The common corrosion and scale inhibitors used in closed systems are listed in Table 502.21 (1).

Table 502.21 (1): Common Corrosion and Scale Inhibitors (BS 8552)

Component	Inhibitor Function
Nitrite	Corrosion inhibitor for ferrous material
Molybdate	Corrosion inhibitor
Azoles	Corrosion inhibitors for copper and copper alloys
Phosphate	Corrosion inhibitors for steel
Phosphonates	Scale and corrosion inhibitor
Silicates	Corrosion inhibitors for steel, copper alloys and aluminum
Tannins	Film forming corrosion inhibitor and oxygen scavenger
Borate	pH buffer, biocide, corrosion inhibitor
Sulfite	Oxygen scavenger
Polymers	Scale inhibitor

The regular monitoring of water samples is essential to evaluate the effectiveness of chemical treatment programme, to ensure that the results are accurate. The monitoring must be carried out using appropriate methodologies and equipment, detailed guidance on sampling and monitoring of water is given in BS 8552.

The sampling point location for different samples are mentioned in Table 502.21 (2).

Table 502.21 (2): Selection Of Sampling Points (BS 8552)

Type of Sample	Sampling Point		
	Full bore drain point	Reduced bore drain point	Pressure test point
Settled solids	Yes	No	No
Suspended solids	Yes	Yes	No
"Total" metals	Yes	Yes	No
Dissolved solids	Yes	Yes	Yes
Microbiology	Yes	Yes	Yes
Dissolved oxygen	No	See BS 8552, A.2	See BS 8552, A.2

The chilled water chemical analysis must be conducted at regular frequency as per BS 8552 and reports must be maintained on-site for records and further analysis.

COMPLIANCE DOCUMENTATION

Table 502.21(3): Documents Required

Project Stages	Submittal Documents
Design Permit Application	1. DM BLDG Al Sa'fat declaration.
Construction Completion Application	1. Final approved layout of plant room chilled water showing the location of chilled water chemical dosing system. 2. Chemical dosing system manufacturer data.
After Completion	1. Chilled water chemical analysis report.