Hydro-X

Reducing unplanned downtime and unbudgeted maintenance spend using Hydro-X same day reporting and monitoring technologies

Contact: www.Hydro-X.co.uk
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Hydro-X Closed System Reporting

Hydro-X same day service reporting using MDS software offers instant notification of service and any remedial actions required whilst the engineer is still on site with you.

Using Hydro-X's handheld service system, the reports are emailed directly to the agreed customer contacts. Any non-conformances will alert both the customer key contact and the Hydro-X account manager to ensure appropriate action is taken in a timely manner/within agreed KPIs.

Simple to interpret with specific photographs within the report, the Hydro-X closed system reports offer clear guidance for customers to keep on top of critical plant monitoring and reduce unplanned maintenance spend.

Key benefits:

- Same Day reports – emailed to you whilst the Hydro-X engineer is still on site
- Visual indication of non-conformances (supported with photographs)
- The report will automatically highlight out of specification readings and input them into the Hydro-X compliance system for timely close-out
- Clear and relevant advice referring to regulatory guidance

Hydro-X Group also offers a full remediation service for Closed Systems including supply and dosing of Hydro-X brand chemistry blended at out UK headquarters.

Closed Systems Analysis Report

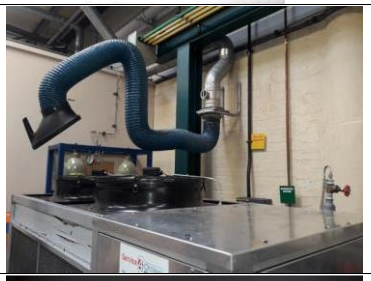
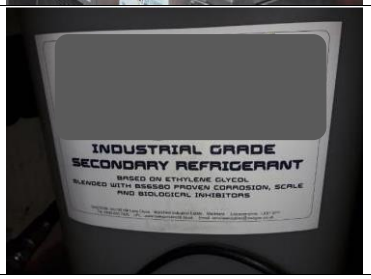
Customer Name:	XXXXXX	**Date:**	29/07/2019
Site Name:	XXXXXX	**System Name:**	1x Chilled system
System Location:		Machine room.	
Any Access issues?		Report to reception in XXXXXXX main building prior to works, induction required, reception will contact the engineers to direct to XXXXXX. PPE: footwear, high viz, bump cap or hardhat, safety specs if using chemical.	
BSRIA Chemistry sample(s) taken?		No	
BSRIA Micro(s) taken?		No	

SYSTEM COMPONENTS	**CONTROL**	**Chilled**				
Dosing pot /Auto Dosing	Yes	Dosing Pot				
Clarity	Yes	No				
Side stream filtration	Yes	No				
Water Meter	Yes	Yes				
RPZ / Backflow prevention	Yes	Unknown				
Water Softener	Yes	Yes				
kW of Boiler/PHX /System Size	N/A	46kW,				
SYSTEM ANALYSIS	**CONTROL**	**Chilled**				
pH	7.5-8.3	5.2				
Total Dissolved Solids	N/A	890				
Conductivity	<2500 mg/l	1270				
Total Hardness	<100 mg/l	90				
Total Alkalinity	250-1250	280				
Chloride	<200 mg/l	100				
Glycol	<25 %	4				
Total Iron	<1 mg/l	10				
Dissolved Iron	<1 mg/l	10				
Copper	<1 mg/l	0.9				
Aluminium	<1 mg/l	0.1	N/A	N/A	N/A	N/A
Inhibitor Chemical	N/A	Other				

Inhibitor Amount	800 - 1200	250				
Chemical Stock	N/A	50ltrs				
Is the Chemical Bunded?	N/A	No				

Comments and Recommendations	
Chilled - Clarity	Requires filtration or other action to improve clarity - account manager to discuss
Chilled - Side Stream Filtration	Side stream filtration should be installed in line with BSRIA guidance BG29 and BG50
Chilled - Water Meter	A water meter should be installed to track water usage on the system and indicate leaks
Chilled - Backflow Protection	There is not suitable backflow prevention or it could not be identified - Where backflow protection is not present, a suitable system should be installed in order to comply with Water Supply (Water Fittings) Regulations
Chilled - pH	Action should be taken to bring pH to within control limits - consider bacterial testing if the pH has changed since the last test
Chilled - Iron	Iron levels are high - action should be taken to lower to within the control limit to avoid further damage to the system. Consider side-stream filtration
Chilled - Dissolved Iron	Dissolved Iron levels are high - action should be taken to lower to within the control limit to avoid further damage to the system
Chilled - Inhibitor Chemical	The inhibitor chemical levels fall outside of the recommended range, appropriate action should be taken to bring inhibitor concentration to within the control limit and avoid further damage to the system
Chilled	Summary: Chilled system analysis indicates this system has extremely high levels of iron indicating internal corrosion is taking place. . pH 5.15 is acidic promoting corrosion, this needs to be elevated to 8.3 max due to possible aluminum coils. . Ethylene Glycol, specific gravity = 4%sg, (The chiller O&M manual will specify the required level of Glycol recommended.) 12.5%sg will give -5°c of frost protection. . Nitrite corrosion inhibitor was found to be below the minimum required level of 800ppm, actual was 250ppm. . 1x Dip-slide undertaken to test for bacteria as acid can be produced promoting corrosion & low pH.

Sample Photos	
Chilled - Chilled sample	

Chilled - Chilled sample	
Chilled - Chilled sample	
Chilled - Chiller	
Chilled - used Glycol/inhibitor/biocide chemical.	

Additional Comments
Recommendations: A system flush is highly recommended due to heavy iron levels & heavy iron sediment. This system would benefit from a micron / magnetic, side-stream filtration unit. Glycol & corrosion inhibitor dosing, post flush.

Site Address: XXXXXXXXXXXXXXX	**Hydro-X Technician:**	Jamie Weir
	Hydro-X Signature:	
	Customer Name:	XXXXXXXX
	Customer Signature:	XXXXXXXXXXXXXXXXXXX

About Hydro-X Group

8 Regional Location Strategically Located throughout the UK to support our Business Partners

Over 120 Staff – Sales Technical, R&D, Products, Administration and Infield Engineers with “In House Capability”

Committed to Protect your Organisation.

Through innovative technologies and continual investment with reliable product and services that –

- Provide peace of mind concerning your compliance
- Enhance your plant longevity
- Reduce your total cost of operation
- Providing compelling Return on Investment
- Helping us both differentiate from competition

Water Treatment

Cooling Systems

Steam Boilers

Pre-Treatment

H & C Systems

Effluent Treatment

Pre-Commission Cleaning

Filtration and Chemical

Water Hygiene

ACoP L8 Compliance

Water quality

Sampling to UKAS

System Clean & Chlorination

Chlorine Dioxide

Log Books

Same Day Reporting

Risk Assessments

Legal Compliance

Legionella RA

C&G Training

Water Surveys

Reviews

Audits

Closed system Assessments

Engineering

Water Treatment Plant and Equipment

Chemical Cleaning

Tank Installation

Process and Optimisation

Water Reclaim

Pre-Treatment

Air Hygiene

Duct work Cleaning

Kitchen Extract

Fire Dampers

Indoor Air quality

Post Clean Verification

Deep Cleaning