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The following boiler chemistry limits are being incorporated into a new COMSC instruction. In the interim they are posted here on Engineering Directorate web page.

FSS BOILER CHEMISTRY LIMITS

The following control limits should be maintained in all high-pressure boilers (FSS):

ROS Wet Lay-up

Phosphate (ppm)	25 maximum, no lower limit
Boiler pH	9.0-10.2
DEHA (ppm)	60-200
Chloride (ppm)	36 maximum
Silica (ppm)	2 maximum
Conductivity (uS/umhos)	180 maximum
Condensate pH	8.6-9.0

Reserve Feedwater

Chloride (ppm)	4
Silica (ppm)	0
Hardness (ppm)	0
Conductivity (uS/umhos)	<20

Evaporator

Chloride (ppm)	2
Silica (ppm)	0
Conductivity (uS/umhos)	<10

Inport Steaming

Phosphate (ppm)	5-25
Boiler pH	9.0-10.2
DEHA (ppm)	0.2 minimum
Chloride (ppm)	36 maximum
Silica (ppm)	2 maximum
Conductivity(uS/umhos)	180 maximum
Condensate pH	8.6-9.0

At Sea

Phosphate (ppm)	15-25
Boiler pH	9.8-10.2
DEHA (ppm)	0.2 -0.5
Chloride (ppm)	16 maximum
Silica (ppm)	6 maximum
Conductivity(uS/umhos)	120 maximum
Condensate pH	8.6-9.0

FSS BOILER CHEMISTRY LIMITS

Testing of Boilers, Feed Water, Condensate, and Evaporators

Boilers in Operation:

Boiler pH	daily
Orthophosphate	daily
Conductivity	daily
Chloride	daily
Silica	weekly
P & T Alkalinity	weekly

Feed Water Testing

Drewplex OX	daily
Conductivity	daily
Hardness	when placing feed tank in operation

Condensate Tests

Ammonia	every 8 hours when lighting-off, daily when underway
Condensate pH	daily

Evaporators



Conductivity	Once every four hours. Maximum limit is 4 uS or umhos. 0.7 uS equals 1 ppm
HP Chloride	Whenever conductivity exceeds 5 uS or umhos .

SAMPLING

- All samples should be cooled to 25C/77F.
- Sample lines should be cleared before testing new water samples
- Sample cooler should be tested for leakage periodically
- DEHA (Drewplex OX) samples should be taken from the feedwater just prior to or at the boiler economizer. DEHA instructions must be followed to the letter in order to obtain accurate results.

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