

ECONOMIX

COMPLETE FIRESIDE TREATMENT CHEMICAL

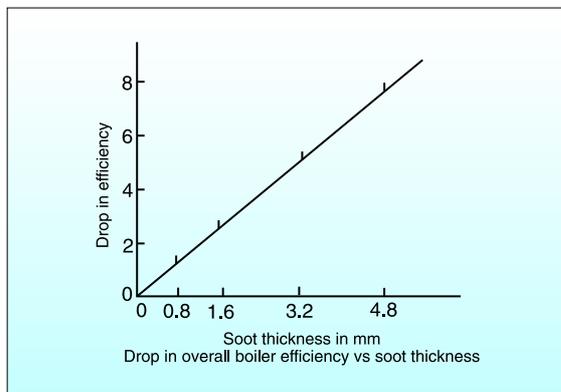
INTRODUCTION

Sooting, clinker and other combustion deposits are common fireside occurrences in boiler and thermic fluid heater installations. Such deposits have to be cleaned manually by brushing, scouring or by chemical action which leaves much to be desired. The cleaning is almost never perfect and cannot reach certain sections of the heating surface which have poor accessibility.

Soot thickness mm	Loss in conductivity percent
0.8	9.5
1.6	26.2
3.2	45.3
4.8	69.0

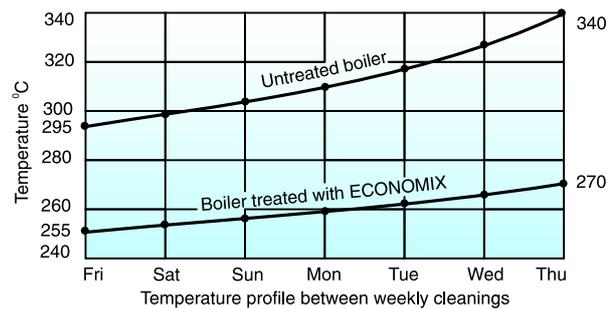
The adhesive properties of unburnt carbon result in the build-up of incombustible solids on the heat transfer surfaces. The carbon acts as thermal barrier reducing heat transfer and boiler efficiency.

The effect of this reduced heat transfer is usually reflected in a loss of efficiency as can be observed from the higher stack temperatures generated by the boiler or heater. The reduction in conductivity can be related to reduction in efficiencies as shown in the graph.

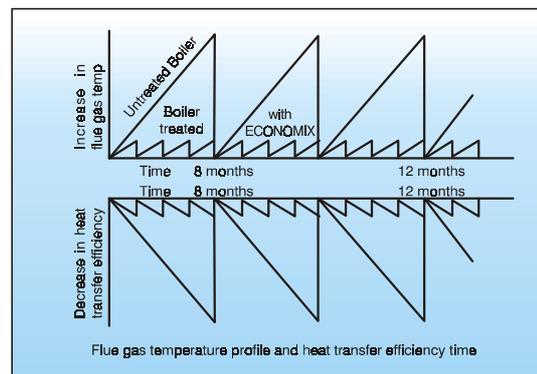


ECONOMIX is a chemical formulation for fireside cleaning of combustion deposits. ECONOMIX

contains dispersants, chemicals and corrosion inhibitors. ECONOMIX is a free flowing powder, non-toxic and safe to handle. It is fed directly into the furnace while the boiler is in operation.



When the chemicals enter the high temperature zone, they vaporize and deposit as a thin film on the relatively cooler surfaces of the furnace. The combustion catalysts reduce the ignition temperature of the adhering carbon permitting to burn at reduced temperatures. Oxidising agents provide the combustion oxygen. This action of ECONOMIX exposes the bare metal of the heat exchanger. The corrosion inhibitors protect the metal from corrosion by acids produced during combustion and prevent scale formation due to metal oxidation.



While traditional cleaning methods cause a sharp decrease in efficiency and increase in stack temperature between shutdowns; ECONOMIX maintains combustion equipment at peak efficiency continuously. Regular use of ECONOMIX results in the complete removal of fireside deposits.

METHOD OF USE

Economix can be introduced directly into the furnace, economiser, superheater packed in a container itself or can be blown with the help of air pressure gun. The most important condition is that the combustion zone temperature is at least 350°C

For oil fired boilers and heaters

Switch 'OFF' the burner and remove the oil needle valve or burner gun. Deliver ECONOMIX into the furnace and start the burner again. For this operation, the burner has to be shut off for about 10 minutes. If the boiler has multiple furnaces or flues, the dosage of ECONOMIX has to be distributed evenly among the furnaces.

For coal fired boilers and heaters-manual fired

Wait for the flame to die out after the fresh coal has been charged. When only the embers are glowing feed ECONOMIX as evenly as possible into the furnace. Shut the furnace doors without feeding coal for about 10 minutes. The boiler or heater may be fired normally after that.

For coal fired boilers and heaters-stoker fired

ECONOMIX should be placed into the furnace at one-third distance from the coal feeding end. The stoker may be operated normally.

BENEFITS EXPERIENCED BY USERS

1. Online cleaning of boiler/heater.
2. Reduced manpower requirements for boiler cleaning
3. Reduced downtime.
4. Increased boiler availability.
5. Reduced soot blowing frequency.
6. Improved heat transfer.
7. Reduced frequency of cleaning.

DOSAGE

It is not possible to recommend exact dosage for any boiler due to many variations of conditions under which boilers operate. Dosage depends on factors such as load, fuel consumption, etc. Thermax application expert will however, recommend exact dosings.

PACKAGING AND HANDLING

ECONOMIX is available in standard pack containing 10 unit packs. Each unit pack contains 1.5 kg of ECONOMIX powder. It is also available in 50 kg fibre drum for the use in large installations.

ECONOMIX is mildly alkaline and may cause irritation to skin, eyes and nose, Avoid contact with eyes and nose. Do not take internally. In case of contact, wash with plenty of water and secure medical attention. ECONOMIX should be stored in dry area.