

Case History no. 8 – Cooked Meats Producer Cooling /Quench Water Filtration

Fluid	: cooling / quench water
Temperature	: 3 - 18 degrees C
Pressure	: 2.5 barg
Flowrate	: 20 lps (264 gpm)
Line size	: 6"

A client who manufactures cooked meats uses water to cool the packets of meat in their plastic packaging.

Problem:-

They had to get rid of the water as it became contaminated with particulate in the form of pieces of meat and plastic and therefore became less efficient as a coolant and more difficult to use. It was also very costly to discharge large volumes of contaminated cooling water to the sewer and also very expensive to refill the system with clean mains water every 2 days.

Solution:-

The client did not have the budget to put in an automatic backwasher filter so we had to come up with a less costly alternative. We proposed a Fabri-plex bag filter consisting of 4 off 2" SS4-224-LP low pressure Ronningen-Petter Fabri-Basket filters mounted in parallel on common 6" ANSI 150 flanged inlet & outlet headers. Each of the 4 bag filters had its own individual isolation valves to allow it to be taken off stream for servicing whilst leaving the remaining 3 on stream to carry on filtering. Each unit is serviced one at a time with minimum of fuss or interruption to coolant flow. The customer used rugged reusable polypropylene filter bags that can be washed and reused many times.

Result:-

Instead of having to empty their whole system every 2 days they now get a weeks run out of it thus reducing the volume they discharge to drain and the volume of freshwater they have to purchase.

The water they discharge to drain is also cleaner than it was so they would reduce discharge costs which are often based upon the level of solids present in the water.