

The FAST system new technology for fumigant disposal and scrubbing of fumigants

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Abstract

The FAST System scrubber accompanies a fumigation chamber and functions to capture and destroy fumigant gases such as methyl bromide, sulfuryl fluoride and other alkyl halides. The system contains a depository holding scrubbing material that creates a complete chemical breakdown of the fumigant introduced. The solution is non-carbon based and is mostly aqueous containing chemical degradation properties. The fumigants, methyl bromide and sulfuryl fluoride, are agitated through the depository and are broken down through the scrubbing solution by an SN2 chemical reaction. By-products of the reaction are retained in the unit leaving only clean air to be released to the atmosphere. The FAST system removes fumigant from a variety of fumigation situations including agricultural and non-agricultural commodities and/or stored products, structures and articles of value. This system can be used with pallets, shipping containers, fumigation chambers, trailers and is able to fumigate small buildings and grain bins from a truck-based mobile system.

Keywords: scrubbing, buffer zones, emissions control, fumigant disposal