Best Available Techniques (BAT) Assessment Celsa Manufacturing (UK) Ltd, Section Mill, Tremorfa Works, Seawall Road, Cardiff, CF24 5TH

On behalf of:
Celsa Manufacturing (UK) Ltd

Project Reference:
024-1973

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BAT Assessment - Ferrous Metals Processing Industry

Project: 024-1973
Site: Celsa Manufacturing (UK) Ltd, Section Mill. Tremorfa Works, Seawall Road, Cardiff, CF24 5TH
Permit Ref. BV0767IT
Source: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022D2110

Section Ref.	Sub-Heading	BAT Sub-Heading	BAT Requirement	Description and Assessment	BAT Assessment
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.1. General environmental performance	BAT 1. In order to improve the overall environmental performance, BAT is to elaborate and implement an environmental management system (EMS) that incorporates all of the following features:	Items (i) to (xx.). Items (xxi) to (xxviii).	This is an inherent part of the certified ISO14001 EMS. Full details are outlined within the Main Installation Report (Ref. 024-1973 Celsa Permit Variation - Installation Report REV00).	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.1. General environmental performance	BAT 2. In order to facilitate the reduction of emissions to water and air, BAT is to establish, maintain and regularly review (including when a significant change occurs) an inventory of process chemicals used and of waste water and waste gas streams, as part of the EMS (see BAT 1), that incorporates all of the following features:	(i) information about the production processes, including: (a) simplified process flow sheets that show the origin of the emissions; (b) descriptions of process-integrated techniques and waste water/waste gas treatment at source including their performances; (ii) information about the characteristics of the waste water streams, such as: (a) average values and variability of flow, pH, temperature and conductivity; (b) average concentration and mass flow values of relevant substances (e.g. total suspended solids, TOC or COD, hydrocarbon oil index, phosphorus, metals, fluoride) and their variability; (iii) information about the quantity and characteristics of the process chemicals used: (a) the identity and the characteristics of process chemicals, including properties with adverse effects on the environment and/or human health; (b) the quantities of process chemicals used and the location of their use; (iv) information about the characteristics of the waste gas streams, such as: (a) average values and variability of flow and temperature; (b) average concentration and mass flow values of relevant substances (e.g. dust, NOX, SO2, CO, metals, acids) and their variability; (c) presence of other substances that may affect the waste gas treatment system (e.g. oxygen, nitrogen, water vapour)	This information was produced during the original IPPC application in 2003. Updated process flows are included within the Main Installation Report (Ref. 024-1973 Celsa Permit Variation - Installation Report REV00), where required. The emissions from the installation have been characterised and are well understood. The characteristics of the waste gas stream associated with the new furnace are outlined in the main installation report (Ref. 024-1973 Celsa Permit Variation - Installation Report REV00) and supplier technical specifications (Ref. 718243-A Tech Spec R01).	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.1. General environmental performance	BAT 3. In order to improve the overall environmental performance, BAT is to elaborate and implement a chemicals management system (CMS) as part of the EMS (see BAT 1) that incorporates all of the following features:	i. A policy to reduce the consumption and risks of process chemicals, including a procurement policy to select less harmful process chemicals and their suppliers with the aim of minimising the use and risks of hazardous substances and avoiding the procurement of an excess amount of process chemicals. The selection of process chemicals may consider: (a) their eliminability, their ecotoxicity and their potential to be released into the environment in order to reduce emissions to the environment; (b) the characterisation of the risks associated with the process chemicals, based on the chemicals' hazards statement, pathways through the plant, potential release and level of exposure; (c) the regular (e.g. annual) analysis of the potential for substitution to identify potentially new available and safer alternatives to the use of hazardous substances (e.g. use of other process chemicals with no or lower environmental impacts, see BAT 9). (d) the anticipatory monitoring of regulatory changes related to hazardous chemicals and safeguarding compliance with applicable legal requirements. The inventory of process chemicals (see BAT 2) may be used to	Chemicals are managed in-line with current EHS requirements i.e. The Control of Substances Hazardous to Health Regulations 2002 (as amended). All systems are part of the certified ISO45001 Safety Management System (SMS).	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.1. General environmental performance	BAT 4. In order to prevent or reduce emissions to soil and groundwater, BAT is to use all of the techniques given below.	a. Set-up and implementation of a plan for the prevention and control of leaks and spillages. b. Use of oil-tight trays or cellars. c. Prevention and handling of acid spillages and leaks.	The design of the process and the associated management systems aim to prevent leaks and spills. Controls include site emergency plans that includes areas such as roles and responsibilities, environmental awareness and specific spillage training, risk assessments and the provision of adequate spillage response equipment. Hydraulic stations and oil- or grease-lubricated equipment are situated in oil-tight cellars that are suitably engineered to prevent releases to ground. The site operates a waste management procedure and a PPM	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.1. General environmental performance	BAT 5. In order to reduce the frequency of the occurrence of OTNOC and to reduce emissions during OTNOC, BAT is to set up and implement a risk-based OTNOC management plan as part of the EMS (see BAT 1) that includes all of the following elements:	i. identification of potential OTNOC (e.g. failure of equipment critical to the protection of the environment ('critical equipment')), of their root causes and of their potential consequences, and regular review and update of the list of identified OTNOC following the periodic assessment below; ii. appropriate design of critical equipment (e.g. compartmentalisation of fabric filters); iii. set-up and implementation of an inspection and preventive maintenance plan for critical equipment (see BAT 1 xii); iv. monitoring (i.e. estimating or, where possible, measuring) and recording of emissions during OTNOC and of associated circumstances; v. periodic assessment of the emissions occurring during OTNOC (e.g. frequency of events, duration, amount of pollutants emitted) and implementation of corrective actions if	The identification and management of abnormal events (and associated emissions) is considered part of the ISO14001 EMS.	Meets BAT

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1.1 General BAT conclusions for the ferrous metals processing industry	1.1.2. Monitoring	BAT 6. BAT is to monitor at least once per year: — the yearly consumption of water, energy and materials; — the yearly generation of waste water; — the yearly amount of each type of residues generated and of each type of waste sent for disposal		The installation monitors water consumption, energy use, material use, wastewater discharges (volumes and chemical characteristics) and waste volumes monthly (by type). This is used by the senior management team as a series of Key Performance Indicators for the business unit.	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.2. Monitoring	BAT 7. BAT is to monitor channelled emissions to air with at least the frequency given below and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality		Please refer to the separate worksheet. Full details are outlined within the Main Installation Report (Ref. 024-1973 Celsa Permit Variation - Installation Report REV00).	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.2. Monitoring	BAT 8. BAT is to monitor emissions to water with at least the frequency given below and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality		Please refer to the separate worksheet. Full details are outlined within the Main Installation Report (Ref. 024-1973 Celsa Permit Variation - Installation Report REV00).	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.3. Hazardous substances	BAT 9. In order to avoid the use of hexavalent chromium compounds in passivation, BAT is to use other metal-containing solutions (e.g. containing manganese, zinc, titanium fluoride, phosphates and/or molybdates) or organic polymer solutions (e.g. containing polyurethanes or polyesters)			N/A
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.4. Energy efficiency	BAT 10. In order to increase the overall energy efficiency of the plant, BAT is to use both of the techniques given below.	a. Energy efficiency plan and energy audits.b. Energy balance record.	Celsa operates a formal ISO14001 EMS. This includes monitoring and tracking the consumption of raw materials and energy throughout the installation. A formal energy efficiency plan (for this part of the installation) is not proposed due to the existing ISO14001 systems. The last energy efficiency audit was undertaken in 2021	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.4. Energy efficiency	BAT 11. In order to increase energy efficiency in heating (including heating and drying of feedstock as well as heating of baths and galvanising kettles), BAT is to use an appropriate combination of the techniques given below.	a. Optimum furnace design for feedstock heating. d. Combustion optimisation. e. Furnace automation and control. j. Pulse-fired burner. k. Feedstock preheating. m. Preheating of combustion air.	Due to the heating quality required, the space available and its lay-out, a reheating furnace, top and bottom side MWFv2 central wide flame burners has been determined (by Fives Steel Spain) as the best solution. The design meets BAT with respect to optimum furnace design for feedstock heating, combustion optimisation, furnace automation and control, pulse-fired burners, feedstock preheating and preheating of combustion air. The BAT-associated environmental performance levels (BAT-AEPLs) for specific energy consumption for feedstock heating in hot rolling (Table 1.1) are outlined in the [illegible]	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.5. Material efficiency	BAT 12. In order to increase material efficiency in degreasing and to reduce the generation of spent degreasing solution, BAT is to use a combination of the techniques given below.			N/A
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.5. Material efficiency	BAT 13. In order to increase material efficiency in pickling and to reduce the generation of spent pickling acid when pickling acid is heated, BAT is to use one of the techniques given below and not to use direct injection of steam.			N/A
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.5. Material efficiency	BAT 14. In order to increase material efficiency in pickling and to reduce the generation of spent pickling acid, BAT is to use an appropriate combination of the techniques given below.			N/A
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.5. Material efficiency	BAT 15. In order to increase material efficiency in fluxing and to reduce the quantity of spent fluxing solution sent for disposal, BAT is use all of the techniques (a), (b) and (c), in combination with technique (d) or in combination with technique (e) given below.			N/A
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.5. Material efficiency	BAT 16. In order to increase the material efficiency of hot dipping in the coating of wires and in batch galvanising, and to reduce the generation of waste, BAT is to use all of the techniques given below.			N/A

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1.1 General BAT conclusions for the ferrous metals processing industry	1.1.5. Material efficiency	BAT 17. In order to increase material efficiency and to reduce the quantity of waste sent for disposal from phosphating and passivation, BAT is to use technique (a) and one of the techniques (b) or (c) given below.			N/A
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.5. Material efficiency	BAT 18. In order to reduce the quantity of spent pickling acid sent for disposal, BAT is to recover spent pickling acids (i.e. hydrochloric acid, sulphuric acid and mixed acid). The neutralisation of spent pickling acids or the use of spent pickling acids for emulsion splitting is not BAT.			N/A
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.6. Water use and waste water generation	BAT 19. In order to optimise water consumption, to improve water recyclability and to reduce the volume of waste water generated, BAT is to use both techniques (a) and (b) and an appropriate combination of the techniques (c) to (h) given below.	a. Water management plan and water audits. b. Segregation of water streams. c. Minimisation of hydrocarbon contamination of process water. d. Reuse and/or recycling of water. e. Reverse cascade rinsing. f. Recycling or reuse of rinsing water. g. Treatment and reuse of oil- and scale-bearing process water in hot rolling. h. Water spray descaling triggered by sensors in hot rolling.	The design of the installation meets BAT through the segregation of water streams, minimisation of hydrocarbon contamination of process water, reuse and/or recycling of water (where possible), the treatment and reuse of oil- and scale-bearing process water in hot rolling (where possible) and the use of water spray descaling triggered by sensors in hot rolling. The BAT-associated environmental performance levels (BAT-AEPLs) for specific water consumption (Table 1.6) are outlined in the Main Installation report. The last water efficiency audit was undertaken in 2019.	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.7.1. Emissions to air from heating	BAT 20. In order to prevent or reduce dust emissions to air from heating, BAT is to use either electricity generated from fossil-free energy sources or technique (a), in combination with technique (b) given below.	a. Use of fuels with low dust and ash content. b. Limiting the entrainment of dust.	Natural gas or hydrogen fuels only. The BAT-associated emission levels (BAT-AELs) for channelled dust emissions to air from feedstock heating (Table 1.7) are outlined in the Main Installation report.	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.7.1. Emissions to air from heating	BAT 21. In order to prevent or reduce SO_2 emissions to air from heating, BAT is to use either electricity generated from fossil-free energy sources or a fuel, or a combination of fuels, with low sulphur content.	Table 1.8 BAT-associated emission levels (BAT-AELs) for channelled SO_2 emissions to air from feedstock heating	The BAT-AEL does not apply to plants using 100 % natural gas or 100 % electrical heating.	N/A
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.7.1. Emissions to air from heating	BAT 22. In order to prevent or reduce NO_X emissions to air from heating while limiting CO emissions and the emissions of NH_3 from the use of SNCR and/or SCR, BAT is to use either electricity generated from fossil-free energy sources or an appropriate combination of the techniques given below.	a. Use of a fuel or a combination of fuels with low NO_X formation potential. b. Furnace automation and control. c. Combustion optimisation. d. Low-NO_X burners. e. Flue-gas recirculation. f. Limiting the temperature of air preheating. g. Flameless combustion. h. Oxy-fuel combustion. i. Selective catalytic reduction (SCR). j. Selective reduction (SNCR) non-catalytic. k. Optimisation of the SNCR/SCR design and operation.	The design of the installation meets BAT through the use of a fuel or a combination of fuels with low NO_X formation potential, furnace automation and control, combustion optimisation and low-NO_X burners. The BAT-associated emission levels (BAT-AELs) for channelled NO_X emissions to air and indicative emission levels for channelled CO emissions to air from feedstock heating in hot rolling (Table 1.9) are outlined in the Main Installation report.	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.7.2. emissions to air from degreasing	BAT 23. In order to reduce emissions to air of oil mist, acids and/or alkalis from degreasing in cold rolling and hot dip coating of sheets, BAT is to collect emissions by using technique (a) and to treat the waste gas by using technique (b) and/or technique (c) given below.			N/A
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.7.3. Emissions to air from pickling	BAT 24. In order to reduce emissions to air of dust, acids (HCl, HF, H_2SO_4) and SO_X from pickling in hot rolling, cold rolling, hot dip coating and wire drawing, BAT is to use technique (a) or technique (b) in combination with technique (c) given below.			N/A
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.7.3. Emissions to air from pickling	BAT 25. In order to reduce NO_X emissions to air from pickling with nitric acid (alone or in combination with other acids) and the emissions of NH_3 from the use of SCR, in hot rolling and cold rolling, BAT is to use one or a combination of the techniques given below.			N/A
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.7.4. Emissions to air from hot dipping	BAT 26. In order to reduce emissions to air of dust and zinc from hot dipping after fluxing in hot dip coating of wires and in batch galvanising, BAT is to reduce the generation of emissions by using technique (b) or techniques (a) and (b), to collect the emissions by using technique (c) or technique (d), and to treat the waste gases by using technique (e) given below.			N/A
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.7.4.1. Emissions to air from oiling	BAT 27. In order to prevent oil mist emissions to air and to reduce the consumption of oil from oiling of the feedstock surface, BAT is to use one of the techniques given below.			N/A

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1.1 General BAT conclusions for the ferrous metals processing industry	1.1.7.5. Emissions to air from post-treatment	BAT 28. In order to reduce emissions to air from chemical baths or tanks in post-treatment (i.e. phosphating and passivation), BAT is to collect the emissions by using technique (a) or technique (b), and in that case to treat the waste gas by using technique (c) and/or technique (d) given below.			N/A
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.7.6. Emissions to air from acid recovery	BAT 29. In order to reduce emissions to air from the recovery of spent acid of dust, acids (HCl, HF), SO2 and NOX (while limiting CO emissions) and the emissions of NH3 from the use of SCR, BAT is to use a combination of the techniques given below.			N/A
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.8. Emissions to water	BAT 30. In order to reduce the load of organic pollutants in water contaminated with oil or grease (e. g. from oil spillages or from the cleaning of rolling and tempering emulsions, degreasing solutions and wire drawing lubricants) that is sent to further treatment (see BAT 31), BAT is to separate the organic and the aqueous phase.		Wastewaters generated from the cooling and de-scaling activities within the installation are collected and pass through a treatment plant which cleans the water so that it can be recycled for re-use as coolant water. A full description of the process is provided within the Main Installation Report.	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.8. Emissions to water	BAT 31. In order to reduce emissions to water, BAT is to treat waste water using a combination of the techniques given below.	a. Equalisation. b. Neutralisation. c. Physical separation, e.g. screens, sieves, grit separators, grease separators, hydrocyclones, oilwater separation or primary settlement tanks. d. Adsorption. e. Chemical precipitation. f. Chemical reduction. g. Nanofiltration/reverse osmosis. h. Aerobic treatment. i. Coagulation and flocculation. j. Sedimentation. k. Filtration (e.g. sand filtration, microfiltration, ultrafiltration). l. Flotation.	Wastewaters generated from the cooling and de-scaling activities within the installation are collected and pass through a treatment plant which cleans the water so that it can be recycled for reuse as coolant water. A full description of the process is provided in the Main Installation Report. The BAT-associated emission levels (BAT-AELs) for indirect discharges to a receiving water body (Table 1.21) are outlined within the Main Installation Report.	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.9. Noise and vibrations	BAT 32. In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to set up, implement and regularly review a noise and vibration management plan, as part of the EMS (see BAT 1), that includes all of the following elements:	i. a protocol containing appropriate actions and timelines; ii. a protocol for conducting noise and vibration monitoring; iii. a protocol for response to identified noise and vibration events, e.g. complaints; iv. a noise and vibration reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and/or reduction measures.	A separate noise and vibration management plan has not been produced; however, noise and vibration controls and management systems are considered within the site-wide EMS i.e. it is a recognised environmental aspect of the site operations. Procedures are in place to record and respond to noise and vibration complaints.	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.9. Noise and vibrations	BAT 33. In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to use one or a combination of the techniques given below.	a. Appropriate location of equipment and buildings. b. Operational measures. c. Low-noise equipment. d. Noise and vibration control equipment. e. Noise abatement.	The design of the installation meets BAT through the appropriate location of equipment and buildings, effective operational measures and the selection of low-noise equipment (where possible).	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.10. Residues	BAT 34. In order to reduce the quantity of waste sent for disposal, BAT is to avoid the disposal of metals, metal oxides and oily sludge and hydroxide sludge by using technique (a) and an appropriate combination of techniques (b) to (h) given below.	a. Residues management plan. b. Pretreatment of oily mill scale for further use. c. Use of mill scale. d. Use of metallic scrap. e. Recycling of metal and metal oxides from dry waste gas cleaning. f. Use of oily sludge. g. Thermal treatment of hydroxide sludge from the recovery of mixed acid. h. Recovery and reuse of shot blast media.	Steel is one of the predominant waste streams generated at the site. Scrap metal arising from quality control failed product or from the cutting/trimming of the final products, along with other non-process generated scrap metal, is collected in dedicated scrap metal skips, which are colour coded and labelled, for recycling at CELSA's New Melt Shop. Steel roll turnings are collected separately in skips. The waste metal is returned for use in the on-site electric arc furnace. The scale is transferred to the central scale weathering area. Scale that has collected in the furnace is collected in a dedicated colour-coded skip. The mill scale is then transferred to CELSA's mineral site for bulking up and further dewatering and weathering before collection by a licensed waste contractor. The mill scale has numerous downstream uses such as use as counter-weights in washing machines, sinter charge mix, cement clinker and production of iron sulphate for water treatment.	Meets BAT
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.10. Residues	BAT 35. In order to reduce the quantity of waste sent for disposal from hot dipping, BAT is to avoid the disposal of zinc-containing residues by using all of the techniques given below.			N/A

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1.1 General BAT conclusions for the ferrous metals processing industry	1.1.10. Residues	BAT 36. In order to improve the recyclability and recovery potential of the zinc-containing residues from hot dipping (i.e. zinc ash, top dross, bottom dross, zinc splashes, and fabric filter dust) as well as to prevent or reduce the environmental risk associated with their storage, BAT is to store them separately from each other and from other residues on: — impermeable surfaces, in enclosed areas and in closed containers/bags, for fabric filter dust, — impermeable surfaces and in covered areas protected from surface run-off water, for all the other			N/A
1.1 General BAT conclusions for the ferrous metals processing industry	1.1.10. Residues	BAT 37. In order to increase material efficiency and to reduce the quantity of waste sent for disposal from texturing of working rolls, BAT is to use all of the techniques given below.			N/A
1.2. BAT conclusions for hot rolling	1.2.1. Energy efficiency	BAT 38. In order to increase energy efficiency in feedstock heating, BAT is to use a combination of the techniques given in BAT 11 together with an appropriate combination of the techniques given below.	a. Near-net-shape casting for thin slabs and beam blanks followed by rolling. B. Hot/direct charging. c. Heat recovery from skids cooling. d. Heat conservation during transfer of feedstock. e. Coil boxes. f. Coil recovery furnaces. g. Sizing press.	The plant requires frequent start-up and shutdowns to enable changes to the rolling stands to facilitate changes in product specification. In order to maximise energy efficiency the furnace will continue to run during short shutdowns, avoiding re-heat periods. Each time a different product is being made, the roll pairs have to be selected to ensure they have the correct configuration to produce the desired product.	Meets BAT
1.2. BAT conclusions for hot rolling	1.2.1. Energy efficiency	BAT 39. In order to increase energy efficiency in rolling, BAT is to use a combination of the techniques given below.	a. Sizing press. b. Computer-aided rolling optimisation. c. Reduction of the rolling friction. d. Coil boxes. e. Three-roll stand. f. Near-net-shape casting for thin slabs and beam blanks followed by rolling.	Work Roll lubrication systems are employed on the mill to reduce friction and thus minimise on energy consumption whilst also extending the life of the rolls. The BAT-associated environmental performance levels (BAT-AEPLs) for specific energy consumption in rolling (Table 1.22) is contained within the Main Installation Report.	Meets BAT
1.2. BAT conclusions for hot rolling	1.2.2. Material efficiency	BAT 40. In order to increase material efficiency, and to reduce the quantity of waste sent for disposal from feedstock conditioning, BAT is to avoid or, where that is not practicable, to reduce the need for conditioning by applying one or a combination of the techniques given below.	a. Computer-aided quality control. b. Slab slitting. c. Edging or trimming of wedge-type slabs	The material efficiency controls are outlined in BAT 41.	N/A
1.2. BAT conclusions for hot rolling	1.2.2. Material efficiency	BAT 41. In order to increase material efficiency in rolling for the production of flat products, BAT is to reduce the generation of metallic scrap by using both of the techniques given below.	a. Crop optimisation. b. Control of the feedstock shape during rolling.	Any deformations of the feedstock during rolling are monitored and controlled to ensure that the rolled steel has the required profile to minimise the need for trimming. Selection of billet length on the basis of maximising the number of final product lengths and minimise the remaining left-over end pieces which need to be reprocessed. The finishing train (Pomini stands) are fully automated by the use of loopers to ensure that the mill runs tension free. This minimises out of specification (reject) material and also failure of the bar proceeding through the mill, reducing the risk of ejection of the bar onto the mill floor (known as a 'cobble').	Meets BAT
1.2. BAT conclusions for hot rolling	1.2.3. Emissions to air	BAT 42. In order to reduce emissions to air of dust, nickel and lead in mechanical processing (including slitting, descaling, grinding, roughing, rolling, finishing, levelling), scarfing and welding, BAT is to collect the emissions by using techniques (a) and (b) and in that case to treat the waste gas by using one or a combination of the techniques (c) to (e) given below.	a. Enclosed scarfing and grinding combined with air extraction. b. Air extraction as close as possible to the emission source. c. Electrostatic precipitator. d. Fabric filter. e. Wet scrubbing.	Scale remaining on the billet following the heating stage is removed in the descaling stage. This involves spraying water from high-pressure jets onto the hot metal surface. The water jets are located adjacent to the rolling track alongside the roughing stands. The scale and water released from this stage is collected in the flume below the rolling stage and the water and scale mixture is directed to the water treatment plant. The BAT-associated emission levels (BAT-AELs) for channelled emissions of dust, lead and nickel to air from mechanical processing (including slitting, descaling, grinding, roughing, rolling, finishing, levelling), scarfing (other than manual scarfing) and welding (Table 1.23) do not apply.	Meets BAT
1.2. BAT conclusions for hot rolling	1.2.3. Emissions to air	BAT 43. In order to reduce emissions to air of dust, nickel and lead in roughing and rolling in the case of low levels of dust generation (e.g. below 100 g/h (see BAT 42 (b))), BAT is to use water sprays.		Scale remaining on the billet following the heating stage is removed in the descaling stage. This involves spraying water from high-pressure jets onto the hot metal surface. The water jets are located adjacent to the rolling track alongside the roughing stands. The scale and water released from this stage is collected in the flume below the rolling stage and the water and scale mixture is directed to the water treatment plant.	Meets BAT

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1.3. BAT conclusions for cold rolling	1.3.1. Energy efficiency	BAT 44. In order to increase energy efficiency in rolling, BAT is to use a combination of the techniques given below.			N/A
1.3. BAT conclusions for cold rolling	1.3.2. Material efficiency	BAT 45. In order to increase material efficiency and to reduce the quantity of waste sent for disposal from rolling, BAT is to use all of the techniques given below.			N/A
1.3. BAT conclusions for cold rolling	1.3.3. Emissions to air	BAT 46. In order to reduce emissions to air of dust, nickel and lead from decoiling, mechanical predescaling, levelling and welding, BAT is to collect the emissions by using technique (a) and in that case to treat the waste gas by using technique (b)			N/A
1.3. BAT conclusions for cold rolling	1.3.3. Emissions to air	BAT 47. In order to prevent or reduce oil mist emissions to air from tempering, BAT is to use one of the techniques given below.			N/A
1.3. BAT conclusions for cold rolling	1.3.3. Emissions to air	BAT 48. In order to reduce oil mist emissions to air from rolling, wet tempering and finishing, BAT is to use technique (a) in combination with technique (b) or in combination with both techniques (b) and (c) given below			N/A
1.4. BAT conclusions for wire drawing	1.4.1. Energy efficiency	BAT 49. In order to increase the energy and material efficiency of lead baths, BAT is to use either a floating protective layer on the surface of the lead baths or tank covers.			N/A
1.4. BAT conclusions for wire drawing	1.4.2. Material efficiency	BAT 50. In order to increase material efficiency and to reduce the quantity of waste sent for disposal from wet drawing, BAT is to clean and reuse the wire drawing lubricant.			N/A
1.4. BAT conclusions for wire drawing	1.4.3. Emissions to air	BAT 51. In order to reduce emissions to air of dust and lead from lead baths, BAT is to use all of the techniques given below.			N/A
1.4. BAT conclusions for wire drawing	1.4.3. Emissions to air	BAT 52. In order to reduce dust emissions to air from dry drawing, BAT is to collect the emissions by using technique (a) or (b) and to treat the waste gas by using technique (c) given below			N/A
1.4. BAT conclusions for wire drawing	1.4.3. Emissions to air	BAT 53. In order to reduce oil mist emissions to air from oil quench baths, BAT is to use both of the techniques given below.			N/A
1.4. BAT conclusions for wire drawing	1.4.4. Residues	BAT 54. In order to reduce the quantity of waste sent for disposal, BAT is to avoid the disposal of lead-containing residues by recycling them, e.g. to the non-ferrous metals industries to produce lead			N/A
1.4. BAT conclusions for wire drawing	1.4.4. Residues	BAT 54. In order to reduce the quantity of waste sent for disposal, BAT is to avoid the disposal of lead-containing residues by recycling them, e.g. to the non-ferrous metals industries to produce lead			N/A
1.5 BAT conclusions for hot dip coating of sheets and wires	1.5.1. Material efficiency	In order to prevent or reduce the environmental risk associated with the storage of leadcontaining residues from lead baths (e.g. protective layer materials and lead oxides), BAT is to store lead-containing residues separately from other residues, on impermeable surfaces and in enclosed areas or in closed containers.			N/A
1.5 BAT conclusions for hot dip coating of sheets and wires	1.5.1. Material efficiency	BAT 57. In order to increase material efficiency in continuous hot dipping of wire, BAT is to avoid excess coating with metals by using one of the techniques given below.			N/A
1.6 BAT Conclusions for Batch Galvanising	1.6.1. Residues	BAT 58. In order to prevent the generation of spent acids with high zinc and high iron concentrations or, where that is not practicable, to reduce their quantity sent for disposal, BAT is to carry out pickling separately from stripping			N/A

BAT Assessment - Ferrous Metals Processing Industry

Project: 024-1973
Site: Celsa Manufacturing (UK) Ltd, Section Mill. Tremorfa Works, Seawall Road, Cardiff, CF24 5TH
Permit Ref. BV0767IT
Source: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022D2110

Section Ref.	Sub-Heading	BAT Sub-Heading	BAT Requirement	Description and Assessment	BAT Assessment
1.6 BAT Conclusions for Batch Galvanising	1.6.1. Residues	BAT 59. In order to reduce the quantity of spent stripping solutions with high zinc concentrations sent for disposal, BAT is to recover the spent stripping solutions and/or the ZnCl2 and NH4Cl contained therein			N/A
1.6 BAT Conclusions for Batch Galvanising	1.6.2. Material efficiency	BAT 60. In order to increase material efficiency in hot dipping, BAT is to use both of the techniques given below.			N/A
1.6 BAT Conclusions for Batch Galvanising	1.6.2. Material efficiency	BAT 61. In order to increase material efficiency and to reduce the quantity of waste sent for disposal from blowing off excess zinc from galvanised tubes, BAT is to recover zinc-containing particles and to reuse them in the galvanising kettle or to send them for zinc recovery			N/A
1.6 BAT Conclusions for Batch Galvanising	1.6.3. Emissions to air	BAT 62. In order to reduce emissions of HCl to air from pickling and stripping in batch galvanising, BAT is to control the operating parameters (i.e. temperature and acid concentration in the bath) and to use the techniques given below with the following order of priority: — technique (a) in combination with technique (c); — technique (b) in combination with technique (c); — technique (d) in combination with technique (b); — technique (d). Technique (d) is BAT only for existing plants and provided that it ensures at least an equivalent level of environmental protection compared to using technique (c) in combination with techniques (a) or			N/A
1.6 BAT Conclusions for Batch Galvanising	1.6.4. Waste water discharge	BAT 63. It is not BAT to discharge waste water from batch galvanising.			N/A