BULK STORAGE CONTAINER AND BULK MATERIAL HANDLING ASSEMBLY THEREWITH

Technical Field

The present invention relates to a bulk storage container for use in storing and transporting bulk material, and in particular to a bulk material container for storing particulate catalyst material.

Background

Large scale chemical processing plants utilise catalyst material to improve reactor efficiencies and increase output. Catalyst material, which is typically in the form of catalyst pellets, has a finite process life and eventually requires re-processing or replacing. Therefore vessels are required for the delivery of catalyst material to a reactor, as well as the storage and transport of material during the removal or re-processing of the material. Containers often used for this purpose are referred to as intermediate bulk containers or IBC's.

IBC's typically comprise a rigid metal container, square in cross-section and having an entry opening at the top through which the container is filled. To fill the IBC a chute or spout is commonly used which relies on gravity feed. As the IBC is filled, the bulk catalyst material displaces the air large within the container and large amounts of dust from the catalyst material become entrained within the air. This dust is emitted in an uncontrolled manner through the top opening of the container. The inhalation or ingestion dust from a catalyst material presents a serious health hazard, with many catalyst materials being toxic and also potentially containing carcinogenic substances.

It is therefore desirable to provide an improved bulk storage container which addresses the above described problems and/or which offers improvements generally.