



CERTIFICATE OF CALIBRATION			
ISSUED BY:	JMW Limited	DATE OF ISSUE:	30/04/2015
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Customer/Acc. No:	Example	E30342	Location:	Post Code	
Instrument:	TPI 716 flue gas analyser		Calibration Interval:	12 months	
Instrument S/No:	657489432		Calibration Date:	30/04/2015	
Instrument ID No:	N/A		Calibrated by (Op. No):	04	
JMW Proc. No:	3798		Approved by (Op. No):	29	
Traceability:	The instrument referred to in this certificate was re-calibrated by applying known concentrations of test gas mixtures and recording the indicated values (gas ranges) and by applying nominal values at a number of points and recording the indicated values (temperature ranges). The test gas mixtures and equipment used, for which the company maintains traceability to international standards by means of certificates issued by the supplier, are listed below (ambient air at the internationally recognised value of 20.9%v/v).				
Allowances:	The allowance is based on the manufacturers published specification where available or recognised industry standards.				
Limitations of Use:	The following results do not carry any implications as to the long term stability of the instrument.				
Environmental Conditions:	The ambient temperature and humidity throughout the calibration period were uncontrolled and unmonitored but were, typically 20°C ±5°C and 50% RH ±20% RH.				
CALIBRATION REFERENCE STANDARDS					
Reference	Description	Uncertainty	JMW Ref	Description	Uncertainty
N/A	Ambient air @ 20.9%v/v oxygen	Absolute	023	Digital pressure calibrator	±0.05 mbar
036	Oxygen @ 0.000005%v/v	±2%	041	Temperature indicator/simulator	±0.25°C
014	500ppm (nom) carbon monoxide	±2%			
ACCESSORIES					
	Present	Sound		Present	Sound
Water trap:	N	N/A	Battery charger:	N	N/A
Printer:	N	N/A	Sampling line/probe:	Y	Y
PRE-CALIBRATION FUNCTIONAL CHECKS					
Instrument is -	Complete:	<input type="checkbox"/> Y	Free from damage:	<input type="checkbox"/> Y	Operational:
	Pump is operational:	<input type="checkbox"/> Y	Battery charges/discharges:	<input type="checkbox"/> Y	<input type="checkbox"/> Y
RESULTS					
Range	Applied value	Allowance	As received		After adjustment
			Indicated reading	P/F	Indicated reading
Oxygen: 0-25%v/v	0% v/v	±0.3%v/v	Unstable	F	0%v/v
	Ambient air @ 20.9% v/v	20.6-21.2%v/v	Unstable	F	20.9%v/v
Carbon monoxide: 0-10,000ppm	0ppm	±3ppm	0ppm	P	0ppm
	CO/ @ 500ppm	485-515ppm	480ppm	F	500ppm
Temperature: 0-1300°C	0°C	±1°C	0°C	P	
	200°C	198-202°C	200°C	P	
	400°C	398-402°C	400°C	P	
	600°C	597-603°C	600°C	P	
	800°C	797-803°C	800°C	P	
Pressure: ±99.99mbar	1.000mbar	±0.050mbar	1.001mbar	P	
	10.00mbar	±0.10mbar	10.05mbar	P	
	50.00mbar	±0.50mbar	50.15mbar	P	
The uncertainties are for a confidence probability of not less than 95%					