SOME L.P.H.W. HEATING DO'S AND DON'TS

PIPEWORK:

DON'T use galvanised pipe and fittings –
DO use black steel or copper.
DON'T use square elbows – DO use swept bends and tees.
DO provide a drain at the lowest point.

EXPANSION:

DON'T fix pipes with rigid supports – expansion is likely to break them or pull them out.
DO ensure that pipes can expand and contract freely without causing damage either to themselves or the building.
DO use anchors to control direction of expansion and to limit the amount of movement which occurs.
Steel pipe expands about 9mm per 10 metres between 10 degrees Celsius and 90 degrees Celsius.
DO take laterals from the top of main to allow for movements and for easy venting of air.
DO grade piping so that it is self venting 5" in 100 feet.
(150mm in 30m)

VENTING:

DO fit open vents or autovents on high points.
If open vents used, ensure they are high enough to prevent water discharging.
DO fit air cocks to all radiators which are located above pipe work.

RADIATORS:

DON'T test system at town main pressure with radiators connected.
DO size radiators carefully. If you undersize them there is no way of increasing their output.
DO use TBOE connections wherever possible and fit air cocks.
DON'T try to braze radiators, gas weld only.
DON'T run radiators at temperatures over 82 degrees Celsius – people may be burned.

LAYOUT:

If the layout allows, placing the cooker next to the cylinder is ideal. Pump and ancillary equipment can then be incorporated within the cupboard in a tidy and effective way.

For wooden floor buildings, under-floor mains are most suitable. For concrete floor buildings, the mains can be run in the ceiling and drop to each heater. Automatic or manual air vents should be fitted to high points of the mains, and head tank should be a minimum of 400mm above the highest point of the pipe work. For exposed beam roofs without ceiling space, the soffit is probably the most suitable location, with droppers in or exposed on the wall.