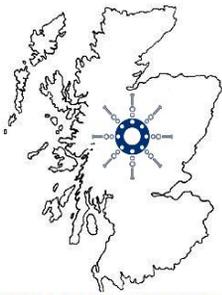


WILLIAM JOHNSTON
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FUEL OIL * LUBE OIL * HP STEAM
HP STEAM * LUBE OIL * SOLAS
HP STEAM * FUEL OIL * SOLAS
L * SOLAS * FUEL OIL * SOLAS
L OIL * SOLAS * HP STEAM
FUEL OIL * LUBE OIL * HP STEAM
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STEAM * FUEL OIL * SOLAS
L * SOLAS * FUEL OIL * SOLAS
L OIL * SOLAS * HP STEAM
FUEL OIL * LUBE OIL * HP STEAM
LUBE OIL * HP STEAM * FUEL OIL * SOLAS



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EXCLUSIVE SCOTTISH DISTRIBUTOR

INTRODUCTION

For many years, fires and other accidents have been an issue within engine rooms and associated areas. In 2003, SOLAS introduced requirements to shield against oil spray onto hot surfaces. More recently, E15 code for hazardous area classification now recommends “porous spray guards” to coalesce oil leak, “rendering it non-hazardous”.

Now, there are many shielding products marketed as solutions to oil and HP steam spray. However, through our regular work on-board a variety of vessels, we are alarmed to see products which are either not fitted correctly, or simply not of a suitable design to stop spray outs and mist formation.

From our own pressure testing process, we have seen ill-fitting or poorly designed shields CAUSE spray and mist. It is important therefore, to ensure that shielding solutions are fit for purpose and installed correctly.

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- BAD DESIGN & INSTALL..
- OUR SHIELDS.....
- APPLICATIONS.....
- THE FLANGEGUARD DIFFERENCE...

BAD DESIGNS / INSTALL

The following shield types are commonly used on-board vessels, and often installed incorrectly. Our in-house testing of these shields demonstrates considerable lateral spray-out and mist formation.

Steel Bands



Held tight against the flange, generally with poor connection design with open gaps.

- Not pressure-containing, so pressure will force leak out.
- Release is not controlled.
- Release typically results in side spray and/or mist formation.
- Easily installed incorrectly

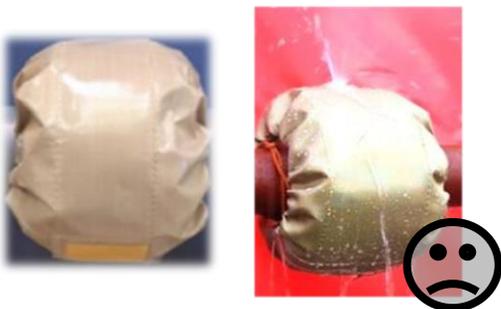
Splash Tape



Convenient tape solution, should be wrapped with 50% overlap, all the way down to pipe.

- Often used above maximum pressure rating
- Typically installed incorrectly
- As a 'band', the release is not controlled.
- In all cases above, release results in side spray and/or mist formation.

Single-Ply Fabric



Low cost materials with no internal central scrim.

- Single-ply material easily pierced by spray
- Resulting spray also transformed to mist formation

OUR SHIELDS

Our shields are designed to prevent spray and mist formation. Each shield design is also tested in our Pressure Test Facility, where we can simulate flange leaks, regulating pressures up to and in excess of 100Bar.

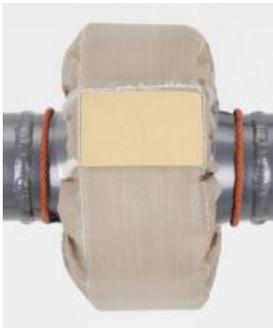
STAINLESS STEEL SAFETY SHIELD: internal mesh & quick release connector



Design ensures pressure diffusion to prevent spray & mist.

- Multi-layer internal mesh diffuses pressure
- No side spray or mist formation
- Simple fitting & removal, no mistakes
- Effective at very high pressure

PTFE SAFETY SHIELD: Multi-layered, Teflon Coated Fibreglass



Design envelopes flange, where oil coalesces and drips safely.

- Multi-layered Teflon Coated Fibreglass
- Central thickened scrim for added protection
- PTFE coated fabric, stitching & pull-cords
- Can be made to fit virtually any shape

Visit www.flangeguards.com to view video of shield testing



APPLICATIONS

Typical applications for shields include fuel oil, lube oil, thermal oil, steam, LNG and acids. Whilst flanges are generally identified as weak-points, our shields can be made for a variety of other pipe joints and fittings:-

Expansion joints, compensators & hose

Filter heads & bodies

Whole pump-sets

Valves; Ball, butterfly, NRV, Bonnet etc



Our solutions...

THE FLANGEGUARD DIFFERENCE



QUALITY

Highest quality materials & most effective shield design



TESTED

All shield designs pressure tested



FLEXIBLE

Special designs for any pipe joint or shape



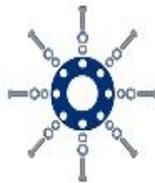
SERVICE

Quick, reliable service for requirements large & small

We all know that oil and HP steam leaks can result in catastrophe so when the price of failure is high, never compromise on quality.

CONTACT US

We have worked on international projects, directly with clients in South Korea and around the world. However, we can also put you in touch with our network of local representatives and agents.



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Disclaimer

Please note, failure to select the correct materials or products we supply ("the Products") may result in damage to plant, equipment or property. In some instances, it may cause death or personal injury. We are not designers and do not give advice about design related matters concerning the Products. We can help and assist with the technical specifications for the Products. In specific applications, particularly where critical conditions exist, we will try to assist you within the limitations of the services that we offer. All information supplied by us is intended as technical co-operation outlining the specifications of the different Products which we supply. To the extent permitted in law, no warranty is given in respect of any information supplied by us. The customer must satisfy themselves as to the suitability of the Products for their intended application and use. The correct fitting of Products is the responsibility of the customer. Your statutory rights remain unaffected. Save in respect of death, personal injury or fraud, our entire liability to you, however arising from the supply of Products shall be limited to the £10M indemnity amount provided by our insurers.