

RELEASES INTO AIR

Operational summary for the year ending 31/12/2017

Operator: Tata Steel UK Ltd

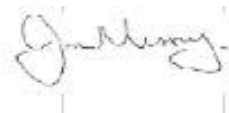
Location: Port Talbot Works

Permit: BL7108 / RP3730BV

Release Points: A2, A6 ,A7 ,A8A, A8B, A9, A10, A10A, A11, A12 & A13

PARTICULATE MATTER (DISCONTINUOUS MONITORING)							
Release Point	A2	A8A	A8B	A9	A10	A10A	A11
Time and date of sampling	13-Jul-17 10:05	10-Nov-17 10:54	13-Nov-17 11:05	08-Nov-17 11:24	27-Jun-17 09:45	15-Jun-17 10:35	15-Aug-17 09:36
Flowrate (Nm3/hr)	559,232	760,080	328,367	1,090,380	210,475	207,744	10390
Particulate measured conc. (mg/Nm3)	67	0.4	3.2	3.7	5.5	0.6	3.2
Particulate limit (mg/Nm3)	30	15	15	15	15	15	50
Sampling method used	BS EN 13284	BS EN 13284	BS EN 13284	BS EN 13284	BS EN 13284	BS EN 13284	BS EN 13284
Analytical method used	Gravimetric	Gravimetric	Gravimetric	Gravimetric	Gravimetric	Gravimetric	Gravimetric
Partic CEM result over monitoring period	23	1.7	0.4	3.8	3.3	0.6	

Signed on behalf of the Operator



Dated 15/01/2018

Form I&S DCM Part 1

RELEASES INTO AIR

Operational summary for the year ending 31/12/2017

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108 / RP3730BV

Release Points: A14, A15, A16, A18, A34A, A34B, A35, A37 & A38

PARTICULATE MATTER (DISCONTINUOUS MONITORING)									
Release Point	A14	A15	A16	A18	A34A *	A34B *	A35 **	A37	A38
Time and date of sampling	04-Jul-17 10:36	25-Jul-17 10:36	05-Jul-17 10:00	-	19-Sep-17 11:38	18-Sep-17 10:51	-	05-Dec-17 10:58	27-Nov-17 10:19
Flowrate (Nm ³ /hr)	502975	400989	529164	-	146,340	222900	-	20125	12131
Particulate measured conc. (mg/Nm ³)	9	7	9	-	17	14	-	6	11
Particulate limit (mg/Nm ³)	15	15	15	25	-	-	25	20	20
Sampling method used	BS EN 13284	BS EN 13284	BS EN 13284	-	BS EN 13284	BS EN 13284	-	BS EN 13284	BS EN 13284
Analytical method used	Gravimetric	Gravimetric	Gravimetric	-	Gravimetric	Gravimetric	-	Gravimetric	Gravimetric
Partic CEM result over monitoring period	7	12	8						
Fuel usages over the sampling period									
Natural gas (%)					90	54			
BF gas (%)									
Coke oven gas (%)					10	46			
Heavy fuel oil (%)									

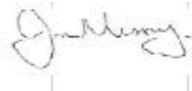
* Sampling only when COG used - unable to take sample due to plant stoppages and no COG use.

** A35 Remains not operational in 2016 - see email Sent to NRW: Subject: Permit BL7108 - Emissions into Air Monitoring 27/01/2014

A18 Not sampled on safety grounds from 2012 see email Sent to NRW: Subject: Permit BL7108 - Emissions into Air Monitoring 23/01/2013

Signed on behalf of the Operator

Dated 15/01/2018



Form I&S DCM Part 2

Operational summary for the year ending 31/12/2017

Operator: Tata Steel UK Ltd
Location: Port Talbot Works

Permit: BL7108

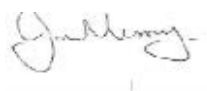
Energy Source	Annual Energy Consumption		
	Primary energy produced on site (MWh) *	Primary energy imported (MWh) **	CO2 released (tonnes)
Electricity	494492	405790	142838
Natural gas		1509136	297124
Coal ***		15861782	
Oil		7005	2092
Coke***	7327089	1857511	
Steam	3381663		
Energy Source	Secondary energy produced on site (MWh)	Secondary energy imported (MWh)	CO2 released (tonnes)
Coke oven gas	1797141		251822
Blast furnace gas	4925200		4280888
Coke (breeze)	861706		341235
BOS gas	661040		465278

* Reported energy use shall cover 95% of all energy used by the installation. An operational record of the energy use calculation shall be maintained.

** Units of imported electricity should be multiplied by a factor of 2.6 to account for the energy lost in generation and transmission.

*** These are not a direct energy sources. 70% of the coal is used to make coke. The remaining 30% of the coal and all of the coke are used as reductants in the BF ultimately producing BFG.

Signed on behalf of the Operator



Dated 23/01/2018

Form Energy 1

RELEASES INTO AIR - NATIONAL PLAN REPORT

Operational summary for the year ending 31/12/2017

Operator: Tata Steel UK Ltd

Location: Port Talbot Works

Permit: BL7108

Release Points: A50, A51, A52A, A52B, A53 & A62

Release Point	A50A	A50B	A51	A52A	A52B	A53	A62	A50A	A50B	A51	A52A	A52B	A53	A62	A50A	A50B	A51	A52A	A52B	A53	A62	A50A	A50B	A51	A52A	A52B	A53	A62	A50A	A50B	A51	A52A	A52B	A53	A62	Total of release points (A50-A53) + A62
Parameter	Natural gas							Liquid fuels							Coke oven gas (COG)							Blast furnace gas (BFG)							Steel Plant gas (BOS)							All Fuels
Net CV of fuel burnt (GJ/T)	46.0	46.0	46.0	46.0	46.0	46.0	46.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	42.1	42.1	42.1	42.1	42.1	42.1	42.1	2.6	2.6	2.6	2.6	2.6	2.6	2.6	6.5	6.5	6.5	6.5	6.5	6.5	6.5	
Annual energy usage (TJ)	46	40	37	240	218	34	161	0	0	1	10	11	5	-	425	384	28	752	769	74	-	372	467	551	2522	2808	1092	1940	-	-	1	256	282	0	6	13532
Total annual energy input (TJ)	775							27							2432							9752							546							
	5.7%							0.2%							18%							72%							4%							

Biomass and other solid fuels are not burnt on these combustion plant.

Form LCPD Annual 2

Signed on behalf of the Operator

Dated 15/01/2018

RELEASES INTO AIR

Operational summary for the year ending 31/12/2017

Operator: Tata Steel UK Ltd

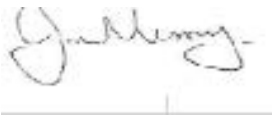
Location: Port Talbot Works

Permit: BL7108 / BL7108 IM (V008)

Release Points: A50, A51, A52A, A52B, A53 & A62

PARTICULATE MATTER (DISCONTINUOUS MONITORING)						
Release Point	A50A & A50B Service 4 & 5	A51 A5	A52A No.6	A52B No.7	A53 Mitchell	A62 No.3
Time and date of sampling	26-Sep-17 15:07	09-May-17 12:59	21-Jun-17 13:05	27-Jun-17 09:25	17-May-17 11:24	01-Nov-17 14:33
Flowrate (Nm ³ /hr)	92,340	54,324	223,632	202,968	102,780	182,556
Particulate measured conc. (mg/Nm ³)	8.0	0.9	0.4	1.5	2.7	0.8
Particulate limit (mg/NM ³)	24		30	30		60
Sampling method used	BS EN 14181	BS EN 14181	BS EN 14181	BS EN 14181	BS EN 14181	BS EN 14181
Analytical method used	Gravimetric	Gravimetric	Gravimetric	Gravimetric	Gravimetric	Gravimetric
Continuous hourly monitoring result over the period	0.0	0.7	1.3	0.4	1.4	0.9
Fuel usages over the sampling period						
Natural gas (%)	1%	0%	0%	1%	0%	4%
BF gas (%)	91%	99%	94%	94%	99%	96%
Coke oven gas (%)	8%	1%	6%	5%	1%	
Heavy fuel oil (%)	0%	0%	0%	0%	0%	

Signed on behalf of the Operator



Dated 19/01/2018

Form LCPD DCM Parts

RELEASES INTO AIR - NATIONAL PLAN REPORT

Operational summary for the year ending 31/12/2017

Operator: Tata Steel UK Ltd

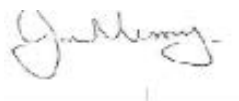
Location: Port Talbot Works

Permit: BL7108

Release Points: A50, A51, A52A, A52B, A53 & A62

Release Point	Sulphur dioxide (Tonnes)	Oxides of Nitrogen (Tonnes)	Particulate Matter (Tonnes)
A50A	25	12	0
A50B	25	12	0
A51	2	5	0
A52A	125	33	1
A52B	111	31	1
A53	16	10	0
All LCPD release points above	303	102	2
Annual limits (A50-A53)	5000	900	150
A62	6.24	6.63	0.34

Signed on behalf of the Operator



Dated 15/01/2018

Form LCPD Annual 1

Operational summary for the year ending 31/12/2017

Operator: Tata Steel UK Ltd

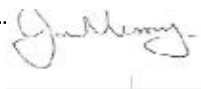
Location: Port Talbot Works

Permit: BL7108

Operational parameters: Raw materials - coal and coal blends

Month	Mean sulphur content of coal blend used to make coke (%)	Max sulphur content of the coals used to make coke (%)
1	0.64	0.68
2	0.69	0.72
3	0.66	0.71
4	0.67	0.68
5	0.65	0.66
6	0.66	0.67
7	0.66	0.70
8	0.70	0.71
9	0.89	0.89
10	0.71	0.72
11	0.68	0.70
12	0.76	0.82
Average KPI	0.70% 0.75%	- -

Signed on behalf of the Operator



Dated 15/01/2018

Form Coke Operational 1

Operational summary for the year ending 31/12/2017

Operator: Tata Steel UK Ltd

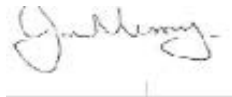
Location: Port Talbot Works

Permit: BL7108

Operational parameters: Raw materials - Blast Furnace blends

Month	Mean Zn load of sinter (g Zn per tonne iron produced)	Max Zn load of sinter (g Zn per tonne iron produced)	Mean Zn load of iron ore blend (g Zn per tonne iron produced)	Max Zn load of iron ore blend (g Zn per tonne iron produced)	Mean Zn load to Blast Furnaces (g Zn per tonne (iron produced))	Max Zn load to Blast Furnaces (g Zn per tonne (iron produced))
Jan	175.48	270	24.22	32	208.41	300
Feb	135.07	245	22.53	28	166.46	279
Mar	135.77	227	23.12	34	166.96	259
Apr	192.63	262	30.73	46	231.90	299
May	148.00	240	33.74	42	189.77	292
Jun	123.03	208	16.66	32	147.10	252
Jul	163.16	314	16.29	22	187.58	337
Aug	131.77	207	14.38	27	154.80	226
Sep	118.66	209	20.76	28	147.80	238
Oct	110.67	187	23.06	37	142.51	226
Nov	78.96	138	33.13	30	119.06	197
Dec	79.25	151	40.58	88	127.90	217
Average	133	-	25	-	166	-
Maximum	-	314	-	88	-	337

Signed on behalf of the Operator



Dated 15/01/2018

Form I&S Operational 2

Operational summary for the year ending 31/12/2017

Operator: Tata Steel UK Ltd
Location: Port Talbot Works
Permit: BL7108/RP3730BV

Inputs		
Coal - Cokemaking	1.26	t/t coke
Coal - Steel Making	193.92	kg/t LS
Sinter/Pellets/Lump ores	1458	kg/t LS
Coke	401	kg/t LS
Lime	43	kg/t LS
Limestone/Magstone	136	kg/t LS
Dolomet/Doloflux	34.3	kg/t LS
Scrap	167	kg/t LS
Water abstracted	4.7	m3/t LS
Energy	20.8	GJ/t LS
Ferrous Cargo Delivery	5,536,000	Tonnes
Carbon Cargo Delivery	1,787,000	Tonnes
Recycled		
Reverts to Sinter Plant	110	kg/t LS
BF Slag	214	kg/t LS
BOS Slag	102	kg/t LS
Scrap (internal arisings)	148	kg/t LS
Briquettes (BOS)	0	kg/t LS
Millscale	16	kg/t LS
Recovered oil	0.0003	kg/t LS
Outputs		
Coke	888,219	Tonnes
Liquid Steel	3,687,177	Tonnes
<i>To Air:</i>		
Particulate	0.45	kg/t LS
Sulphur dioxide	1.67	kg/t LS
Oxides of nitrogen	1.27	kg/t LS
<i>To Water:</i>		
Volume	4.57	m3/t LS
Suspended solids	205.9	g/t LS
Oil & grease	10.75	g/t LS
Total cyanide	0.02	g/t LS
Phenols	0.15	g/t LS
Ammonia	50.2	g/t LS
Metals [total] (Fe,Zn,Pb & Cr)	12.51	g/t LS
<i>To Land:</i>		
Slag (BOS & Desulph)	3.9	kg/t LS
BF slurry	0.01	kg/t LS
BOS slurry	*	kg/t LS
Refractories	0.00	kg/t LS
Demolition waste	0.0	kg/t LS
Filter cake	0.5	kg/t LS
General rubbish	0.5	kg/t LS

* Data not available at time of compiling returns. Information will follow when available.

Signed on behalf of the Operator

Dated 25/01/2018



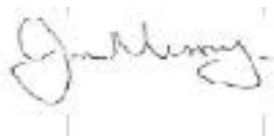
Form Site Operational

EMISSION INVENTORY - ANNUAL REPORT TO THE NRW

Operating year: 2015
Operator: Tata Steel UK Ltd
Location: Port Talbot Works
Authorisation: BA6321/ CB8401
Release Point: Sinter Main

Medium to which released	Radionuclide	Annual Release (Giga-Becquerels)	Annual Limit (Giga-Becquerels)
Air	Lead 210	51	160
Air	Polonium 210	66	185

Dated



26/01/2018

Schedule 9