Data Sheet

Erratum to: Data on Biomass Boilers

Ir Ravi Manon*

The following data on biomass boilers were gathered and published in PIPOC 1999 by John de Kock and David Yap of Flosep Sdn Bhd. These data should be of interest to those who would like to venture into designing devices for trapping particulates to meet with the emission level of 0.15 g Nm^{-3}.

TABLE 1. FLUE GAS CHARACTERISTICS IN A TYPICAL PALM OIL MILL BOILERS

Description	Units	Study 1(a)	Study 1(b)	Study 2	Study 3	Study 4	Study 5
Boiler Capacity	**t hr^{-1}**	**27**	**27**	**11**	**18**	**13.6**	**13.6**
Steam turbine output	kW	640	650	290	480	n/a	300
Inlet dust load	g Nm^{-3}	3.98	3.2	4.3	3.8	2.76	1.49
Outlet dust load	g Nm^{-3}	1.95	0.24	1.7	1.15	0.52	0.24
Inlet particle size	D[v,0.5] μm	40.92	44.88	38.41	56.7	46.43	38.24
Outlet particle size	D[v,0.5] μm	36.8	4.48	n/a	34.4	8.53	4.11
Type of dust collector[1]		Multi cyclone	Flosep TAS50	Multi cyclone	Multi cyclone	Flosep TAS100	Flosep TAS50
Emission factor	kg t^{-1}	3.25	0.4	3.026	1.5	0.65	0.42

All dust collectors in this study were single stage.

* *Ravindranathan Palmtech Solutions*
No. 77 Jalan 22/37
47400 Petaling Jaya, Selangor
E-mail: nravimenon41@gmail.com

TABLE 2. BOILER FLUE GAS CHARACTERISTICS UNDER DIFFERENT CONDITIONS

Boiler Capacity 14 tph / Parameters	Units	Normal Condtion		Overload Condition		Racking in Progress	
		Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
Flue gas temperature	°C	214	167	236	178	217	172
Dust concentration	g Nm^{-3}	1.75	0.40	2.60	1.50	2.80	1.40
Moisture content	% V/V	7.40	7.35	7.96	7.81	7.85	7.84
Particle size (median)	μm	52.02	6.66	6.89	1.11	22.06	2.52
Below 10 μm	% Mass	7.90	64.3	57.60	100	39.00	98.20
Below 1 μm	% Mass	0.64	18.2	15.20	44.6	4.10	19.60

The original article was published in *Palm Oil Engineering Bulletin, Issue No. 127* (Apr – Jun 2018). Unfortunately, the original version of this article contained errors. Data for flue gas characteristics in a typical palm oil mill boilers were previously incorrect. The correct data are shown as above.