Condenser Condition

Original Draft Document of article printed in ACR News March 2005
& Heating & Ventilating Review March 2005

See also editorial release H&V Review March 2005

& Initial Advert H&V Review February 2005

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February 2004

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Press release for A C R News January 2005
595 words

Fin Rot; Header Plate Weep; Failed tube; Athletes Foot ! ! !

How are your Condensers ?

Thankfully three of the above conditions only affect the Chiller the Service Engineer is likely to be working on …

Most water chillers are expected to provide around 20 years reliable service. In order to achieve this they are often *"carefully"* placed in the most inhospitable place available ! Typically this may be on the roof, adjacent to boiler flues, or in the car park next to the delightful aroma of fresh exhaust fumes. Next to Swimming pool outlet ventilation ducts is another highly undesirable position we typically find chillers to be sited, or in a whole host of other less than pleasant local atmospheric environments.

In order to function properly, air cooled fin heat exchangers such as chiller condensers and dry coolers require clean, dry air to be passing through them. However, airborne contaminants can seriously affect not only the operating efficiency, but also the life expectancy of these simple heat rejection devices.

Many chillers on the UK market in recent years have been designed for warm Mediterranean climates where the warm daytime conditions effectively de-hydrate the air and the affect of any rainfall is minimised. In our rainy industrial environment the effect of acidic dampness upon closely mated surfaces of dissimilar metals is to cause electrolytic corrosion at an alarming rate. Add to this vibration from barely accessible fans, and compressors on packaged units, then take account of poor assembly techniques leading to premature fracture and fretting of the delicate tubes, then premature leakage and rotting of the Condenser is all too common.

There is an increasing requirement to offer Chiller users a life extension by renewing the rotten, leaky coils resulting from several years exposure to the elements. As an option Epoxy Coated fins to bespoke design replacement Condenser coils are commonly selected. The Epoxy Coat is particularly beneficial at any site where Fin Rot is evident as a significant problem.

Replacement Epoxy Coated Condenser Coils offer several benefits to the chiller user ...

Major life extension of old plant
Major reduction to corrosive effects in hostile environments
Major reduction in cleaning burden - the dirt simply washes off during the next rainstorm

When fitted in conjunction with other minor finish treatments, the inclusion of new Condensers can present a facelift to the entire chiller unit rendering the chiller, like my sister, over a decade younger looking, and with smoother skin !

ThermOzone are the Field Service associate firm to compressor re-manufacturer ThermaCom. They have found Condenser renewal projects provide a natural balance to the intensive Summer workload associated with the compressor market. Condenser renewal is a longer term consideration, and thus lends itself better to Winter works projects, when the chiller load is less.

Virtually any air cooled chiller is a suitable candidate for such a project, and disruption is surprisingly minimal. New condenser panels are supplied in up to four sub-panel strips, removing the need for cranes on many projects. All coils are made to measure against the original coil pattern, and typically a project takes around 8 weeks, 6 of which are spent off site manufacturing the bespoke coils. All work is guaranteed and is offered in conjunction with a whole host of other chiller enhancements, such as compressor overhauls, fan bearings, gas upgrades, etc..

ThermOzone have replaced coils at some highly prestigious sites including Genome Campus, Natural History Museum & Motorola. If your chiller inventory is starting to look it’s age then why not contact them - 0118 950 0606.