

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: 2014

Reporting Form A1/4		
Parameter	Limit value (kg)	Annual release
Oxides of nitrogen annual mass emissions (as NO ₂)	None	134.44 tonnes
Carbon Monoxide annual mass emissions	None	31.36 tonnes
Particulate annual mass emissions [*2]	None	1.47 tonnes
Hydrogen Chloride annual mass emissions [*1]	None	3.33 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

[*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)

Date26/01/2015.....

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: 2014

Reporting Form EW1	
Parameter	Quantity
Delivered Electricity MWh	307,817
Primary electricity (delivered x2.4) Mwh	738,760
Primary carbon dioxide (primary electricity x 0.166) te	122,634
Delivered gas MWh	963411 (3468.279 TJ)
Process water used m3	3926071 [*1]

[*1] Total water used on Site including: Process, Domestic, and Contractors

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Date26/01/2015.....

Permit Reference Number: BS3905
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Installation: Llanwern Steel Works

Form Number: R1

Date of Form: 01/09/09

Reporting of Waste Disposal and Recovery for the year: 2014

Waste Description	Waste	Route	Disposal (tonnes)	Recovery (tonnes)
1) Hazardous Waste				
Named hazardous waste	(1) Drums Contam PPE (2) Oil (3) Chromate Waste (4) WEEE (8) Tank & Separator Sludge (9) Degreasing Waste (10) Fluoro Tubes (11) Spill-sorb	(1) Off Site Incinerator (2) Off Site Recovery (3) Off Site Disposal (4) Off Site Recovery (8) Off Site Disposal (10) Off Site Recovery R13 (11) Off Site Incinerator	(1) 25.4t (3) 205.4t (8) 43.4t (11) 37.9t	(2) 502.5t (4) 9.2t (9) 14.9t (10) 2.3t
Other hazardous wastes	---	---	---	---
Total hazardous waste			312.1t	528.9t
2) Non-Hazardous Wastes				
Named non-Haz waste	(1) Bricks & Rubble (2) Pickle Line ETP Cake (3) Wood (4) Scrap Metal (5) 'General' Waste (6) Metallic Sludge e.g. RGS (7) Hot Mill Scale & Cake (8) Paper & Cardboard (9) Plastic (10) Tins & Cans (11) Zinc Dross (12) Mixed Recycling	(1) Off Site Recovery (2) PT Landfill (3) Off Site Recovery (4) PT BOS / 3rd Party (5) Off Site Landfill (6) Off Site Recovery (7) Off Site Treatment (8) Off Site Recovery (9) Off Site Recovery (10) Off Site Recovery (11) Off Site Recovery (12) Off Site Recovery	(2) 547.2t (5) 355.7t (6) 20.2t	(1) 107.0t (3) 69.3t (4) 102784t (7) 24952t & 5770t (8) 41.2t (9) 22.2t + 0.98t (10) 0.7t (11) 923.1t (12) 19.7t
Other non-haz waste	---	---	---	---
Total non-haz waste			923.1t	134690.2t
TOTAL WASTE			1235.2t	135,219.1t
Operator's comments: All waste data compiled from: Waste Management Contractors, and Accounting function(s)				Total: 136454.3t

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Date26/01/2015.....

Permit Reference Number: BS3905
 Operator: Tata Steel UK
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Form Number: P11 - Environmental Performance Indicators
 Date of Form: 01/09/09

Reporting of Performance Indicators for the year: 2014

Process Area	Water supplied per tonne of rolled steel, litres	Oil used per tonne of rolled steel, litres	Performance Indicator			Waste disposal per tonne of rolled steel (excluding material sent for recovery), kg
			Substances released into the air per tonne of rolled steel, kg			
			NOx (as NO2)	CO2		
Hot Mill	1032.3	0.77	0.065	94.9		0.32
Cold Mill		0.28				
Zodiac		0.35	0.046	66.5		

Operator's comments:

- Only 'total' water usage KPI values available
- Total water = 3862600m3 (Process) + 63471m3 (Domestic) = 3926071m3
- Galv tonnage 474827t, HRP tonnage 1542192t, CRP tonnage 1786076t --- [717779t (Cold Rolled) & 1068297t (Pickled)]
- Oil usage data (from SAP): HRP 1192069L, CRP 508097L, Zodiac 164805L (this includes all: oils, greases, and coating oils, but excludes fuel & transport oils)

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Permit Reference Number: BS3905
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Form Number: LCPD1
Date of Form: 01/09/09

LCPD Reporting - Summary for the year: 2014

Energy Usage

Energy Usage Summary							All LCPD Release Points Totals
Release Point [*2]	A14 Boiler No1	A15 Boiler No2	A16 Boiler No3	A14 Boiler No1	A15 Boiler No2	A16 Boiler No3	
Parameter	Natural Gas			Distillate Fuel Oil			
Fuel NCV	37.24 MJ/m3 [*1]			43.02 GJ/t [*1]			
Annual fuel usage (tonnes)	6087.0 t			2.2 t			6089.2 t
Annual energy input (GJ)	303072.6 GJ			94.6 GJ			303167.3 GJ

LCPD Mass Releases

Parameter	Annual Mass Release	Unit
Mass release of oxides of nitrogen as NO ₂ from LCPD plant [*3]	11.8	t
Mass release of sulphur dioxide from LCPD plant as SO ₂ [*4]	0.12	t
Mass release of carbon dioxide from LCPD plant [*5]	17,132.6	t
Total dust emission (as total suspended particles) [*6]	92.2	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: NO_x 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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