

# Important boat safety message

## Advice to boaters on burning wood fuel

January 2015

### **Boaters using damp wood and logs in their stoves could be risking increased costs, stove damage and carbon monoxide poisoning says the Boat Safety Scheme (BSS).**

It is crucial that wood fuel is kept in a dry, well-ventilated area. If not, the damp fuel will cause the stove to run at a lower temperature as the heat of the fire will be producing steam and so the stove needs much more fuel to keep the boat warm.

Even worse, the steam dissolves-out flammable, acidic tars which will cling to and block up, as well as inevitably damage, the stove and its chimney.

Damaged stove installations are more likely to leak combustion gases into the cabin space, and because of incomplete combustion as the fuel is damp, those gases are more likely to contain carbon monoxide (CO) – giving the vicious cycle that could see a highly toxic atmosphere in the boat. Stove flues lined with tar could also lead to a chimney fire.

**"Almost all problems associated with burning wood are caused by damp fuel. A 1kg log of fresh wood will contain about a tea mug's worth of water"**

- To burn effectively, wood needs to be dried out, 'seasoned', to a maximum of 15 to 20% water.
- A fresh 1kg log with 60% moisture may be able to give out just under 2kW of heat energy, a 1kg log dried to only 25% roughly doubles the heat per kW to about 4kW.'
- Wood that burns easily and cleanly with good heat will feel dry and have a hollow sound when tapped. The bark will either have fallen off, or will fall away easily and good wood often has cracks in the end where it has dried out.
- Wood that feels damp and dense or has the leaves attached should be avoided. Seeing green or white mould on the surface and not having any radial cracks are signs of potentially unseasoned fuel that needs drying before use.

There is much more information on stove fuels at <http://www.soliftec.com/woodfuel.htm>

For more advice on solid fuel stove safety <http://www.boatsafetyScheme.org/stay-safe/solid-fuel-stoves>