

CIFs

Catalytic Iron Filters

Technology
for a
Sustainable Future

The ideal solution for high concentration odour sources on sewage and sludge treatment plants.

CIFs use rusting iron Pall rings to remove bulk hydrogen sulphide (H_2S) from highly odorous air streams. H_2S removal efficiencies of 60-80% are obtained providing a cheap means of reducing the load onto downstream polishing Odour Control equipment. Widely used on sludge tanks, imported sludge PS and sludge presses.

Key benefits

- Good H_2S roughing filter - up to 60% efficiency single stage and 80% dual stage
- Segregated multiple beds ensures low pressure drop even at end of media life
- Correctly sized to avoid "swamping" with excess sulphur
- Low operating pressure drop less than 250Pa per stage
- Operating life of 3-5 years
- Humidification in inlet duct with low water consumption, < 1 litre/min for many applications
- Robust vessels fabricated from PVC/GRP
- Significant running cost savings when used with chemical scrubbers and impregnated carbon filters



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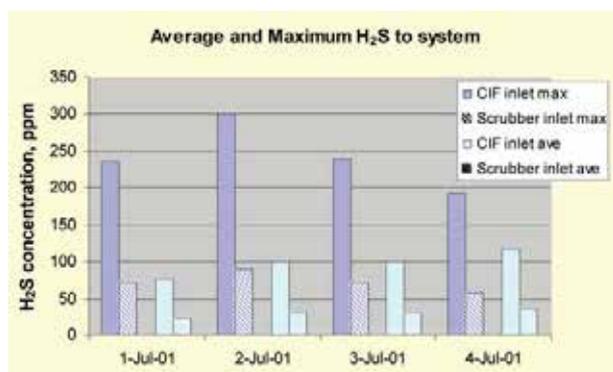
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Examples of applications

- **With chemical scrubbers**
Reduces caustic and bleach chemical consumption by up to 80%, avoids sulphur precipitation in scrubbing liquor, and reduces the size of the scrubber
- **With biofilters**
Protects biofilter from peak H₂S loadings, extends life of media, improves odour removal performance, ideal for sludge treatment centres where site storage of chemicals is undesirable (see also Dry-Cat literature)
- **With carbon filters**
Reduces carbon usage by up to 80%, extends life of media, ideal for smaller sites, or where space is limited

Case study



Entec carried out performance testing on the Howdon Sludge CIFs. The graph above shows for 1st - 4th July that peak H₂S loads of 300ppm were reduced to <100ppm and that the 24-hour average values of 100ppm were reduced by 70%. This allowed the Odorgard™ scrubber to be sized for a maximum load 30% of the total system maximum. During July, the operation of the CIFs saved £'s in chemical costs (15% bleach and 27% caustic solution).

Units installed and operating successfully include:

Southern Water

Tunbridge Wells STW

South West Water

Sidmouth STW, Dawlish STW and Cornborough STW

Anglian Water

Boston STW, Spalding STW and Ingoldmells STW

Scottish Water

Dingwall STW, Oban STW, Rothesay STW, Campbeltown STW, Helensburgh STW and Newton Stewart STW

DRD Water Services - Northern Ireland

Ballyclare STW

Welsh Water

Felinfach STW



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