PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services
Jl. Raya Jakarta Bogor Km 37, Cilodong, Depok Jawa Barat Indonesia 16412
Telp. 021-29629393/4, Fax 021-29629395. http://www.aaslaboratory.com

KAN Komite Akreditasi Nasional
LP-565-IDN

LAPORAN HASIL PENGUJIAN

Result of Analysis

No: AAS.LHP.VIII.2023.3311

Nomer Order *(Order Number)*	: AAS.KU.VIII.2023.3311	Matrik Sampel *(Sample Matrix)*	: Emisi
Nama Pelanggan *(Costumer Name)*	: **PT Ispat Indo**	Parameter Analisa *(Parameter)*	: Emisi Sumber Tidak Bergerak (Isokinetik)
Alamat *(Address)*	: Desa Kedungturi, Kec. Taman, Kab. Sidoarjo, Jawa Timur	Tgl. Penerimaan *(Received Date)*	: 03 Agustus 2023
Telepon/Faks *(Phone/Fax)*	: 081615095757	Tgl. Analisis *(Analysis Date)*	: 04 - 11 Agustus 2023
Personil Penghubung *(Contact Person)*	: Bapak Irwan	No. Lab *(Lab. No.)*	: 08.0238 - 08.0239

Depok, 14 Agustus 2023
General Manager

PT. ANUGRAH ANALISIS SEMPURNA INDONESIA DEPOK

Sonly H. Saragih

No. Formulir : 28.1/F-PP/SMM-AAS
Revisi : 4

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KAN Komite Akreditasi Nasional LP-565-IDN

LAPORAN HASIL PENGUJIAN

No: AAS.LHP.VIII.2023.3311

Nama Pelanggan: PT Ispat Indo
Costumer Name

Parameter Analisa: Emisi Sumber Tidak Bergerak
Parameter

Tanggal Sampling: 28 Juli 2023
Sampling Date

No	No. Sample	Kode sample	Parameter Uji	Hasil	Kadar Maksimum	Satuan	Metode Pengukuran	Keterangan
1	08.0238	**Emisi Cerobong BRF A S: 07° 21' 21,4" E: 112° 42' 20,6"**	Total Partikulat (Debu)	99,73	150 6)	mg/Nm^3	SNI 7117.17-2009 US-EPA Method 17	
			Sulfur Dioksida (SO_2)	47,19	1000 6)	mg/Nm^3	18-NON-74/MU/SMM-AAS (Flue Gas Analyzer)	
			Nitrogen Dioksida (NO_2)	26,41	1200 6)	mg/Nm^3	18-NON-74/MU/SMM-AAS (Flue Gas Analyzer)	
			Opasitas	<20	20 6)	%	SNI 19-7117.11:2005	
			Karbon Monoksida (CO)	15,86	-	mg/Nm^3	18-NON-74/MU/SMM-AAS (Flue Gas Analyzer)	
			Oksigen (O_2)	17,63	-	%	18-NON-74/MU/SMM-AAS (Flue Gas Analyzer)	
			Karbon Dioksida (CO_2)	39051,12	-	mg/Nm^3	18-NON-74/MU/SMM-AAS (Flue Gas Analyzer)	
			Laju Alir	17,00	-	m/s	22-043/IK/SMM-AAS (Flue Gas Analyzer)	
			Persen Isokinetik	91,20	-	%	Method 17 USEPA	

Keterangan :

6) Kadar Maksimum mengacu pada Pergub Jawa Timur No.10 Tahun 2009, Tentang Baku Mutu Emisi Sumber Tidak Bergerak untuk Industri atau Kegiatan Usaha Lainnya yang Sudah Beroperasi, Lampiran I Bag. A (Industri Logam dan Sejenisnya)

*) Parameter Belum Terakreditasi

- Volume gas diukur dalam keadaan standar (25°C dan tekanan 1 atmosfer)

Depok, 14 Agustus 2023
General Manager

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PERCENT ISOKINETIC VARIATION AND PARTICULATE CONCENTRATION

No: AAS.LHP.VIII.2023.3311

Nama Pelanggan: PT Ispat Indo
Costumer Name
Lokasi Sampling: Emisi Cerobong BRF A S: 07° 21' 21,4"E: 112° 42' 20,6"
Sampling Location

No	Parameters	Metric Unit	Keterangan
1	Total sampling time, min.	60	Measurement
2	Average Dry Gas Meter Temperature, K (R)	306,47	Measurement
3	Barometric Pressure, mm (in) Hg	756,50	Measurement
4	Dry Gas Meter Coefficient (Y)	1,001	Calculation
5	K1	0,3923	Constant
6	Gas Volume, m^3 (ft^3)	1,22	Measurement
7	Average delta H, mm (in) H_2O	50,19	Measurement
8	Vm (std), m^3 (ft^3)	1,1883	Calculation
9	K2	0,001357	Constant
10	Collected Water, ml	33,00	Measurement
11	Vw (std), m^3 (ft^3)	0,0448	Measurement
12	Water vapor of gas (Bws)	0,0363	Calculation
13	Kp	34,97	Constant
14	Cp	0,84	Calibration
15	Ts, K (R)	425,73	Measurement
16	Pbar - Ps, mm (in) Hg	0,01	Measurement
17	Ps, mm (in) Hg	756,49	Calculation
18	Md, g/g mol (lb/lb mol)	28,77	Calculation
19	Ms, g/g mol (lb/lb mol)	28,38	Calculation
20	Average delta P, mm (in) H_2O	16,90	Calculation
21	Vs, m/s (ft/s)	17,00	Calculation
22	Dn, m (ft)	0,00635	Measurement
23	An, m^2 (ft^2)	0,0000317	Calculation
24	Ds, m (ft)	1,37	Measurement
25	As, m^2 (ft^2)	1,4747	Calculation
26	Qs, m^3/s (ft^3/s)	25,08	Calculation
27	Qs (std), m^3/s (ft^3/s)	17,36	Calculation
28	K4	4,2484	Constant
29	Percent of Isokinetic (I, %)	91,20	Calculation
30	Weight of Particulate, mg	118,50	Particulate
31	Concentration of Particulate, mg/Nm^3	99,73	Calculation
32	Emission rate of Particulate, kg/hr	6,23	Calculation
33	Jumlah Traves Point	12	Titik
34	O_2, %	17,63	Instrument

Nilai Isokinetik 90% ≤ X ≤ 110%

Depok, 14 Agustus 2023
General Manager

PT. ANUGRAH ANALISIS SEMPURNA

Sopiyan Saragih

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LP-565-IDN

LAPORAN HASIL PENGUJIAN

No: AAS.LHP.VIII.2023.3311

Nama Pelanggan: PT Ispat Indo
Costumer Name
Parameter Analisa: Emisi Sumber Tidak Bergerak
Parameter

Tanggal Sampling: 28 Juli 2023
Sampling Date

No	No. Sample	Kode sample	Parameter Uji	Hasil	Kadar Maksimum	Satuan	Metode Pengukuran	Keterangan
2	08.0239	Cerobong Dust Collector	Total Partikulat (Debu)	34,11	150 6)	mg/Nm^3	SNI 7117.17-2009 US-EPA Method 17	
			Sulfur Dioksida (SO_2)	4,12	1000 6)	mg/Nm^3	18-NON-74/MU/SMM-AAS (Flue Gas Analyzer)	
			Nitrogen Dioksida (NO_2)	3,54	1200 6)	mg/Nm^3	18-NON-74/MU/SMM-AAS (Flue Gas Analyzer)	
			Opasitas	<20	20 6)	%	SNI 19-7117.11:2005	
			Karbon Monoksida (CO)	0,84	-	mg/Nm^3	18-NON-74/MU/SMM-AAS (Flue Gas Analyzer)	
			Oksigen (O_2)	18,84	-	%	18-NON-74/MU/SMM-AAS (Flue Gas Analyzer)	
			Karbon Dioksida (CO_2)	23934,56	-	mg/Nm^3	18-NON-74/MU/SMM-AAS (Flue Gas Analyzer)	
			Laju Alir	15,29	-	m/s	22-043/IK/SMM-AAS (Flue Gas Analyzer)	
			Persen Isokinetik	100,86	-	%	Method 17 USEPA	

Keterangan :

6) Kadar Maksimum mengacu pada Pergub Jawa Timur No.10 Tahun 2009, Tentang Baku Mutu Emisi Sumber Tidak Bergerak untuk Industri atau Kegiatan Usaha Lainnya yang Sudah Beroperasi, Lampiran I Bag. A (Industri Logam dan Sejenisnya)

*) Parameter Belum Terakreditasi

- Volume gas diukur dalam keadaan standar (25°C dan tekanan 1 atmosfer)

Depok, 14 Agustus 2023
General Manager

PT. ANUGRAH ANALISIS SEMPURNA INDONESIA

Sonny.H. Saragih

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PERCENT ISOKINETIC VARIATION AND PARTICULATE CONCENTRATION

No: AAS.LHP.VIII.2023.3311

Nama Pelanggan: PT Ispat Indo
Costumer Name
Lokasi Sampling: Cerobong Dust Collector
Sampling Location

No	Parameters	Metric Unit	Keterangan
1	Total sampling time, min.	60	Measurement
2	Average Dry Gas Meter Temperature, K (R)	308,22	Measurement
3	Barometric Pressure, mm (in) Hg	755,60	Measurement
4	Dry Gas Meter Coefficient (Y)	1,001	Calculation
5	K1	0,3923	Constant
6	Gas Volume, m^3 (ft^3)	1,221	Measurement
7	Average delta H, mm (in) H_2O	40,34	Measurement
8	Vm (std), m^3 (ft^3)	1,1800	Calculation
9	K2	0,001357	Constant
10	Collected Water, ml	19,00	Measurement
11	Vw (std), m^3 (ft^3)	0,0258	Measurement
12	Water vapor of gas (Bws)	0,0214	Calculation
13	Kp	34,97	Constant
14	Cp	0,84	Calibration
15	Ts, K (R)	331,46	Measurement
16	Pbar - Ps, mm (in) Hg	0,01	Measurement
17	Ps, mm (in) Hg	755,59	Calculation
18	Md, g/g mol (lb/lb mol)	28,89	Calculation
19	Ms, g/g mol (lb/lb mol)	28,65	Calculation
20	Average delta P, mm (in) H_2O	17,69	Calculation
21	Vs, m/s (ft/s)	15,29	Calculation
22	Dn, m (ft)	0,00556	Measurement
23	An, m^2 (ft^2)	0,0000243	Calculation
24	Ds, m (ft)	5,00	Measurement
25	As, m^2 (ft^2)	19,6429	Calculation
26	Qs, m^3/s (ft^3/s)	300,29	Calculation
27	Qs (std), m^3/s (ft^3/s)	267,47	Calculation
28	K4	4,2484	Constant
29	Percent of Isokinetic (I, %)	100,86	Calculation
30	Weight of Particulate, mg	40,25	Particulate
31	Concentration of Particulate, mg/Nm^3	34,11	Calculation
32	Emission rate of Particulate, kg/hr	32,85	Calculation
33	Jumlah Traves Point	12	Titik
34	O_2, %	18,84	Instrument

Nilai Isokinetik 90% ≤ X ≤ 110%

Depok, 14 Agustus 2023
General Manager

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Sorlly H. Saragih