



Combustion Technologies – Pollutants and legislation

Ficha #3 (delivery, in pdf/excel, day 26 MAy 2022)

A boiler is fed by fuel-oil (molar mass 100 g/mol) with the following ultimate analysis (see table). Considering combustion with 25% excesso air:

- Calculate the (A/F)_{st}.
- Estimate the SO₂ concentration in the combustion products.
- Compare with the dry limit at 3% O₂ of 200 mg/Nm³ and discuss if the power plant complies with the legislation.
- Can you estimate the particle emissions at the exhaust? Explain and estimate in mg/Nm³.

C	86.4%
H	9.8%
N	0.35%
S	1.13%
O	2.28%
Cinzas/Ash	0.04%

Ultimate analysis fuel, mass basis