



- High Maintenance Costs?
- Clogged Filters?
- Blocked Needle Valves?
- Dirty Analyser Electrode and Sensors?

## After Lowe's Solution

- More reliable analysis.
- Increased Analyser Electrode life.
- Release of Technicians to deal with other maintenance work.
- Short pay-back period from initial investment.



**Do you want to know more?**

**Contact our magnetite solution hotline on:**

**[sales@lowe-engineering.net](mailto:sales@lowe-engineering.net)**

## MAGNETITE & PARTICLE PROBLEMS

Causing expensive downtime?

Analysis you can't rely on?

## MAGNETITE & PARTICULATES FILTER SOLUTION FROM LOWE ENGINEERING!

Developed to combat:-

**\*Clogged Filters**

**\*Blocked Needle Valves**

**\*Dirty Analyser Probes and Sensors**

and at the same time

## SAVES YOUR MONEY!

It's design prevents the particulates reaching these parts of the system leading to:-

**\*More reliable analysis**

**\*Less downtime**

**\*Release of Technicians to deal with other Maintenance Work**

**\*Increased Analyser Probe life**

The filter is easily retro-fitted in most cases, no power is required.  
Optional back-flush valve and fitting kit available to suit applications.

It is simple to back-flush straight into the drains tundish using valves

It can easily achieve, depending on the conditions, two weeks  
between back-flushing with longer periods in most cases

Just a short pay-back period from initial investment!

Extensively tested

Want to know more? Contact the experts at Lowe's.

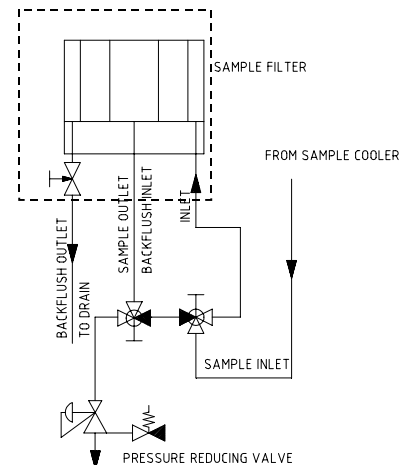
## MAGNETITE and PARTICLE FILTER

Low Engineering are increasingly being requested for a means of contending with Magnetite fouling of needle valves, pressure reducing valves etc on Steam and Hot Water Sampling Systems. This problem has been very significantly compounded by the cycling regimes found in many modern power generation plants.

Low reviewed several solutions including pulsed electromagnetic separation, cyclones etc but concluded that each of them introduced significant collateral disadvantages. The optimum design has proved in actual plant trials to be able to considerably reduce the problem.

The Unit is introduced into the sample line after the cooler and can in most cases be easily retrofitted, requiring no power to operate it and some minor changes to the pipework. The magnetite is retained in the body and at an appropriate time is back-flushed into the tundish. The time interval between back-flushes is of course determined by the amount of magnetite in the system but tests have shown that it is capable of no intervention for at least two weeks under normal running with magnetite concentrations of 500 ppb.

Tests demonstrated the analyser sensors were not contaminated over the period compared with sensors on an adjacent HRSG line operating on an identical cycle. This of course gives more confidence in the reliability of the readings. With the magnetite removed from the system, maintenance costs are reduced. The trials showed that approximately 40% of the magnetite is removed with the station running constantly but with varying loads. This 40%, appeared to be the particle size that cause problems with the systems, as the remainder passed through with no apparent ill effects. This was visible in the chamber of the on-line pH using the filter which remained free of magnetite where as this was not the case on the line without the filter.



SCHEMATIC OF FILTER INSTALLATION

The supplied unit would comprise, the filter and blowdown valve, with 1/4" NPT connections, an optional fitting kit, consisting of back-flush valves and pipework, can also be supplied. Discounts will be available for quantity purchases.

Should the above be of interest to you we would be pleased to discuss your requirements in detail.