

30th January 2023

Mrs E A Parr
PPC Compliance Assistant
Natural Resources Wales
Rivers House
St Mellons Business Park
St Mellons
CARDIFF
CF3 0EY

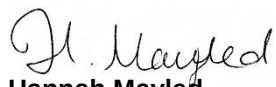
Dear Mrs Parr,

RE: Melt Shop EPR Permit TP3639BH Annual Returns 2022

In accordance with CELSA Manufacturing UK Ltd Environmental Permitting Regulations (EPR) Melt Shop Permit TP3639BH, please find forms A2, E1, PI1, R1 and S1 duly completed for the annual reporting period 2022.

Should you require any further information regarding these works please do not hesitate to contact me.

Yours sincerely,



Hannah Mayled
Environmental Advisor

Permit Number: EPR/TP3639BH

Operator:

CELSA Manufacturing (UK) Limited

Facility: Tremorfa Melt Shop

Form Number:

Air 2 / 20/09/13

Reporting of emissions to air for the period from1 January 2022 to 31 December 2022

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	% Uncertainty ^[4]
A1	Particulate Matter	5 mg/m ³		5.25* mg/m ³	BS EN 13284-1:2017 & MID	05/10/2022 12:56 – 14:05	8
	Oxides of Nitrogen (as NO ₂)	25 mg/m ³		8.89 mg/m ³	BS EN 14792:2017	03/10/2022 13:45 – 14:45	2
	Sulphur Dioxide	25 mg/m ³		16.39 mg/m ³	CEN / TS 17021:2017	03/10/2022 13:45 – 14:45	3
	PCDD/F	0.1 ng/m ³		0.046 ng/m ³	BS EN 1948-1:2006 & MID	04/10/2022 09:45 – 16:00	19
	VOC	20 mg/m ³		4.16 mgC/m ³	BS EN 12619:2013	03/10/2022 13:45 – 14:45	3
	PAH	No Limit Set		58.69 ug/m ³	BE ISO 11338:2003	05/10/2022 09:15 – 12:30	16
	PCB	No Limit Set		0.8624 ng/m ³	BS EN; 1948–1 & 4:2010	04/10/2022 09:45 – 16:00	9
	Heavy Metals	No Limit Set		2.67 mg/m ³	BS EN 14385:2004 & MID	03/10/2022 13:40 – 14:52	9
	Hg	0.05 mg/m ³		0.002 mg/m ³	BS EN 14385:2004 & MID	03/10/2022 15:25 – 16:37	12
A2	Particulate Matter	10 mg/m ³		4.53 mg/m ³	BS EN 13284-1:2017 & MID	05/10/2022 14:57 – 16:01	9

* Particulate matter value of 5.25 mg/m³ combined with uncertainty value of ±8% can be considered as within the permit limit value of 5.00mg/m³ in accordance with Environment Agency interpretation guidance: [Monitoring stack emissions: maximum uncertainty values for periodic monitoring.](#)

[1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.

Permit Number: EPR/TP3639BH
Limited

Operator: CELSA Manufacturing (UK)

- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
- [3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
- [4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed J. Mayfield
(Authorised to sign as representative of Operator)

Date...30th January 2023

Permit Reference Number: TP3639BH

Operator : CELSA Manufacturing (UK) Ltd

Installation: Tremorfa New Melt Shop

Form Number: E1 [11/05/05]

Reporting of Energy Usage for the year2022.....

Energy Source	Energy Usage		CO ₂ Produced (tonnes)
	Quantity	Primary Energy	
Electricity	MWh	988,186.73*	79,623***
Natural Gas	kWh	35,091	8,168.24**
TOTAL		1,023,277.73	

* Conversion factor for delivered electricity to primary energy = 2.4

**UK ETS annual submission (pending verification)

*** UK 2022 electricity conversion factor = 0.19338 kgCO₂e/kWh. Invoiced kWh data used in calculation.

Trends in Energy Usage			
Year	Parameter		
	Primary Energy usage	CO ₂ produced	CO ₂ per unit output
2018	1,124,759	136,109	0.147
2019	1,104,893	127,469	0.132
2020	1,079,248	108,635	0.126
2021	1,133,041	104,114	0.112
2022	1,023,278	87,791	0.105

Operator's comments :

2018 – 2022 data amended in 'Trends in Energy Usage' table on right to factor in electricity emissions in line with annually updated government emissions factors.

Signed 
(authorised to sign as representative of the Operator)

Date...30th January 2023

Permit Number: EPR/TP3639BH
Limited

Operator: CELSA Manufacturing (UK)

Permit Reference Number : TP3639BH

Operator : CELSA Manufacturing (UK) Ltd

Installation : Tremorfa New Melt Shop

Form Number : PI1 [11/05/05]

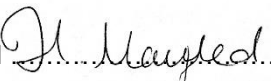
Reporting of Performance Indicators for the year2022.....

Annual Production	
Production of liquid steel	839,344 Tonnes liquid steel

Parameter	Quantity	Units
Electrical energy (delivered)	411,744,471	KWh
Particulates	53,379	Kg
Water	531,542	m ³

Trends in Environmental Performance			
Year	Parameter		
	Electricity consumption (MWh / t LS)	Particulates Released (g / t LS)	Towns / Commercial Water used (m ³ / t LS)
2011	490.35	30.09	0.481
2012	465.62	25.88	0.502
2013	459.94	7.78	0.521
2014	470.96	20.82	0.600
2015	460.87	54.00	0.591
2016	468.37	52.09	0.602
2017	476.15	5.83	0.797
2018	485.01	38.87	0.585
2019	475.40	35.77	0.704
2020	500.17	25.85	0.676
2021	485.38	19.25	0.581
2022	411.74	63.60	0.623

Operator's comments:

Signed 
(authorised to sign as representative of the Operator)

Date...30th January 2023

Permit Number: EPR/TP3639BH
Limited

Operator: CELSA Manufacturing (UK)

Permit Reference Number: TP3639BH Operator: CELSA Manufacturing (UK) Ltd

Installation: Tremorfa New Melt Shop Form Number: R1 [11/05/05]

Reporting of Waste and By-Product Generation

for the period from 01 January 2022 to 31 December 2022

Parameter (tonnes)	Tonnes sent for off-site disposal as special waste	Tonnes sent for off-site disposal as controlled waste	Tonnes sent for off-site recovery or recycling
Ferrous scrap metal			506.6
Non-ferrous metal			15.36
Steel making slag			114,463
Melting Shop filter dust		5,362	14,206
Other filter dusts including shot-blasting dusts			103.04
General waste		74.68	188.16
Asbestos	6.84		
Waste oil 13.02.08*			42.4
Empty Oil Containers 15 01 10*			0.26
Filters			0.50
Food waste			0.72
Green waste			0.96
Inert waste			4.94
Metallic scale/iron oxide			1942.32
Refractory waste			1496
Waste glycol			14.00
Other wastes: DMR			4.18
Wood			212.44
Scrap screening fines		10,904	
Scrap screening fines			9,623
Fluorescent tubes			0.08
Ferrosilicon		44.94	
WEEE			6.54
Cables			3.26
Para bags		38.86	
Hydraulic Hoses			1.00
Tyres			0.96
Quench tower waste		26.88	

Signed: 

Date: 30th January 2023

(authorised to sign as representative of the Operator)

Permit Number: EPR/TP3639BH
Manufacturing (UK) Limited

Operator: CELSA

Facility: Tremorfa Melt Shop

Form Number:

Sewer 1 / 20/09/13

Reporting of emissions to air for the period from1 January 2022... to ...31 December 2022.....

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
S1 (when being discharged) ^[5]	Oil / grease	5 mg/l	Spot sample	0.62	Material soluble in 1,1,2-trichloro-trifluoroethane	Annual average of monthly sampling	
	Suspended Solids	20mg/l		6.38	The solids shall be separated and dried at 105°C	Annual average of monthly sampling	
	pH	6-10		8.38	BS 6068-2.50:1995, ISO 10523:1994	Annual average of monthly sampling	
	Nickel	0.5 mg/l		<0.001	BS 6068-2.60:1988, BS EN ISO 11885 1998	Annual average of monthly sampling	
	Arsenic	0.01 mg/l		0.00127	BS 6068-2.60:1988, BS EN ISO 11885 1998	Annual average of monthly sampling	
	Cadmium	0.05 mg/l		0.00064	BS 6068-2.60:1988, BS EN ISO 11885 1998	Annual average of monthly sampling	
	Chromium	0.5 mg/l		0.00078	BS 6068-2.60:1988, BS EN ISO 11885 1998	Annual average of monthly sampling	
	Zinc	2 mg/l		0.103	BS 6068-2.60:1988, BS EN ISO 11885 1998	Annual average of monthly sampling	
	Mercury	0.02 mg/l		0.00003	BS 6068-2.74:2002, BS EN ISO 13506 2002	Annual average of monthly sampling	
	Iron Compounds	5 mg/l		1.093	BS 6068-2.60:1988, BS EN ISO 11885 1998	Annual average of monthly sampling	
	Flow	No Limit Set	Daily total flow	24.55 m ³ /day	Flow Meter	Daily averages from effluent meter	

Permit Number: EPR/TP3639BH
Manufacturing (UK) Limited

Operator: CELSA

S2	Oil / grease	5 mg/l	Spot Sample	0.60	Material soluble in 1,1,2-trichloro-trifluoroethane	06/01/2023 11:00	
	Suspended Solids	20 mg/l		3.0	The solids shall be separated and dried at 105°C	06/01/2023 11:00	
	pH	6-10		8.1	BS 6068-2.50:1995, ISO 10523:1994	06/01/2023 11:00	
	Nickel	0.5 mg/l		0.0032	BS 6068-2.60:1988, BS EN ISO 11885 1998	06/01/2023 11:00	
	Arsenic	0.01 mg/l		0.00077	BS 6068-2.60:1988, BS EN ISO 11885 1998	06/01/2023 11:00	
	Cadmium	0.05 mg/l		0.00049	BS 6068-2.60:1988, BS EN ISO 11885 1998	06/01/2023 11:00	
	Chromium	0.5 mg/l		0.00055	BS 6068-2.60:1988, BS EN ISO 11885 1998	06/01/2023 11:00	
	Zinc	2 mg/l		0.13	BS 6068-2.60:1988, BS EN ISO 11885 1998	06/01/2023 11:00	
	Mercury	0.02 mg/l		0.00001	BS 6068-2.74:2002, BS EN ISO 13506 2002	06/01/2023 11:00	
	Iron Compounds	5 mg/l		0.947	BS 6068-2.60:1988, BS EN ISO 11885 1998	06/01/2023 11:00	

[1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.

[2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

[3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

[4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

[5] A record of the hourly flow at the time the sample of S1 is taken shall be maintained in the Plant records.

Signed *H. Mayfield*
(Authorised to sign as representative of Operator)

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Manufacturing (UK) Limited

Operator: CELSA