

Newsletter 1-14

November 2014

It is with great pleasure we hereby announce the establishment of VOCZero Ltd. International investors established VOCZero Ltd. in the UK, and engaged 1st of November Morten Reimer Hansen, to build up the international sales and market competencies of a fully equipped VRU supplier, in cooperation with the managing director, Karin Jensen. This is now far in the process, with a major move through the acquisition of the VRU supply company, HydroCarbon Processes Ltd. in November. HydroCarbon Processes Ltd. is based in Thailand, selling, designing, producing and servicing VOC vapour processing plants, to the oil and petrochemical industry in Asia Pacific and CIS-countries.

VOCZero Ltd. consists of a group of graduated engineers having more than fifty years' experience with VOC Vapour Recovery in common, and been involved in the sales, design, supply management, fabrication, delivery, installation, commissioning, and Life Cycle Services of more than three hundred VOC Vapour Processing Systems. The experienced employees of VOCZero have been active worldwide in more than forty countries.

VOCZero Ltd. offers a pre-defined range of Vapour Recovery Units (VRU) for recovery of volatile organic compounds, and VOC Vapour Odour Abatement Systems for removal of odorous vapour, to the oil and petrochemical industry.

The VRU process is based on the well-known technology of adsorption on activated carbon and regeneration of the activated carbon by vacuum. This technology has proven to be the best available for applications like storages, truck, rail, barge and ship loading operations.

VOCZero Ltd. uses a specific, for the purpose developed, activated carbon VZ DuraVOCTM.

The design and selection of parts are made to achieve durable, safe and efficient process plants, and are based on international standards recognized in the oil and gas industry, such as ASME VIII, ASME B31.3, EN 60079 & EN 1127.



The typical VOC vapours to be treated in a vapour processing plant are:

- Gasoline
- Diesel
- E5 Gasohol
- E10 Gasohol
- E20 Gasohol
- E85 Gasohol
- E100 Gasohol
- Methanol
- Benzene
- Toluene
- Xylene
- MTBE
- ETBE
- Naphtha
- Crude Oil



Our Vapour Recovery Units are designed to meet the stringent health and safety requirement set out by European ATEX and Machinery directives.

Emission standards

- 150 mg/Nm³
- 10 g/Nm³
- 35 g/Nm³
- 35 g/m³ loaded product

Key features

- Modular design
- · Prefabricated skids makes installation simple
- Energy efficient

The VOCZero VOC Vapour Odour Abatement System contains VZ ActiveVOC[™] filter material consisting of odorous selective activated carbon, which only is to be replaced, when the capacity of the filter material is fully utilized.



VZ ActiveVOC[™] activated carbon is manufactured under stringent quality control, from scientific selected grades of coal-based carbon. It is activated through a comprehensive controlled process, and pre-treated with chemical reagents, specifically for removal of odorous gasses from vapour streams, in which hydrocarbons are present.

VOCZero Ltd. can assist you in all matters relating to VOC Vapour Processing and you can benefit from our outstanding long-term experience with VOC vapour processing systems in terms of:



We are experts in front-end studies, in which we can help you to:

- analyse your VOC Vapour volumes based on your storage capacity and loading rates for truck, rail and ships, and convert this to a format usable for a capacity design of a VOC vapour processing systems
- investigate site specifics such as climatic conditions, space and utility availability necessary for the design of the VOC vapour processing systems
- hydraulic design of your vapour header for optimal pressure loss through the piping
- assist with a hazard and operability study (HAZOP) for the integration of a VOC vapour processing systems in your terminal
- investment estimation and evaluation for a complete VOC vapour processing systems to be installed



- performance surveillance of your VOC vapour processing systems, documented in reports giving
 - fault diagnostic reason and rectification suggestions
 - bottleneck analysis with suggestions for upgrade and associated costs
 - VOC emission checks, giving VOC vapour processing systems present status and trends
- Training of VOC vapour processing systems operators in daily operation and maintenance

VOCZero Ltd. is available for you, whenever you have a challenge with VOC vapour emission, we will be very happy to assist you. Please take a look at our website: <u>www.voczero.com</u>, and use the contact form there, or contact us directly by replying to this mail.

Yours sincerely VOCZero Ltd.



Morten Reimer Hansen Sr. Vice President, BD & Sales



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