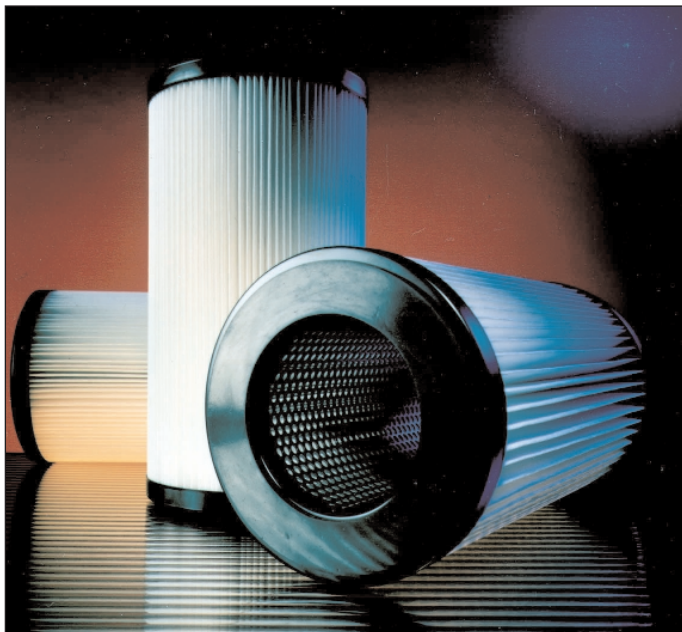


## GLYCOL/AMINE FILTRATION ELEMENTS



- **Specifically designed for glycol/amines**
- **Long life/infrequent replacement**
- **Cost effective filtration**
- **All sizes and formats available**
- **Environmentally friendly/ completely combustible**

The Alan Cobham brand of contaminant control elements has been developed to meet a broad range of individual and critical filtration needs for both liquid and gaseous applications. The range provides for the separation of both solid particles and liquid dispersions from many process fluids with the emphasis on producing high quality filtrate and, wherever possible, environmentally acceptable effluent, irrespective of the influant condition.

### Duty Requirements

The high level of solids contaminant generated within wet gas pipelines places a severe load on filtration systems. The contaminants tend to concentrate within the glycol/condensate streams resulting in high element usage. The liquid stream contains not only glycol and water but also hydrocarbons including a high percentage of aromatic fractions. Organic and inorganic solids resulting from oil/gas processing are also present, including corrosion products, sand, scale and debris together with thermal degradation products from glycol cracking. The resultant stream will contain both sedimenting solids and solids with neutral buoyance due to the oil coating of fine particles. Filtration of this complex mixture exerts a stringent duty on any filtration element in terms of removal duty and chemical compatibility. Consequently, conventional elements provide only a short life expectancy.

### Solution

Too often, standard filters are employed for this arduous duty. However, as a result of continual research and development programmes, Cobham Fluid Systems have developed, tested and optimised a specific filter element for glycol treatment.

These new generation elements offer extended operation with fouling fluids such as dirty glycol. This has resulted from the combination of several profiled layers of glycol resistant, depth filtration media in conjunction with a final pleated media pack overlaid with polyethylene.

As these environmentally friendly elements contain no metal parts (plastic centre tube and endcaps) they are completely combustible, offering a safe and efficient disposal route for hazardous waste.

## Trials

This combination of media has been examined in our extensive in-house test facility and demonstrated an improved life expectancy for particle removal from hydrocarbon streams over conventional cartridges.

Further tests were conducted at a NAM processing facility. These elements were tested in clusters of 28 elements and tested for their filtration ability with a live process stream of dirty, wet glycol.

These elements were evaluated under normal production conditions, full flow test with phosphate injection. After an extended test duration, examination of used cartridges showed a high dirt retention capability and an extended life expectancy over conventional filters.

## Results

These successful results demonstrated several advantages of the Alan Cobham glycol filter :

- Long operating life
- Ease of dirt work up
- No bypass problems
- Backflow proof
- High dirt retention capacity
- Glycol compatible

## Conclusions

- The Cobham Fluid Systems range of decontamination elements provides economic and reliable solutions to the problem of particle and liquid contamination. The short life and poor performance of conventional filters for glycol filtration has been remedied by the new range of filter elements designed specifically for this duty. As a result of this development we can provide elements offering improved performance and life expectancy whilst treating a notoriously difficult process stream.
- The elements are supplied in a standard, industry accepted format. Elements are also available in a number of diameters and lengths to suit most applications and configurations. Core material and end caps can be supplied to meet the most stringent design duties.
- This cost effective solution results from significant reduction in both direct and indirect costs, such as lower cartridge costs, lower down time and less frequent operator intervention. A combination of which result in the most cost effective filter solution for this duty.

Further information on this product and advice on their application can be obtained by contacting our facilities.



### Cobham Fluid Systems Limited

Holland Way, Blandford Forum, Dorset, England. DT11 7BJ

Tel: 44 (0)1258 486600 Fax: 44 (0)1258 486601

[www.cobhamfluidsystems.com](http://www.cobhamfluidsystems.com)

[sales@cobhamfluidsystems.com](mailto:sales@cobhamfluidsystems.com)

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