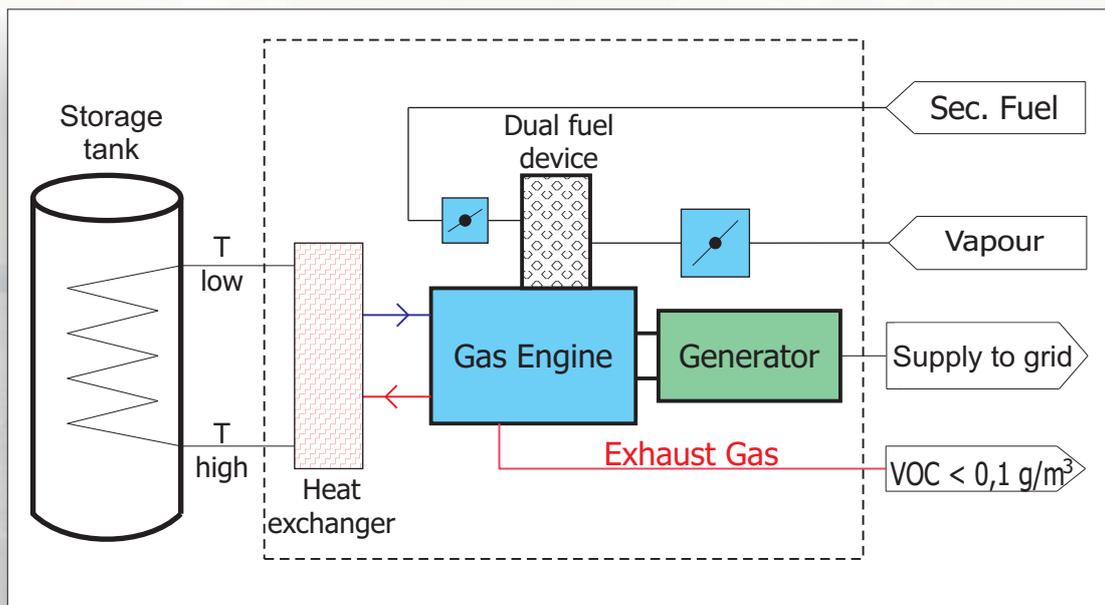
The system consists of a gas engine and generator with a special designed continuous dual fuel device.

The VPS operates as a fully automatic device. As soon as any vapour is detected the system starts operating.

The fuel management system will constantly monitor and adjust all settings within the system to ensure an efficient and effective operation. When the system does not detect any vapour it will shut down automatically.

The collected vapour is converted into electricity by the gas engine and generator. An option is the recovery of the engine heat, which can be used for heating storage tanks as well as buildings at the terminal. The VOC emissions are reduced up to 99.9% and the recovered energy efficiency is 31% of electricity and 76% of heat (when heat recovery is included).

The prime advantage of VPS is that it generates electricity during the process instead of consuming it. The produced electricity can be utilized by the terminal to reduce purchase from the grid. If there is any surplus production of electricity from the VPS, it can be sold to the grid.



A schematic impression of the VPS

Benefits:

Environmental

- VOC reduction up to 99.9%
- The VPS complies to the strictest requirements such as:
 - * EU Directive 94/63/EC
 - * German TA-Luft
 - * NER (Dutch Emission Guidelines)
- No chemical waste

Operational

- Automatic operation & remote controlled
- Containerized units



The gas engine & generator, the heart of the system



VPS for NGT



VPS for Shell Moerdijk

Economics

- Energy revenues instead of energy costs
- Low operation costs
- Short ROI

Flexibility

- Processing of more than 80 different product vapours
- Available in different application sizes; a solution for every throughput; at truck, barge or rail tank-filling
- Can be used as backup power



VPS at NGT, Roodeschool, NL

IPCO Power in the Netherlands has developed the unique VPS for the handling of vapour emissions that are released when transloading chemicals and petrochemicals at chemical plants, tankstorage or refinery facilities.



A complete VPS system with vapour holder

IPCO POWER - VPS
The solution for both your finance and our environment

References:

	Site : Neckarhaven, Rotterdam, Netherlands Equipment : 1 VPS 115 kW and 2x VPS 650 kW Treatment : Gasoline, Naphtha
	Site : Vopak/Shell, Botlek, Netherlands Equipment : 1 VPS 140 kW Treatment : Gasoline, Naphtha, Hexane, Aromatics, Penthane, Xilene
	Site : Shell Chemie Moerdijk, Netherlands Equipment : 1 VPS 140 kW Treatment : BTX, ECR off gas
	Site : Grootammers, Netherlands Equipment : 1 VPS 60 kW Treatment : Gasoline
	Site : Raffinerie Feyzin, France Equipment : 1 VPS 650 kW Treatment : LPG, Aromatics, Gasoline, Butadiene, Benzene
	Site : Huiles Minérales, Eclépens, Switzerland Equipment : 1 VPS 60 kW Treatment : Gasoline
	Site : AOG, Groningen, Netherlands Equipment : 1 VPS 90 kW Treatment : Gasoline
	Site : Eastham, United Kingdom Equipment : 3x VPS 115 kW Treatment : Gasoline, Naphta
	Site : Geleen, Netherlands Equipment : 1 VPS 115 kW Treatment : MTBE, ETBE
	Site : Botlek, Rotterdam, Netherlands Equipment : 1 VPS 650 kW Treatment : Acetone, Aromatics
	Site : Hull, United Kingdom Equipment : 1 VPS 90 kW Treatment : Gasoline
	Site : NoordGas Transport, Roodeschool, Netherlands Equipment : 1 VPS 140 kW Treatment : LPG Condensate
	Site : ALCA Petroleum Company, Antwerp, Belgium Equipment : 1 VPS 115 kW Treatment : Gasoline
	Site : Plochingen, Germany Equipment : 1 VPS 90 kW Treatment : Gasoline
	Site : Neuss, Germany Equipment : 1 VPS 115 kW Treatment : Gasoline
	Site : Salzgitter, Germany Equipment : 1 VPS 115 kW Treatment : Gasoline
	Site : AFS, Schiphol Airport, Netherlands Equipment : 1 VPS 300 kW Treatment : Jet-A1 vapour / off spec Jet-A1

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