

## Case History no. 2 – Print Works Coolant Water Filtration

Fluid : cooling water containing a lot of rust particles. In a printing works  
Flow rate : 40M3/hr  
Line size : 4”  
Working Pressure: 2 – 3 barg

A well known cardboard box manufacturer with a large printing works was filtering coolant on a side stream basis using a small 10” wound cartridge filter. The coolant is used to cool different machines in different parts of the process and becomes contaminated with lots of rust particles from old pipe work etc.

When you take out one of the cartridges it is covered in a sticky oily contaminant.

### **Problem:-**

The cartridge filter was too small to have any real impact on the amount of contaminants being re-circulated through the system as the volume being passed through it was too small. They wanted a larger system which was easy to use and service.

### **Solution:-**

We supplied a Ronningen-Petter bag filter for the purposes of a side stream trial. Initially we supplied a woven multifilament filter bag which tended to block rapidly due to the soft gelatinous nature of the contaminants. We decided we need to replicate the benefits of the depth type cartridge so we gave them a spun polypropylene HIGH EFFICIENCY bag which has some depth to it as well as being highly efficient.

They were able to run the unit for several weeks and practically forget about it.

This is due to the depth nature of the bag plus its high surface area compared to a small cartridge. The depth formed by the matrix of fibres provides a high volume of voids within the bag i.e. the fibres and their interstices provide the matrix to trap the particles and the high number of voids between them to allow the bag to accommodate a large volume of solids.

### **Result:-**

They purchased 3 off bag filters, model SS24-224-LP mounted in parallel on common flanged inlet & outlet headers.