

CONSERVATION OF FUEL

1. GENERAL

1.01 This section discusses the general aspects of fuel conservation for efficient operation.

1.02 Reference shall be made to appropriate Bell System Practices, manufacturers' instructions or the assistance of experienced personnel shall be obtained if difficulties are encountered in the operation of heating and ventilating systems.

1.03 Recommendations shall be prepared to cover any contemplated additions or changes to buildings and heating equipment and these forwarded through the lines of organization to the General Plant Manager. No work shall be done until required approvals have been obtained.

2. ROOM CONDITIONS

2.01 Reduce temperatures to the minimum generally accepted as desirable for health and comfort. It is estimated by some authorities that each degree drop in average temperature above 70° F. saves about 3% in fuel.

2.02 Avoid variations in temperature in different rooms, e.g. operating room, locker room and rest room in so far as practical. Maintenance of the same temperature level throughout quarters occupied by a particular force is conducive to greater comfort.

2.03 Proper air conditions are considered to be more dependent on slow air movement sufficient to dispel dead air pockets than upon the number of changes of air and can be effected with less expenditure of fuel.

2.04 Open windows only the minimum necessary for satisfactory ventilation. When room temperatures are

excessive, it is preferable to turn off one or more radiators.

2.05 Turn off radiators in rooms during unoccupied periods with due regard to avoiding freezing temperatures.

2.06 Pull down shades or venetian blinds at night to reduce heat losses through windows.

2.07 Solicit employee cooperation in effecting fuel conservation by the means enumerated above and to ensure their comfort encourage employees to wear warm clothing.

3. HOT WATER

3.01 Maintain temperature of hot water in storage tanks when used for toilet purposes and housekeeping requirements at not more than 130 degrees F.

3.02 When hot water temperatures are reduced, it is necessary to notify the employees of the fact by appropriately placed posters in wash rooms, or otherwise, so that water will not be allowed to run in order to get expected higher temperatures. Request employees to use hot water sparingly.

4. BOILER OPERATION

4.01 Keep internal heating surfaces of the boiler clean to assure maximum heat absorption. Soot and fly ash on boiler heating surfaces may waste as much as 5% of the fuel burned.

4.02 Inspect oil burners and combustion chambers frequently to make certain that the burners are in good operating condition and that the combustion chamber walls are not cracked, disintegrating or covered with soot.

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4.03 Adhere strictly to proper practices for firing, cleaning and banking coal fires. (Covered by other sections of the "H" series of Bell System Practices).

4.04 Blow down and flush boiler to clean interior surfaces and to remove sludge as provided for in Division 18 of Section H51.303.

4.05 Check the boiler setting to ensure that it is tight and there is no infiltration of air into the combustion chamber.

4.06 Normally, buildings equipped with low pressure boilers can be satisfactorily heated with one pound or less of steam pressure even in severe weather. Avoid steam pressure in excess of actual heating requirements. Vacuum heating systems should be operated with as high a vacuum in the return lines as practical.

NOTE: In Iowa refer to Sec. H51.390.

5. HEATING SYSTEMS

5.01 Radiators should be cleaned between and under sections to ensure maximum air circulation. Where blackout curtains or draperies are used on windows over radiators inspect to see that the heat from the radiators is not pocketed by the curtains or draperies.

5.02 Check condition of insulation on steam lines, hot water tanks, etc.

5.03 Inspect the heating system as a whole to see that there are no leaks and that traps, radiator shut-off valves, air vent valves, etc., are operating properly.

5.04 The air valve in hot water radiators should be opened periodically to assure hot-water circulation to full capacity of the radiator.

5.05 Hammering or erratic circulation in steam distribution and return lines can be corrected by a competent heating contractor with advantages in fuel saving.

5.06 If it is evident that the thermostats are out of adjustment they shall be checked and readjusted by a competent service mechanic. However, in small exchanges where only one thermostat is involved and it can not be readily adjusted, it should be replaced.

5.07 Room thermostats should be protected from drafts and relocation or shielding may be justified in some instances.

5.08 There may be cases where it would be desirable to modify a thermostat to prevent unauthorized persons from changing the setting.

6. VENTILATING SYSTEMS

6.01 Inspect ventilating equipment as to cleanliness of air filters and operation of the dampers.

6.02 Adjust ventilating equipment to hold to a minimum the percentage of outside air taken in.

7. INSULATION

7.01 Review the advisability of installing weather-stripping on windows where air leakage is excessive.

7.02 Review the advisability of installing storm sash on the windows of small buildings particularly on the prevailing wind side and where air leakage is excessive. Due regard should be given to the availability of space for summer storage and to the problems of hanging, removal and cleaning.

8. MISCELLANEOUS

8.01 Reduce the cleaning of windows to a minimum during the winter months.