Odour Control Systems Limited

TECHNICAL DATA

TRI-OX™
Catalytic Odour Control Media

Developed for control of high levels of Hydrogen Sulphide in malodorous gas streams

Due to its policy of cont inuous research and development; the Company reserves the right to alter product specifications without prior notification.

"WHAT'S THAT AWFUL SMELL?"

Chances are you have dealt with this question more times than you care to remember. Not all that long ago, nuisance odours were considered unavoidable. Unpleasantries we just had to bear. But no more! Public intolerance of malodour has grown dramatically. Regulatory pressure is rigorous.

Introduction

OCS TRI - OX™ Media selectively removes hydrogen sulphide from process gas encountered in a wide range of industries including: -

- Wastewater Treatment
- Biogas
- Landfill Gases
- Industrial Vent Gases
- Animal Waste Processing
- Chemical Processing

Key Features

OCS TRI - OX™ media has been specially developed to provide sustained neutralisation of hydrogen sulphide. The product offers the following key features: -

- Dry granular form
- Unaffected by moisture
- Safe, easy to handle
- Environmentally safe for easy disposal
- Inert and non hazardous
- Works on demand
- High capacity removals
- Treats H2S levels over 5000ppm

continued overleaf >>>

OCS TRI-OX™ Systems

There are three basic applications for using OCS TRI-OX™ systems to remove Hydrogen Sulphide from gas streams:

1. From odorous air streams - after H_2S is stripped, the air is discharged to atmosphere or treated further by a secondary dry scrubbing system.
2. From biogas produced in anaerobic digesters - H_2S is stripped and the methane is recovered and flared or used as fuel in co-generation equipment.
3. From sour natural gas - to meet pipeline specifications and for flare gas.

In these applications, the odorous air or gas is conveyed to a fixed media bed of OCS TRI-OX™, a granular medium within a vessel. The gas flow is upward through the media bed. H_2S is effectively stripped from the gas before it exits the top of the media bed. The adsorber vessels can be supplied as ASME code pressure vessels, at the required working pressure of the system. For air streams, discharging to atmosphere, the vessels can be closed, vented top, of POLYPROPYLENE, HDPE or GRP Construction.

H_2S is stripped from the gas stream by catalytical chemical reaction providing prolonged removals of over 90%.

Air streams obviously contain oxygen with the H_2S. In this application, continuous regeneration is taking place at the same time as H_2S adsorption. The time to saturation is then much longer than if no oxygen was present.

Biogas comprises mainly methane, nitrogen, carbon dioxide and hydrogen sulphide. Only hydrogen sulphide is adsorbed within the media bed. This means that the methane can be recovered, free of sulphides, for use as a fuel. Also, there is very little, if any, carbon dioxide adsorption. Combustion of methane will not generate sulphur dioxide emissions because the sulphur has been removed from the gas. Typically, digester gas is very corrosive to pipes and equipment due to the presence of moisture and H_2S. With the H_2S removed, corrosion is greatly reduced. H_2S removal from sour natural gas is similar to removal from biogas.

Key Benefits

Unlike other Odour Control media such as carbon, aluminas, biologicals etc. OCS TRIOX™ readily copes with a wide spectrum of sulphide loadings to provide exceptional benefits:-

- Uniquely treats all ranges of sulphides to virtually any required outlet concentration
- Maintenance free
- Can be utilised in both passive and fan assisted treatment systems
- Low cost, simple yet effective sulphide control

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preserving the environment

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APPROVED CONTRACTOR

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