

Rotamec explains winter pump maintenance

Keeping heating systems operating reliably in the winter is essential for any facility manager, whether they are responsible for an industrial processing plant or hospital. However, as heating is a seasonal application it's not uncommon for heating pumps to lie stationary during summer, only to present reliability issues when they are turned back on as temperatures drop. Understanding the common causes of failure is the first step in preventing breakdowns, which is why it's important to be proactive with any winter maintenance schedule.

John Drew, Site Services Manager at Rotamec, explains the common causes of failure in heating pumps and busts some of the myths surrounding winter maintenance.

Typical failure modes

Mention the words 'winter maintenance' and people automatically imagine stoic engineers facing arctic conditions as they bring a frozen pump back to life. The truth, however, is a little less dramatic; very few failures are caused by adverse or extreme conditions. While freezing temperatures and bad weather can have a debilitating effect on equipment, the main risk to heating pumps in the winter is how they are treated during the summer months. The majority of failures that we're called out to at this time of year are a result of the heating pump being switched off for months on end.

Leaving a pump standing can cause a host of issues that will only present themselves when it comes time to turn them on. If the pump has been left standing with water in the system for six months, then corrosion can form within the internals of the pump. Where corrosive liquids are involved this corrosion could extend to the impeller. Indications that the pump has been damaged will only be apparent when it is next turned on, when you may notice excessive noise or a drop off in performance.

Pumps also feature a mechanical seal which is finely machined. If water gets trapped between the shaft and this seal, this can also result in corrosion – with the potential to spread to other associated components that also may need subsequent replacement.

Most of the calls Rotamec receives at the start of winter with regards to failed heating pumps are issues arising from incorrect maintenance practices during the summer months. By introducing a heating system treatment programme it's possible to minimise corrosion during long periods of standing to ensure that equipment is ready to start first time when it's needed.

Try to avoid emergency repairs

Recent experience demonstrates the issues that can be caused when a heating pump is left standing for too long. Following the first cold snap of winter, Rotamec was contacted by a medical facility in Bristol which had experienced a heating pump failure. Time was of the essence, as without adequate heating an entire department would be taken out of action, which would have affected the healthcare service. We were able to diagnose the fault and effect a repair within a day, which ensured the department could stay open and keep treating patients.

The primary learning point with this scenario is that if the damage is only identified when heating is required, then it will result in an emergency repair. Issues are further exacerbated if any redundancy pumps have also suffered similar damage due to inactivity. Failed heating systems can bring manufacturing facilities to a halt or force the closure of public and commercial buildings. The urgency of the repair will also typically necessitate higher costs as resources are stretched and lead times must be kept to a minimum. Taking a preventative approach is the best in terms of value and uptime.

Preventative maintenance schedules will, in most cases, keep the pumps and ancillary components in a good state of repair and ready for operation in winter. Of course, all mechanical parts eventually fail, but by identifying damage while the system is not in regular use, it's possible include repairs as part of any planned maintenance schedule. This same approach is equally as valid for pumps that run cooling systems during the summer months. A proactive winter service schedule should be followed to make sure they are ready when the warmer weather eventually arrives.

A capable pump service provider

To ensure the smooth running of pumps throughout the year, facility managers need to employ a preventative maintenance strategy with a service partner. This can ensure that pumps can be periodically run and checked for issues well in advance of seasonal duty requirements to ensure reliability.

At Rotamec, we offer a full service that includes regular maintenance, scheduled servicing and emergency repairs. Our engineers will meet you on-site to carry out diagnostics and assess whether the pump needs to be sent to our workshop for further repairs. In-house machining capability and a large array of spares such as seals, ensures fast repairs when they are needed. A strong supply network means pump operators can choose between overhaul or replacement depending on which is the fastest or most cost-effective option. The business holds multiple maintenance service contracts with large facilities, public services and private businesses across the UK.

Image Caption: Keeping heating systems operating reliably in the winter is essential for any facility manager, whether they are responsible for an industrial processing plant or hospital.

[Source: istock - A stockphoto]

About Rotamec

Rotamec is a turnkey stock, supply, service and repair provider for a wide range of engineered products from leading brands. Operating UK facilities in Cheddar, South Wales, Exeter and Redditch, the business provides a 24/7, 365 days a year service to promote customer uptime by delivering cost effective engineering solutions.

Services offered include repair, refurbishment and rewind of AC and DC electric motors plus supply of motors, gearboxes, pumps, bearings and transmission components from leading brands. Site services are another area of expertise, with dedicated service teams on standby to supply and install all types of electrical and mechanical rotational equipment. Operatives undertake in-house training provided by leading industry manufacturers.

Rotamec was founded in May 2000, growing from a rewind and repair company to providing power transmission solutions in 2003. A fast, responsive service and access to nationwide stocks allows customers to control maintenance costs and ensure time efficiency.

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