



HIGH INTEGRITY FOAMBAG™

For filling and permanent sealing of pipework during decommissioning

BACKGROUND

Since the early 1980s Steve Vick International has been producing FOAMBAGS™ which are used by gas utilities worldwide for pipe rehabilitation and decommissioning. During installation of FOAMBAG™, the gas systems remain pressurised and operational.

The benefits of FOAMBAG™ as a cost effective, reliable pipe flowstopping and permanent sealing method has attracted the interest of engineers working on a variety of projects and applications.

Alternative industries supplied include: -

- Water/Drainage Utilities
- Civil Engineering
- Nuclear Sector

In the nuclear sector, FOAMBAG™ has been used for decommissioning pipes, where environments have often been contaminated and require remote pipe sealing to prevent ingress or egress of potentially hazardous material.

A recent joint project with the nuclear industry has resulted in the development of our High Integrity FOAMBAG™.

INSTALLATION

Developed to meet specific customer requirements, the High Integrity FOAMBAG™ product range is now available to meet the most demanding of end user applications.



Typical High Integrity FOAMBAG™ with two-part resin foam pack



Inside view of FOAMBAG™ illustrating internal piping for injection of resin

Once positioned in the pipe, the fabric bag is filled with an expanding resin foam. To upgrade the performance of our existing FOAMBAG™, the High Integrity FOAMBAG™ has been re-engineered to allow a second filling operation with a high performance resin specified to suit the application.

Unlike the original FOAMBAG™, the High Integrity FOAMBAG™ uses non-porous fabric to prevent unwanted foam filling the central resin void. Stitching at the external ends of the bag allows surplus foam to seep through from the main body, eliminating excessive loading on the pipe wall during installation.

Stage I: Forming the central resin void



High Integrity FOAMBAG™ filled with expanded foam

Stage II: High Integrity FOAMBAG™ fully cured



Central void filled with high performance resin

Features:

- Well proven method of filling and sealing pipes to be abandoned
- Currently available for pipe diameters up to DN300mm
- Pressure resistance in excess of 1 bar
- Local or remote positioning of FOAMBAG™ up to 50 Metres from point of access
- Minimum load exerted on pipe walls
- Suitable for installation in media-filled pipes
- Temperature operating range 0°-30°C
- Chemical bond to pipe wall

**High
Integrity
FOAMBAG™
can be
modified to
meet
specific
project
requirements**

PERFORMANCE

A chemical bond is formed between the pipe wall and the High Integrity FOAMBAG™ fabric shell. This bond improves its mechanical performance, thus allowing it to withstand higher pressures, vibration and shock loadings.

Sealing is also improved by the specialised resin bond, as any shrinkage will only stress the resin and prevent separation between the resin/pipe or resin/ FOAMBAG™ interfaces. The green band which appears at the points where the resin has adhered itself to the pipe wall, is the area of highest mechanical strength.



Green band appears at the points where the resin has adhered to the pipe wall

The High Integrity FOAMBAG™ can be installed locally or remotely—up to 50m from the access point. Installation can be carried out via various access points including tank access, under pressure drilling, exposed pipe/flange ends, manholes/sumps etc. Successful installation does not require a line of sight as the FOAMBAG™ location can be confirmed by CCTV.

MEDIA FILLED PIPE

The installation of a High Integrity FOAMBAG™ can be completed whilst the pipe is filled with media. The injection of resin displaces any media present in the pipe, whilst creating a bond between the pipe and the FOAMBAG™

If two or more High Integrity FOAMBAGS™ are positioned at cut points, the pipe can then be cut through the middle of the bag and both pipe ends will remain sealed.

It is not necessary to empty sealed lengths of pipe which may hold contaminated material.

In situations where the pipe may be near the end of its service life, consideration should be given to possible mechanical failure of pipe lengths, for example due to corrosion holes, weak joints or weakened pipe walls. In these circumstances it is recommended that the entire void is filled with expanding foam to stabilise any long term contaminant residues and allowing pipes to be safely abandoned or removed.

SITE/PROJECT DESIGN SUPPORT

Steve Vick International maintains a nationwide network of field support staff and a SPECIAL CONTRACT SERVICE is available together with project development technicians to assist with your future projects.

Contact details are shown below.

Founded in 1981, Steve Vick International Ltd is a renowned specialist in developing techniques for the repair, renovation and decommissioning of pipes.

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