

Permit Reference Number: BS3905

Operator: Tata Steel UK

Installation: Llanwern Steel Works

Form Number: A1/4

Date of Form: 01/09/09

Release for year ending: 2015

Reporting Form A1/4		
Parameter	Limit value (kg)	Annual release
Oxides of nitrogen annual mass emissions (as NO ₂)	None	93.69 tonnes
Carbon Monoxide annual mass emissions	None	22.0 tonnes
Particulate annual mass emissions [*2]	None	1.14 tonnes
Hydrogen Chloride annual mass emissions [*1]	None	1.48 tonnes
Oil mist annual mass emissions	None	Unquantified. Ref to Imp item Submission 9.9

[*1] HCl values based on actual concentrations and measured flowrates in conjunction with operating hours per annum. Chromate 2014 figures used for calculation.

[*2] Particulate emissions as above, but includes also an estimation for NG, using an assumed 1 mg/Nm³ concentration factor applied to the Natural Gas usage volume @ 3% O₂

Signed
(authorised to sign as representative of the Operator)

Date26/01/2016.....

Permit Reference Number: BS3905

Operator: Tata Steel UK

Installation: Llanwern Steel Works

Form Number: EW1

Date of Form: 01/09/09

Energy and Water Consumption

Consumption for Calendar Year ending: 2015

Reporting Form EW1	
Parameter	Quantity
Delivered Electricity MWh	227,902
Primary electricity (delivered x2.4) Mwh	546,965
Primary carbon dioxide (primary electricity x 0.166) te	90,763
Delivered gas MWh	312,776 (1126.0 TJ)
Process water used m3	5088419

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Date26/01/2016.....

Permit Reference Number: BS3905
 Operator: Tata Steel UK
 Installation: Llanwern Steel Works

Form Number: R1
 Date of Form: 01/09/09

Reporting of Waste Disposal and Recovery for the year: 2015

Waste Description	Waste	Route	Disposal (tonnes)	Recovery (tonnes)
1) Hazardous Waste				
Named hazardous waste	(1) Drums Contam PPE	(1) Off Site Recovery		48.52
	(2) Oil	(2) Off Site Recovery		340
	(3) Chromate Waste	(3) Off Site Disposal	120	
	(4) WEEE	(4) Off Site Recovery		14.6
	(8) Tank & Seperator Sludge	(8) Off Site Disposal	44	
	(9) Degreasing Waste	(9) Off Site Recovery		42.00
	(10) Fluoro Tubes	(10) Off Site Recovery		0
	(11) Spill-sorb	(11) Off Site Recovery		7.89
	(12) Contaminated Hoses	(12) Off Site Recovery		12.75
Other hazardous wastes	---	---	---	---
Total hazardous waste			164	465.76
2) Non-Hazardous Wastes				
Named non-Haz waste	(1) Bricks & Rubble	(1) Off Site Recovery		87.00
	(2) Pickle Line ETP Cake	(2) PT Landfill	474.54	
	(3) Wood	(3) Recycling		203.24
	(4) Scrap Metal	(4) PT BOS / 3rd Party		73769.00
	(5) _ General _ Waste	(5) Off Site Landfill/ Recovery	382.86	
	(7) Hot Mill Scale & Cake	(7) Off Site Treatment		13303.00
	(8) Paper & Cardboard	(8) Recycling		29.94
	(9) Plastic	(9) Off Site Recovery		24.20
	(10) Tins & Cans	(10) Off Site Recovery		3.60
	(11) Zinc Dross	(11) Off Site Recovery		944.00
	(12) Mixed Recycling	(12) Off Site Recovery		31.06
	(13) Cables	(12) Off Site Recovery		17.72
	(14) Corex	(14) Recycling		25.20
	(15) Welding Waste	(15) Off Site Disposal	26.68	
	(17) Scrap	(17) Recycling		4.30

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Other non-haz waste	---	---	---	---
Total non-haz waste			884.08	88442.26
TOTAL WASTE				89956.1
Operator's comments: All waste data compiled from: Waste Management Contractors, and Accounting function(s)				

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Date26/01/2016.....

Permit Reference Number: BS3905

Operator: Tata Steel UK

Installation: Llanwern Steel Works

Form Number: PI1 - Environmental Performance Indicators

Date of Form: 01/09/09

Reporting of Performance Indicators for the year: 2015

Process Area	Performance Indicator				
	Water supplied per tonne of rolled steel, litres	Oil used per tonne of rolled steel, litres	Substances released into the air per tonne of rolled steel, kg		Waste disposal per tonne of rolled steel (excluding material sent for recovery), kg
			NOx (as NO2)	CO2	
Hot Mill	2098	1.04	0.081	118.2	0.42
Cold Mill		0.25			
Zodiac		0.28	0.046	67.8	

Operator's comments:

- Only 'total' water usage KPI values available
- Total water = 5088419 m3 (Process) + 99450 m3 (Domestic) = 5187869m3
- Galv tonnage 504550t, HRP tonnage 697065t, CRP tonnage 1271766t --- [472909t (Cold Rolled) & 798858t (Pickled)]
- Oil usage data (from SAP): HRP 728360 L, CRP 313862 L, Zodiac 142200 L (this includes all: oils, greases, and coating oils, but excludes fuel & transport oils)

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Operator: Tata Steel UK

Installation: Llanwern Steel Works

Form Number: LCPD1

Date of Form: 01/09/09

LCPD Reporting - Summary for the year: 2015

Energy Usage

Energy Usage Summary							
Release Point [*2]	A14 Boiler No1	A15 Boiler No2	A16 Boiler No3	A14 Boiler No1	A15 Boiler No2	A16 Boiler No3	All LCPD Release Points Totals
Parameter	Natural Gas			Distillate Fuel Oil			
Fuel NCV	37.24 MJ/m3 [*1]			43.02 GJ/t [*1]			
Annual fuel usage (tonnes)	6841.8 t			0.2 t			
Annual energy input (GJ)	343003.2 GJ			8.6 GJ			343011.8 GJ

LCPD Mass Releases

Parameter	Annual Mass Release	Unit
Mass release of oxides of nitrogen as NO2 from LCPD plant [*3]	13.2	t
Mass release of sulphur dioxide from LCPD plant as SO2 [*4]	0.13	t
Mass release of carbon dioxide from LCPD plant [*5]	19,382.6	t
Total dust emission (as total suspended particles) [*6]	64.9	kg

[*1] The CV's used are from Government published factors for calendar year 2013, these being used for EUETS reporting purposes

[*2] All three Boilers share common metering

[*3] Factors used: NOx factor of 1.93 [Gas], and 8.10 [Oil], and NG Density of 0.748 kg/m3

[*4] Assumed Natural Gas Sulphur content of 7mg/m3, and Fuel Oil content of 0.1%

[*5] CO2 Emission factors of: **74.15**, and **56.50** kg CO2/GJ used for Gas Oil & Natural Gas respectively [from annually published national factors]

[*6] An accepted value of 1mg/Nm3 in waste gas used as basis for particulate mass release

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