AFPMA laboratory

Waypoint

AFPMA
Lycée des Métiers du Bâtiment
43, route d'Aubusson
23500 FELLETIN
www.afpma.pro

Damien Lehmann

Crédits Photos :
AFPMA

Toute utilisation des photos est soumise à autorisation préalable

www.afpma.pro

EN PARTENARIAT AVEC :

AVEC LE SOUTIEN FINANCIER DE :


OGC H2O measure
OGC and dust measure
Measure of wood mass
Air velocity measure
Filter drying and weighing
Combustion analyzer
Bell exchanger
Temperature and pressure measure
Supervison

Pressure regulator carbon filter

Silica gel for dry air

VOC absorber

Calibration gas for VOC

Flame ionization detector

LASER water vapor sensor

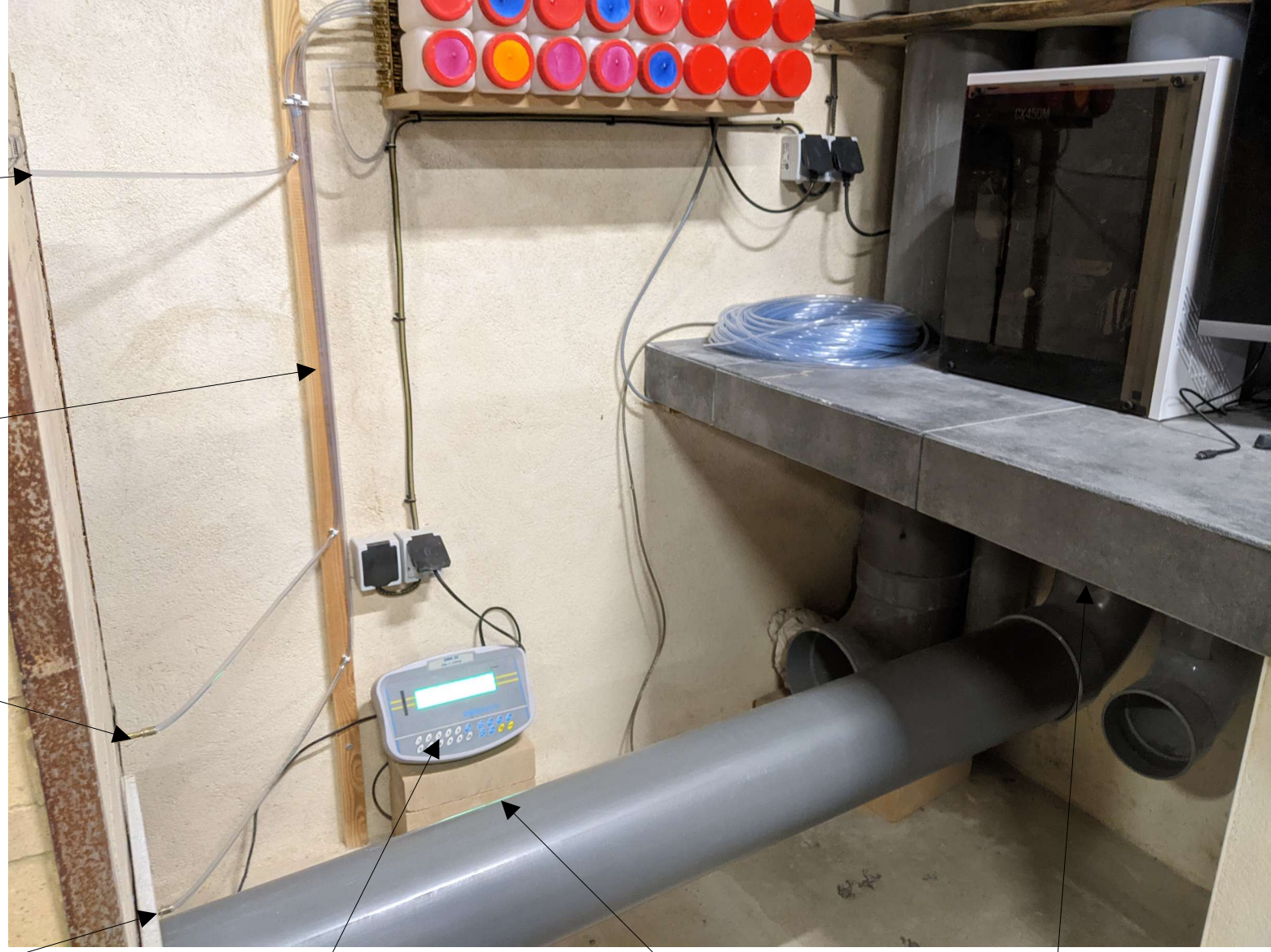
Combustion analyzer

Hydrogen generator

Condenser


H2


Air supply 100/125/160/200 mm
CONDAR suction regulator
Pressure socket
Hot wire anemometer
Thermocouple reading
Differential pressure sensors
Atmospheric pressure Outside temperature
Pressure buffers
Supervision



Fireplace top pressure socket

Temperature measurement for pressure compensation

Pressure socket Bottom of fireplace

Under-fired pressure socket

Balance display under fireplace

Pressure socket air pipe

Air temperature and humidity measurement

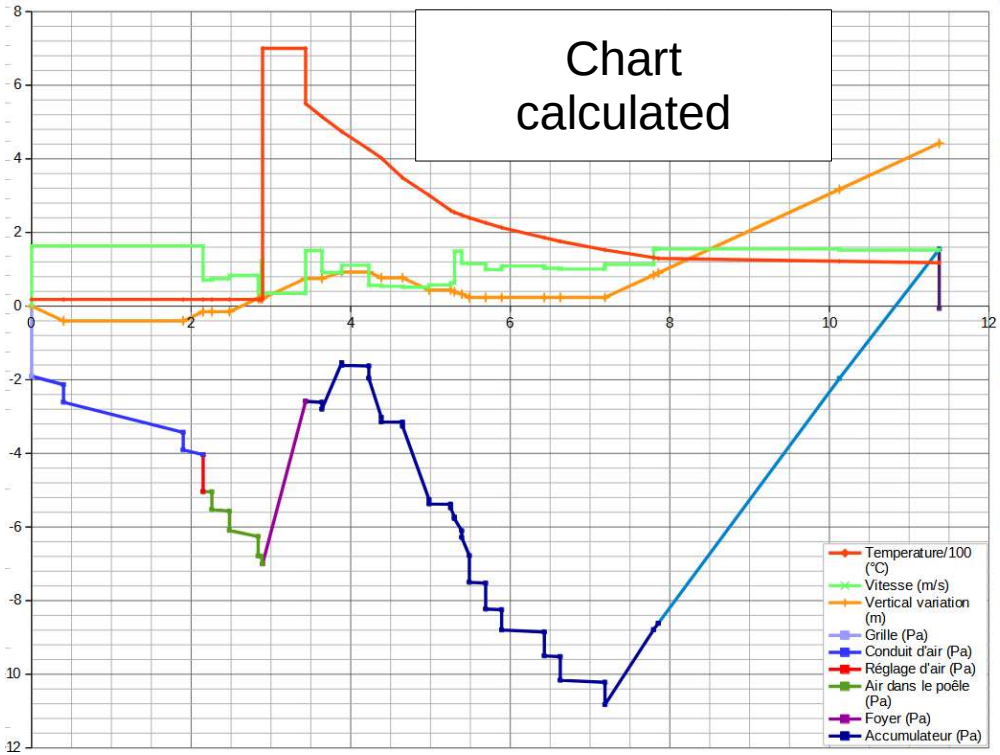
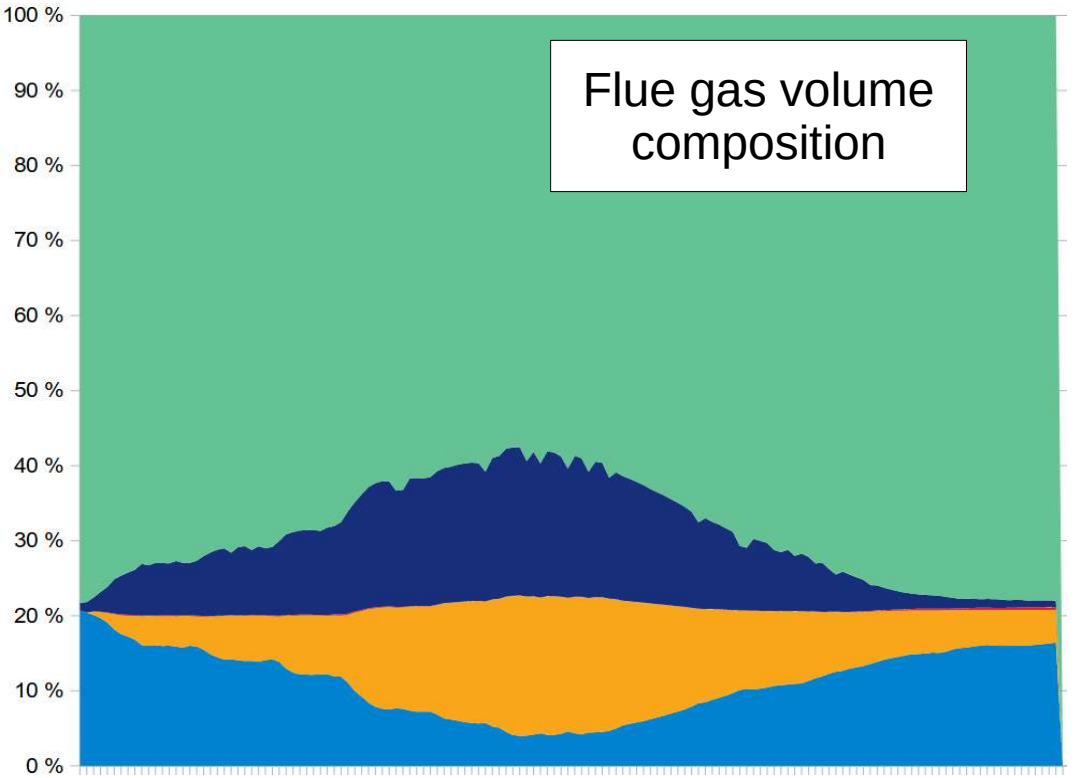
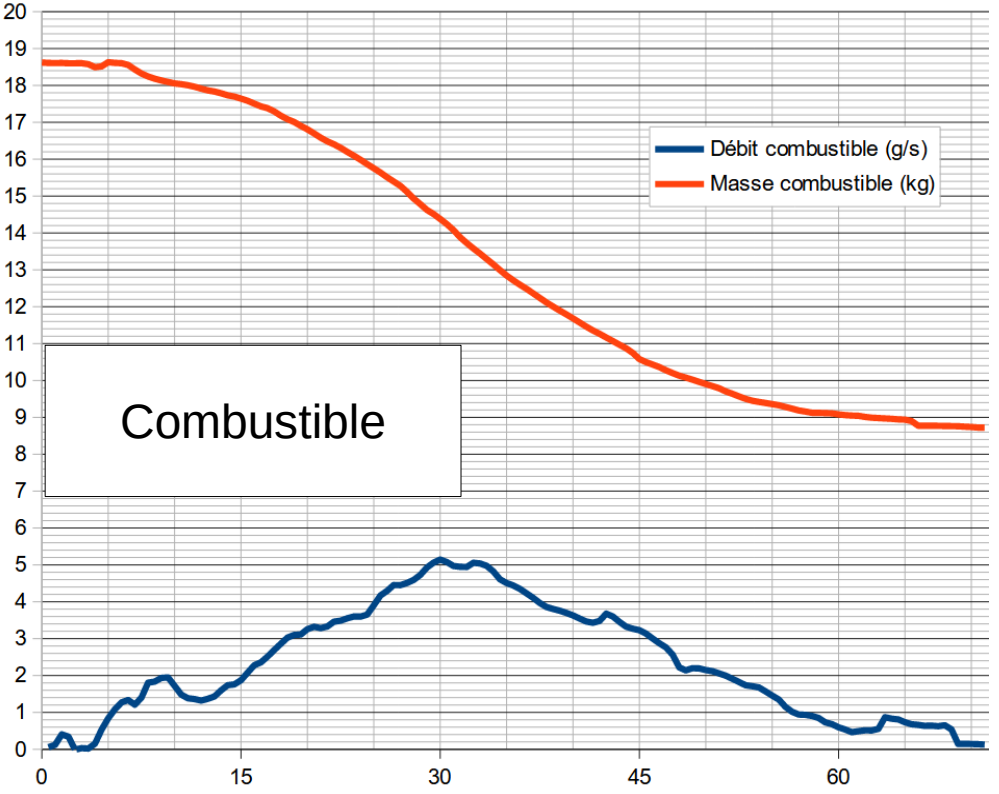
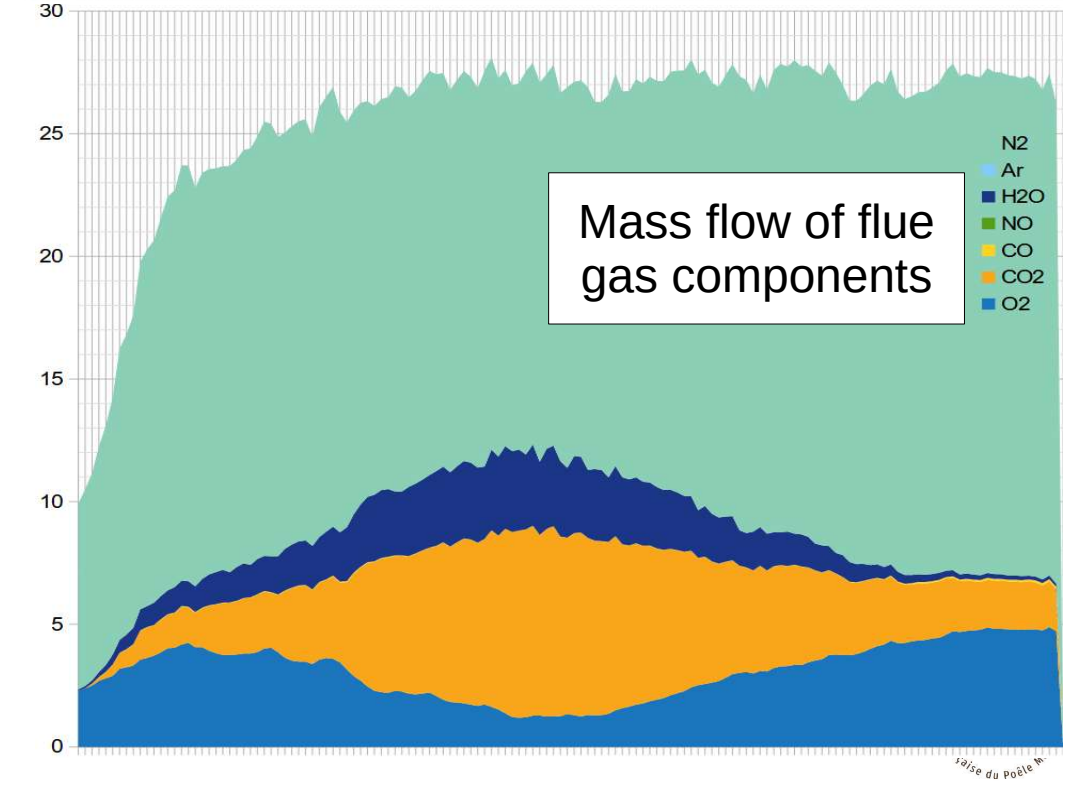
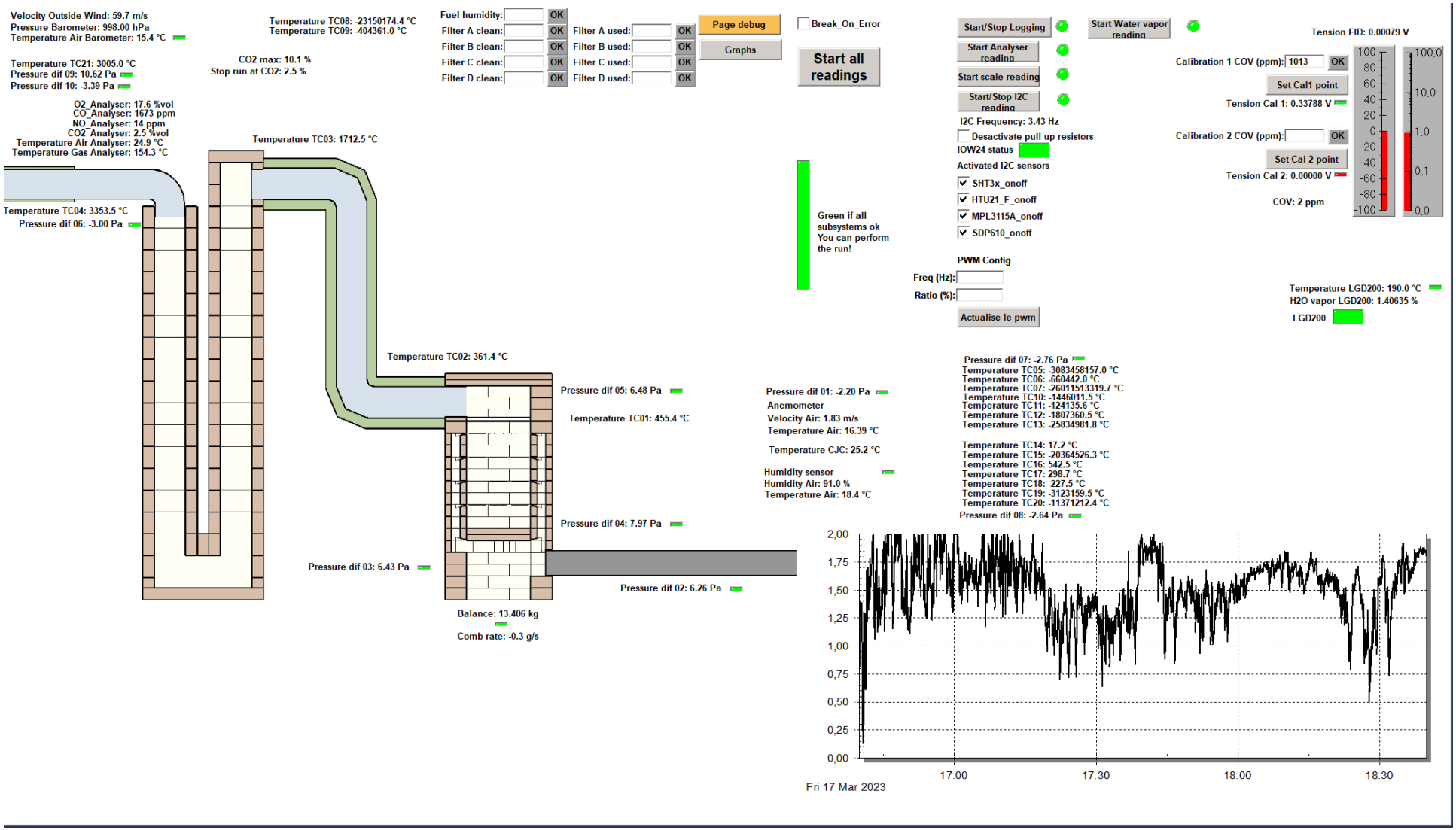


Chart calculated
Temperature/100 (°C)
Vitesse (m/s)
Vertical variation (m)
Grille (Pa)
Conduit d'air (Pa)
Réglage d'air (Pa)
Air dans le poêle (Pa)
Foyer (Pa)
Accumulateur (Pa)


Flue gas volume composition


Combustible
Débit combustible (g/s)
Masse combustible (kg)


Mass flow of flue gas components
N2
Ar
H2O
NO
CO
CO2
O2


Velocity Outside Wind: 59.7 m/s
Pressure Barometer: 998.00 hPa
Temperature Air Barometer: 15.4 °C
Temperature TC21: 3005.0 °C
Pressure dif 09: 10.62 Pa
Pressure dif 10: -3.39 Pa
O2_Analyser: 17.6 %vol
CO_Analyser: 1673 ppm
NO_Analyser: 14 ppm
CO2_Analyser: 2.5 %vol
Temperature Air Analyser: 24.9 °C
Temperature Gas Analyser: 154.3 °C
Temperature TC08: -23150174.4 °C
Temperature TC09: -404361.0 °C
CO2 max: 10.1 %
Stop run at CO2: 2.5 %
Fuel humidity: OK
Filter A clean: OK
Filter B clean: OK
Filter C clean: OK
Filter D clean: OK
Filter A used: OK
Filter B used: OK
Filter C used: OK
Filter D used: OK
Page debug
Graphs
Break_On_Error
Start all readings
Start/Stop Logging
Start Analyser reading
Start scale reading
Start/Stop I2C reading
Start Water vapor reading
I2C Frequency: 3.43 Hz
Desactivate pull up resistors
IOW24 status
Activated I2C sensors
SHT3x_onoff
HTU21_F_onoff
MPL3115A_onoff
SDP610_onoff
Green if all subsystems ok
You can perform the run!
PWM Config
Freq (Hz):
Ratio (%):
Actualise le pwm
Tension FID: 0.00079 V
Calibration 1 COV (ppm): 1013 OK
Set Cal1 point
Tension Cal 1: 0.33788 V
Calibration 2 COV (ppm): OK
Set Cal 2 point
Tension Cal 2: 0.00000 V
COV: 2 ppm
Temperature LGD200: 190.0 °C
H2O vapor LGD200: 1.40635 %
LGD200
Temperature TC03: 1712.5 °C
Temperature TC04: 3353.5 °C
Pressure dif 06: -3.00 Pa
Temperature TC02: 361.4 °C
Pressure dif 05: 6.48 Pa
Temperature TC01: 455.4 °C
Pressure dif 04: 7.97 Pa
Pressure dif 03: 6.43 Pa
Pressure dif 02: 6.26 Pa
Balance: 13.406 kg
Comb rate: -0.3 g/s
Pressure dif 01: -2.20 Pa
Anemometer
Velocity Air: 1.83 m/s
Temperature Air: 16.39 °C
Temperature CJC: 25.2 °C
Humidity sensor
Humidity Air: 91.0 %
Temperature Air: 18.4 °C
Pressure dif 07: -2.76 Pa
Temperature TC05: -3083458157.0 °C
Temperature TC06: -660442.0 °C
Temperature TC07: -26011513319.7 °C
Temperature TC10: -1446011.5 °C
Temperature TC11: -124135.6 °C
Temperature TC12: -1807360.5 °C
Temperature TC13: -25834981.8 °C
Temperature TC14: 17.2 °C
Temperature TC15: -20364526.3 °C
Temperature TC16: 542.5 °C
Temperature TC17: 298.7 °C
Temperature TC18: -227.5 °C
Temperature TC19: -3123159.5 °C
Temperature TC20: -11371212.4 °C
Pressure dif 08: -2.64 Pa
2,00
1,75
1,50
1,25
1,00
0,75
0,50
0,25
0,00
17:00
17:30
18:00
18:30
Fri 17 Mar 2023