

# Primary Mechanical Shoe Seal (MS6)

## General Information:

The MS6 has been used on different tank types, containing a full range of crude and refined products.

The seal is suitable for welded and riveted tanks with wide variations in rim spaces.

All mechanical seal components are easily accessible, allowing installation with the tank remaining "in service". No welding or flame cutting is required to install or maintain the shoes.

All components are pinned or bolted with corrosion-resistant fasteners.

## Design Features:

Metallic shoes can be furnished in galvanised or stainless steel. Shoe height is selected to match the rim configuration, minimise extension below the floating roof and ensure compliance with environmental codes.

Metallic shoes are suspended in the rim space by bolt-on pantograph hanger assemblies. This flexible pantograph mechanism ensures that metallic shoes are held in constant contact with the tank shell despite rim gap variations.

Sealing and roof centring forces are provided by stainless steel springs.

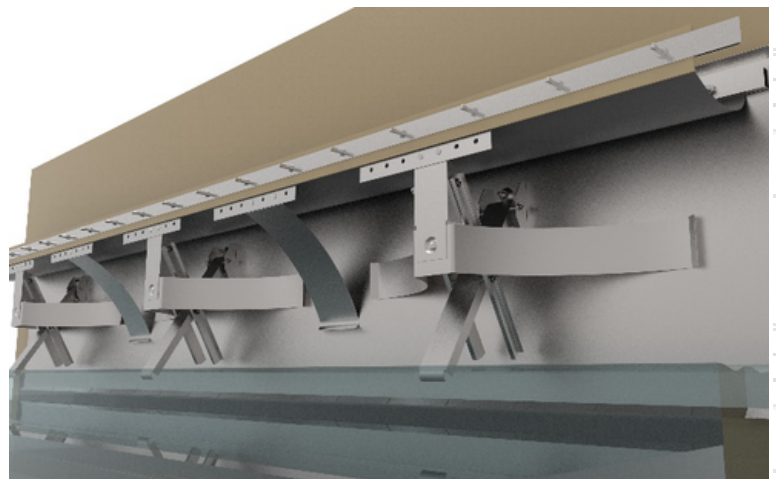
## Vapour Membrane:

We recommend the following materials for membrane:

- **Calcium Silicate:** 1.90mm thick. It complies with DIN 22118, DIN 22100 (Part 1) and the Health and Safety Committee Guide of Shell. Meets the LASTFIRE 6.1 specifications. They are 85% compatible with aromatic products.
- **PTFE (Teflon):** 0.25 and 0.35mm thick. They comply with DIN 22118 and DIN 22100 (Part 1). Meets the LASTFIRE 6.1 specifications. They are 100% compatible with aromatic products.
- **Polyurethane (PU):** 0.4 and 1mm thick. They are 70-100% compatible with aromatic products.

## Main Characteristics

- \*Inservice installation\*
- \*Complying with EPA Requirements\*
- \*Used in internal roofs in compliance with API 650\*
- \*Unique design proved by extensive mechanical testing (e.g. evenly distributed pressure)\*
- \*Suitable for welded and riveted tank shells.\*
- \*Compatible with stored products\*
- \*Maximising usable tank capacity\*
- \*Primary fabric seal (selected for mechanical durability and chemical stability with the product)\*
- \*Easy to install, repair, inspect (all components are accessible from above)\*



## Technical Data

**Rim space:** Normally 200 mm.  $\pm$  100 mm. is the standard but the seal design can be modified to suit larger nominal rim space.

**Aromatic resistance:** 100%

## Material Specification

**Continuous seal:** Teflon/Fiberglass, Calcium Silicate, Urethane, Polyurethane.

**Sealing ring:** Galvanised / Stainless Steel

**Service life:** 10-25 years

**Typical weight:**  $\approx$  20kg per linear meter.