

CORROSION

EXHAUST FROM WOOD AND OIL FIRE BURNERS

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This issue supersedes all previous issues

The fall out from boilers and heaters using wood and oil for fuel can be unsightly and if neglected, damage the surface on which it falls. While it is not always possible to prevent this happening it can be reduced by locating the flue or exhaust in a position where prevailing winds would blow the fallout clear of the roof. It is most important to ensure that the height of the flue is sufficient to create a good draft which will also result in reducing the concentration of the fallout.

The design of the flue must meet the appropriate Australian Standard AS 2918 - 1990 and meet appropriate Local Government building ordinances.

Corrosion arising from deposition from incorrectly designed flues has been previously investigated and has been found to be related to grossly elevated concentrations of sulphurous products, wood acids and resinous combustion products which have condensed directly from the exiting flue gas.

This has been found to be related to fuel type, and/or inappropriate flue design.

Burning of green hardwood, resinous soft woods, low grade coal or oils with a high sulphur content can all result in greater quantities of fallout which contain corrosive substances.

Where the skin temperature of the flue is low due to poor design or the use of single tube flue systems, cooling of the flue gas will occur. This results in precipitation of the flue gas components and deposition of the heavier particles on the roof surface adjacent to the flue.

Figure 1: Flue Deposition/Corrosion.



The information and advice contained in this Bulletin is of a general nature only, and has not been prepared with your specific needs in mind. You should always obtain specialist advice to ensure that the materials, approach and techniques referred to in this Bulletin meet your specific requirements.

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