PARKER BOILER CO.
USE OF EMS POWERED OXYGEN SCAVENGER FOR STEAM BOILERS

WHEN TO USE
EMS Oxygen Scavenger Treatment must be used on Steam Boiler Systems in addition to the required Boiler Water Compound on the following conditions:
1. On any Boiler water supply with an excessive Oxygen problem.
2. On all Boiler Systems that require 80% or more raw water make-up or have less than 20% condensate return.
3. Standardly used on all Boilers 50 H.P. and larger.
4. When an Oxygen corrosion problem is present in the Steam Drum or Tubes as determined from an inspection.

DOSAGE
The initial daily dosage of EMS Oxygen Scavenger should be on the basis of the schedule shown below for each size Boiler. Since the amount of daily treatment required may very considerably with the amount of make-up water used on the particular job, it will be necessary to regulate and change the amount of dosage based on a daily Sodium Sulfite test.

BOILER	LBS. PER 8-HOUR SHIFT	WATER REQUIRED FOR SOLUTION	BOILER	LBS. PER 8-HOUR SHIFT	WATER REQUIRED FOR SOLUTION
3-10 H.P.	¼ LB	1 PINT	90 H.P.	1¾ LB	3½ QUARTS
12-25 H.P.	½ LB	1 QUART	115 H.P.	2¼ LB	4½ QUARTS
30-50 H.P.	1 LB	½ GALLON	150 H.P.	3 LB	1½ GALLONS
70 H.P.	1¼ LB	2½ QUARTS			

TESTING
The test for Sodium Sulfite reside in either the Boiler Water or Boiler Feedwater is easy and simple to take with a Sodium Sulfite test kit, which can be purchased at a nominal cost. Such is recommended as Customers can perform this quite easily. Test must be made immediately after sample is taken to eliminate contamination.

The daily dosage of Oxygen Scavenger must be uniformly regulated to maintain a Sodium Sulfite level between 40-100 ppm in the Boiler water. The test is preferable taken near the end of the shift before the complete blowdown is made. If the Sodium Sulfite residue is below the recommended level, increase the amount of Oxygen Scavenger and if above, decrease the amount of Oxygen Scavenger used. A sodium Sulfite level between 10-40 ppm is recommended in the Boiler makeup water tank.

A test for excessive Oxygen can only be made in the field and requires an expensive and sophisticated set of test equipment by experienced personnel.

HOW TO USE
I. GENERAL INSTRUCTIONS:
1. Before using, Oxygen Scavenger must be mixed thoroughly into liquid solution. The dosage can be mixed in a 1-gallon plastic bottle with soft water, and should be shaken thoroughly until dissolved. Always shake container before adding to the system. Never add the Oxygen Scavenger powder direct to the Boiler System as this will cause strainer stoppage or pump problems. (Do not mix more than two pounds to one gallon of water.)
2. Do not mix more than one week's dosage at a time. Always shake up the solution at the beginning of each shift just before using. Mix in Plastic Bottle.
3. The initial amount of daily dosage should be on the basis of the schedule on above. A Sodium Sulfite test should be made each day until the daily dosage is established to maintain a range of the Sodium Sulfite level of 40 to 100 ppm is in the Boiler Water for proper protection. When the water sample is obtained, the Sulfite test should be promptly made in the field as a time delay or exposure to the atmosphere will definitely cause inaccuracy to the results.
4. Exposure of the Oxygen Scavenger powder container should always be kept tightly sealed. The top should always be kept tightly on the solution bottle and the cover on the compound feeder tank when used.
5. Follow the complete directions contained with the Taylor Test Kit for taking each test.

II. ADDING DIRECT BY BATCH TREATMENT:

A. **BOILER USING HEATED FEED WATER AND WITH 80% OR MORE RETURN CONDENSATION:**
1. Mix the required dosage in a plastic bottle and shake thoroughly until dissolved.
2. Shake well each time before using and always keep the cap tightly on the plastic bottle.
3. Add in equal dosages during the shift as follows: At start of shift; every two (2) hours; and at end of the shift, before refilling the boiler after making the blowdown.

B. **BOILER USING COLD FEED WATER AND WITH LESS THAN 20% RETURN CONDENSATION:**
Same as above except, add treatment every two hours or more often for better results

III. ADDING BY MEANS OF AN AUTOMATIC COMPOUND FEEDER:
(Refer to Automatic Boiler Compound Feeder Operating Instruction K-125).

CAUTION: SOFT WATER MUST ABSOLUTELY BE USED AT ALL TIMES WHEN USING OXYGEN SCAVENGER, WITHOUT EXCEPTION. USING OXYGEN SCAVENGER WITH HARD WATER WILL CAUSE RAPID TUBE STOPPAGE. DO NOT MIX OR STORE IN ALUMINUM CONTAINERS.