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Section 1 Introduction

The KM9004 is an electronic combustion analyser, intended for boiler checking and service, which measures the following:

- Oxygen O₂ content (%) of flue (stack) gas
- Carbon Monoxide CO content (ppm) of flue gas
- Nett temperature of flue gas (increase over ambient)
- Actual temperature of the flue gas in Celcius or Fahrenheit.

From these readings the instrument calculates the combustion efficiency. It is programmed for different fuels including natural gas, light oil, heavy oil and solid fuel. The parameters can be monitored continuously while the boiler is adjusted to give optimum combustion.

The KM9004 uses either a standard probe (CP4) for gas sampling or a smoke probe for both gas sampling and smoke testing. Either probe is connected by quick release couplings, and the instrument can be used to optimise the combustion efficiency of boilers using the oxygen and carbon monoxide readouts, with the temperature readout as an additional indication of heat transfer efficiency within the boiler. It can also check the smoke emission against standard charts with the smoke probe (see section 3.4).

A printer gives a printout of all parameters on demand. The display unit can be used as a hand-held monitor at distances up to 25 metres away from the main instrument case.

The instrument can be programmed for up to 8 different languages. If it is not set for the correct language on delivery, the local Kane-May dealer should be consulted. The keypad on all instruments is in English.

This manual provides all the information required for normal operation of the instrument. Section 2 describes the instrument and its various functions. Section 3 covers the preparation and Section 4 the starting up and setting up of parameters before operation. Section 5 describes normal operation, with Para. 5.6 summarising the steps. Section 6 covers routine maintenance. Section 7 gives a summary of combustion theory and practice and the determination of combustion efficiency. Section 8 is the specification of the instrument.

In line with its policy of continuous development, Kane-May Limited reserves the right to alter any part of the instrument specification without prior notice. Further information is available from the local Kane-May dealer or from the Service Manager at Kane-May Limited.

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