



# PIPEOTECH

## CASE STUDY

### ATEX Zoning reduction & equipotential bonding

*Recycling metallic canisters containing flammable gases to prevent the emission of the gases to the environment and recycle the metallic packing material*

#### ● INDUSTRY CHALLENGES

The client when building their machinery wanted a bolted flange joints with zero fugitive emissions, the lowest ATEX zone possible, and flanges which are equipotentially bonded. Local regulation of piping within industrial settings containing flammable substances (in this instance the propane) required full compliance to local standards with regards to ATEX zoning. Further to this the gasket had to be easy to install and replace ensuring a long lasting, simple to maintain seal.

#### ● BACKGROUND

Aerosol cans, pharmaceutical inhalers, and barbecue propane tanks when expired still contain hazardous flammable material. A machine was developed to capture the liquids and gases within the canisters, preparing them for energy-to-waste applications in a near zero-emissions environment. The metal pressure vessels are compressed into bricks and ejected from the machine, accepted by scrap metal businesses around the world.

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Material

S235 Carbon Steel

Industry

Recycling

Customer

Mobile Equipment Manufacturer



## ● BENEFITS

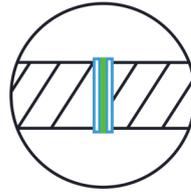
The DeltaV-Seal™ gaskets have been utilized during the manufacture of all new machines. Client Testimonial: [We are] very happy we found Pipeotech [DeltaV-Seal™] gaskets for our application. The zoning reduction around the flanges and that they provide equipotential bonding for the piping are both fantastic attributes and we will continue using them going forward on future projects. We've also recommended them to customers for other piping applications.



REDUCE ATEX ZONES



FIRE SAFE



INSTALL & FORGET



## OPERATIONAL CONDITIONS

PRESSURE: 4 Bar G

ATMOSPHERIC CONDITIONS: Indoor

TEMPERATURE: Ambient

MEDIA (PRODUCT): Propane

SIZE: 1 1/2" to 6"

MEDIA (CLEANING): N/A

## ● SOLUTIONS

Working in partnership with a local ATEX zoning expert, Pipeotech and the recycling machinery manufacturer were successfully able to reduce the ATEX zone around the flanges from ATEX Zone 1 to ATEX Zone 2 with compliance to EN 1127. The process of achieving compliance to EN 1127 included demonstrating the durability of the DeltaV-Seal with EN1591-1 calculations to demonstrate extremely low leakage rates combined with API6FB fire safe performance. With the gasket manufactured from carbon steel it also provides equipotential bonding.



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