Comment No.		Chapter No. / section No. (if available)			I	Chapter title (only if there is no section or chapter No.)	BAT	Page # (PDF version)	Comment description Proposed amendment	Rationale	
1						Scope	0	xxiii	A description of sulfuric acid plants in coking plants is already reported in the chapter 5.3.12.4 of this draft BREF.	"This BREF does not address the following activities:	The techniques of the sulphuric acid plants used and integrated with the coke oven gas desulphurisation plants are even reported in the chapter 5.3.12.4 (pages 258+264) "Reduction of SO2 by coke oven gas desulphurisation".
2						Scope	0	xxiii	Original text: In particular,this BREF cover the following processes:	In particular, this BREF cover the following processes:	Editorial comment: add space between "," and "this"
3	2	5 1	ı				1	50	The aspect that the EMS is a reiterative dynamic model, which was part of the formar standard texts, is missing.	Technical description: add at the end of the 4th paragraph: 'The cycle is a reiterative dynamic model, where the completion of one cycle flows into the beginning of the next, see Figure [Author/Secretariat: cross-reference the appropriate caption number].' Add the figure from p 9 of IEF 22-4-3 (7 April 2010)	The proposed text is taken from the corresponding chapter of the document IEF 22-4-3 (p. 9).
4	2	5 1	1				1	51	The information on standardised and non-standardised EMS is missing, which was part of the former standard texts.	Reinsert the following text in Section 2.5.1, under 'Description': "An EMS can take the form of a standardised or non- standardised ('customised') system. Implementation and adherence to an internationally accepted standardised system such as EN ISO 14001:2004 can give higher credibility to the EMS, especially when subjected to a properly performed external verification. EMAS provides additional credibility due to the interaction with the public through the environmental statement and the mechanism to ensure compliance with the applicable environmental legislation. However, non-standardised systems can, in principle, be equally effective provided that they are properly designed and implemented".	Important information of the former standard texts should be retained.
5	3	3 2	2 8	2			0	159	Original text: It is essential that the gas be low in dust (<40 mg dust/Nm3) and heavy metals,	It is essential that the gas is low in dust (<40 mg dust/Nm³) and heavy metals,	editorial comment: " gas is low" instead of " gas be low"
6	4	3 2	2				0	196	Original text: The application of bag filters downstream from a wet scrubber requires that the waste gas streams be reheated after the scrubbers.	The application of bag filters downstream from a wet scrubber requires that the waste gas streams are reheated after the scrubbers.	editorial comment: " waste gas streams are reheated" instead of " waste gas streams be reheated"
7	5	3 21	1				0		Table 5.25.  New data on the Biological Waste Water Treatment plant in Ijmuiden were sent to the bureau in an email of 11/2/2010.  In the BREF still the old data are presented.	Update table 5.25. with new data (see attached file)  BIO 2000 new.pdf	The new provided data in table 5.25 were the reason that BAT 15 was modified by adding the sentence "These values refer only to single coke oven water treatment plant".
8	9					Scope	0	479	The introductory text of the chaper 9 is welcome. The context of the BAT conclusions have been written but the use of this standalone document (Status of the BAT conclusions, link with the environnement permits, the fact that techniques listed are not exhaustive and not prescriptive) is not mentioned,	In the introduction of the BAT conclusions add the following: "The list of techniques described in the following sections is neither prescriptive nor exhaustive"	This chapter is the only that will be translated into all official EU-languages. It will probably often be read as a stand-alone document and it would therefore be helpful if this important text is repeated here.
9	9						0	479	The production of coke is missing in the detailed list of processes covered by the BAT conclusions (the second bullet list on page 479)	Please include an additional bullet list item for 'the production of coke from coking coal' in the second bullet list on page 479	Coke production was recently added in the first bullet list on page 479 (Annex I activities), but it is still missing in the second list.
10	9						0	480	The term 'spot measurement' is used in BATs 21, 42–44, 50, 52, 59, 64, 76, 79, 89 and 91, but it has not been defined, neither in the general section of Chapter 9 nor in the monitoring section 9.1.7.	Modify spot measurements into discontinuous measurements.  The current phrases '(spot measurement, for at least half an hour)' will all be replaced by '(discontinuous measurements, spot samples of at least 30 minutes each).'	Using similar terms without a proper definition may lead to confusion and hamper an equal implementation of the named BAT conclusions.
11	9						0	480	The 'Definitions' section of Chapter 9 should be complemented by the definition of various pollutants mentioned in sections 9.2 to 9.7		It needs to be clarified which compounds have to be measured for the monitoring of a certain pollutant, and how the measurement result should be expressed. E.g. $NO_x$ is usually expressed as $NO_2$ , and it most includes only $NO$ and $NO_2$ , but it may also include $N_2O$ .
12	9	1 1	ı				1	481	Original text: commitment of top management;	commitment of top management;	editorial comment: deleting the space between "management" and ";"
13	9	1 2	2				2	481	The cross reference to the Energy Efficiency BREF respectively future BAT conclusions on energy efficiency in BAT 2 should be retained.	Reintroduce the following sentence from the April 2010 and the September 2010 draft: 'In the context of energy management, see the Energy Efficiency BREF (ENE).'	The cross reference to the Energy Efficiency BREF was part of the BAT conclusions from the final TWG meeting and as such it should be retained. This cross reference will get even more important when new BAT conclusions on energy efficiency will be adopted.
14	9	1 2	2				2	482	Description of BAT I.i The last bullet point on energy audits is not in accordance with the sentence reported in the section 2.5.2.1 of this draft BRef (see page 53).		The energy audit is an important item of the BAT considered, and so it should be developed on plant-by-plant basis (taking into account the achieved environmetal benefits specified on page 53), starting from the Energy Efficiency BRef, which only include information of a generic nature. For this reason we believe that the description paragraph should report the same sentence of the section 2.5.2.1 of this draft BRef (see page 53).
15	9	1 2	2				2	482	Applicability of BAT II-IV All the content in the <i>Applicability paragraph</i> considered in this draft should be included (see page 55).		The paragraph on applicability should be completed with all the information reported in the section 2.5.2.3 of this draft BRef (see page 55). These additional information has to be considered relevant in order to allow a correct assessment of all the possibilities of the application of the BAT II-IV, according to the "guidence document" developed under IED (see section 3.2.3 on page 23 of the guidance).  The Applicability has to be completely reported in the BAT conclusions in order to correctly evaluate all the possibilities of the application of the BAT considered.  According to the agreement reached at the TWG level during its meeting held in February 2010 and the draft BRef October 2010 (see pag. iii of the draft BREF October 2010), the description paragraph should be integrated with the sentence that specifies the use of the different tecniques individually or in combination.  Moreover the section on BAT 3 should be completed with the paragraph on applicability, as it contains relevant information to allow a correct assessment of all the possibilities of the application of the BAT, according to the "guidence document" developed under IED (see section 3.2.3 on page 23 of the guidance).
16	9	1 2	2				3		BAT 3. Description. Introduce the applicability of the BAT and the possibility to use the different tecniques individually or in combination.		Such additions accurately reflect the agreement reached at the TWG level during its meeting held in February 2010 and the existing text present in the draft BREF October 2010. Moreover in order to correctly describe the BAT, the Applicability in this draft (page 54, page 78 in the PDF version) should be included.

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17	9	1 2	2			3	483	Query about BAT 3: does the 4th bullet point mean 'firing reheat furnaces with	Amend text to: 'using process gases as fuels for reheat furnaces'.	Clarity. 100% utilisation of all process created fuel gases should be achieved, before using imported
	<del>                                     </del>							process gas or gases'?  BAT 4 needs clarification regarding its technical as well as its legal applicability	Introduce a subheading 'Applicability' to put the text in brackets there.	fuels/gas. Clarification of text.  The text in brackets at the end of BAT 4 deals with the applicability of this BAT conclusion, and thus should be
18	9	1 2	2			4	483		Applicability The cooperation and agreement of a third party may not be within the control of the operator, and therefore may not be within the scope of the permit.	placed under the heading 'applicability'.
19	9	1 3	3			7	484	BAT 7 It is necessary to report the sentence in the note as agreed in the draft BRef October 2010 (see page 97)	We ask for the following modification: "Note: The selection and sorting of scrap might not be entirely within the control of the operator."	According to the agreement reached at the TWG level during its meeting held in February 2010 and the draft BRef October 2010 (see pag. 97 of the draft BREF October 2010), the sentence in the note should be integrated as indicated, because both the selection and sorting of scrap might not be entirely within the control of the operator.
20	9	1 4	1			8 - 9	484	BAT 9, general preference is given to on-site recycling (BAT 8). But the specialised recycling processes mentioned under BAT 8 are not restricted to on-site recycling, and it does not matter if they are carried out by a third party. Hence it should be clarified that general preference is given to specialised recycling processes aiming to close material cycles no matter where they are carried out.  Additionally, the specialised recycling processes mentioned under BAT 8 are too specialised to be well-known, so they need some explanation.  Last not least, BAT 9 should reflect that the recycling options for residues	8. BAT for solid residues is to use integrated techniques and operational techniques for waste minimisation by internal use or by application of specialised en-site recycling processes (internally or externally).  Description Techniques for the en-site-recycling of iron-rich residues include specialised recycling techniques such as the OxyCup® shaft furnace, the DK process, smelting reduction processes or cold bonded pelletting/briquetting as well as techniques for production residues mentioned in the Sections 9.2 – 9.7.  Applicability As the mentioned processes may be carried out by a third party, the recycling itself may no be in the control of the operator of the iron and steel plant, and therefore may not be within the scope of the permit.  9. BAT is to maximise external use or recycling for solid residues which can not be used or recycled en-site-according to BAT 8, wherever this is possible and in line with waste regulations. BAT is to manage in a controlled manner residues which can neither be avoided nor recycled.'	The recycling processes described under BAT 8 may be carried out in standalone installations or in iron and steel plants operated by different operators (in fact, some of the mentioned processes are only carried out in standalone installations, e.g. the DK process). Hence the recycling of iron-rich waste materials in such facilities may be either internal or external recycling. Building such a plant only for on-site recycling would have no environmental benefit, and it would probably not be viable for smaller iron and steel plants. The idea of this BAT conclusion was not to force every operator to build up such a facility, but to foster the use of these processes, no matter by whom they are operated. It has to be noted however that the external recycling would be beyond the control of the operator and thus can not be ruled in the permit.  Although the individual processes are only named as examples under BAT 8, they are too specialised to be well-known. They could be explained most easily by providing a cross reference to the corresponding section 2.5.4.4 in the BREF. If cross referencing to the BREFs was generally ruled out for the standalone BAT conclusions documents, then it would be necessary to include a short description of the aforementioned recycling processes.
21	9	1 7	7			15		BAT 15 To complete the main paragraph on the definition of BAT	Modify text as follows: 'For relevant emission sources not mentioned in BAT 14, BAT is to measure the emissions of pollutants from all processes included in the specific BAT Sections 9.2 – 9.7 and from process gas-fired power plants within iron and steel works as well as all relevant process gas components/pollutants periodically and discontinously. This includes the discontinous monitoring of process gases, stack emissions, polychlorinated dibenzodioxins/furans (PCDD/F) and monitoring the discharge of waste water but excludes diffuse emissions (see BAT 16).	We suggest to complete the paragraph on the definition of the BAT with the proposed additions, in order to better clarify that diffuse emilsons are excluded from the quoted monitoring.  These additions accurately reflect the agreement reached at the TWG level during its meeting held in February 2010 (see attached slide that was agreed in Seville).
22	9	1 7	7			16	488	BAT 16 needs clarification: Which sources shall be monitored, and how often? Due to the high efforts required for determining diffuse emission and due the high uncertainty of such evaluations, the obligation to monitor diffuse emissions should be clearly restricted to cases where such measurements or evaluations are deemed necessary to identify relevant emission sources in order to prioritise adequate measures.  Additionally, the second part of the description for direct or quasi-direct measurements should be deleted. For determining 'the order of magnitude of diffuse emissions' it is not necessary to measure different PM fractions or to determine the particle size distribution.	Delete the second part of the description for 'Direct or quasi-direct measurements'.	In general we appreciate a better monitoring of diffuse emissions, as they can represent a high portion of total emissions. But taking into account the high efforts for estimating diffuse emissions as well as the high uncertainty of the results, it makes no sense to force every operator to carry out such estimations for multiple sources, and even periodically. If a kind of source has once been identified as a major source of diffuse emissions, there is no need to carry out further emission estimates, but to apply the appropriate measures mentioned in BAT 11. Additionally, many options for reducing diffuse emissions are merely operational measures, which are not cost-intensive, and as such could be applied without the need for further indication.
23	9	2				23	493	Original text: II end-of-pipe techniques which can include	II. end-of-pipe techniques which can include:	editorial comment: Adding point ("II.") and colon at the end
24	9	2				23	494	Original text: It is essential that the gas be low in dust (<40 mg dust/Nm3) and	· · · · · · · · · · · · · · · · · · ·	editorial comment: " gas is low" instead of " gas be low"
25	9	2				23	494	heavy metals,  BAT 23. Applicability of the SCR process under BAT II.ii.  Report as described in this draft at page 158 (Description) and at page 159 (Applicability), pages 183 and 184 respectively in the PDF version.  SCR technique might be an option (as agreed in the TWG).	and heavy metals Add the following to the last paragraph: 'the accumulation of explosive ammonium nitrate (NH4NO3)'.	To highlight the risks of explosivity and corrosion as described in this draft (page 158, page 182 of the PDF version).  These additions accurately reflect the the text present in the draft BREF October 2010 when referring to Applicability.
26	9	2				28	495	BAT #28	Add what is stated at the end of BAT 39 and 56 on the use of TOC instead of COD, i.e. "in some cases, between 2 and 4."	To be consistent with BAT 39 and 56.
27	9	2				32	496	BAT 32. Applicability. When referring to applicability of waste gas recirculation, it must be considered also the content of BAT 23.	Modify the applicability of BAT 32. as follow: "At some plants, the existing configuration may make costs of heat recovery from the sinter waste gases or sinter cooler waste gas very high.  The recovery of heat from the waste gases by means of a heat exchanger would lead to unacceptable condensation and corrosion problems. For waste gas recirculation see also the applicability of BAT 23."	Such clarification reflects the agreement reached at the TWG level during its meeting hel in February 2010 and help the reader considering all the existing restriction in the application of this technique
28	9	3				36	497	BAT 36. Applicability.  Applicability is described for technique I. only, whereas it should be both for technique I. and II.	Modify as follows: "Applicability of BAT I and BAT II"	As agreed in the TWG and written in the BREF October 2010 (pg 224) " 4. BAT for existing plants with particular consideration for the prerequisites for application "
29	9	3				39	498	BAT 39 - Minor typographical amendment suggestion.	The brackets immediately around the superscript 1 after COD (Chemical Oxygen Demand) should also be in superscript. Occurs twice in BAT 39.	Minor tidying up. Correction.
30	9	3				39		BAT 39. In accordance with the agreement reached at TWG level, Tata Steel Ijmuiden (originally Corus in February 2010) provided the author with new information and values of the Arsenic Removal Plant. It has therefore to be underlined that BAT-AEL's for COD (<100), Kjeldahl nitrogen (<10) and heavy metals (<0,2) are wrong and must be rewritten.	Modify the BAT AELs as follows: - suspended solids < 50 mg/l - COD < 160 mg/l - Kjeldahl nitrogen < 45 mg/l - heavy metals < 0,55 mg/l (sum of arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), mercury (Hg), nickel (Ni), lead (Pb), zinc (Zn)).	Such modifications accurately reflect the agreement reached at the TWG level during its meeting held in February 2010.  In the TWG final slides (see attached slide 42 of the presentation of the EIPPC Bureau) is clearly stated "Corus will provide new information on the arsenic removal plant". This has been done several times in the process since seville february 2010, but the values are so far not adapted.
31	9	1 2	2			41	498 483	BAT 4 needs clarification regarding its technical as well as its legal applicability	Include the following text:  The cooperation and agreement of a third party may not be within the control of the operator, and therefore may not be within the scope of the permit.	As the external use of surplus waste heat is beyond the control of the operator, this can not be ruled in the permit. Hence the same wording as in the text in brackets at the end of BAT 4 should be included here under the heading 'applicability'.
32	9	4				44	501	BAT 44. Description The right cross-reference about the description of monitoring method is not to the to BAT 16 but to the BAT 46.	Modify the text as follows: "The duration associated with BAT of visible emissions from charging is <30 seconds per charge as a monthly average using a monitoring method described in BAT 4 46."	The monitoring method for the estimation of charging emissions from coke ovens are described in BAT 46, and not in BAT 16

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33	9	4				44	501	BAT 44 - Visible diffuse emissions from charging of coke ovens can be assessed using techniques mentioned towards the end of the notes under BAT 46.	Mention the visual assessment also mentioned in BAT 44.	Visual assessments are the important routine management tool.  Clarification of text.
34	9	4				44		BAT 44. The description is modified in comparison with the BAT conclusions 3 in the draft BREF October 2010 ("should consist" has been removed)	Reintroduce the agreed phrasing: "From an integrated point of view, 'smokeless' charging or sequential charging with double ascension pipes or jumper pipes are the preferred types, because all gases and dust are treated as part of the coke oven gas treatment. If, however, the gases are extracted and treated outside the coke oven, charging with a land-based treatment of the extracted gases is the preferred method.  Treatment should consist of efficient extraction of emissions with subsequent combustion to reduce organic compounds and the use of a bag filter to reduce particulates."	Such addition accurately reflects the agreement reached at the TWG level during its meeting held in February 2010 and the existing text present in the draft BREF October 2010.
35	9	4				44	501	BAT 44. Description.  No monitoring methods have been discussed and agreed in the final TWG held in Seville in February 2010.  Moreover the Description in BAT 16, as previously commented, is too restrictive and incorrect.	Remove the reference to BAT 16.	Such modification accurately reflects the agreement reached at the TWG level during its meeting held in February 2010
36	9	4				47	502	BAT 47. To correctly describe BAT 47. it is important to add the Applicability as in this draft (page 275, page 299 of the PDF version).	Add the applicability as follows. "Applicable both at new and existing plants. In new plants, a gas-tight design will probably be easier to achieve than at existing plants."	Such addition accurately reflects the agreement reached at the TWG level during its meeting held in February 2010.
37	O	4				51		BAT 51. Description To add the measurement method used (VDI 2303) for BAT II and III (coke wet quenching) as described in this draft (page 270).	Add footnotes concerning the monitoring methods, as follows:  The BAT-associated emission levels for dust, determined as the average over the sampling period, are: - <20mg/Nm3 in case of coke dry quenching - <25g/t coke in case of emission minimised conventional wet quenching (1) (1) This level is based on the use of the non isokinetic Mohrhauer method (former VDI 2303) - <10 g/t coke in case of coke stabilisation quenching (2) (2) This level is based on the use of an isokinetic sampling method according to VDI 2066	According to the article 3.12 of Directive 2010/75/EU the information about associated monitoring should be fully reflected in the BAT conclusions, expecially in cases, as this one, where the BRef specifies that the measurement of emissions "depend very much on the measurement method used".
38	9	4				56	505	# 56	To be clarified what is meant by "sulphides, easily released" and "cyanide, easily released" and by the comment on the sum of nitrogen compounds: " Regarding"	Any ambiguity creates uncertainties and extra administrative burdens
39	9	4				56	504 - 505	BAT 56 - Minor typographical amendment suggestion.	The brackets immediately around the superscript 1 after COD (Chemical Oxygen Demand) should also be in superscript. Occurs twice in BAT 56.	Minor tidying up. Correction.
40	9	5				61	507	It it not clear how the BAT-AEL for diffuse dust emissions from the cast house in BAT 61 should be monitored. According to BAT 16, only 'the order of magnitude of diffuse emissions' should be determined. But the order of magnitude would not qualify to serve as BAT-AEL.	Delete BAT AEL.	As the measures to reduce diffuse emissions mentioned in BAT 61 have to be applied anyway, and taking into account the high uncertainty of monitoring diffuse emissions, the effort to monitor these emission seems to be disproportionate.
41	9	5				63	507	The presention of individual techniques for BAT 63 is not consistent with the presentation of individual techniques for other BATs. This should be harmonised.	Modify the presentation: mention the three techniques mentioned in BAT 63 as one consecutive list, and put their description or applicability restrictions below - in the same way as it was done for the other BATs.	For consistency with the presentation of other BAT conclusions. A brief description of the techniques is even more important if no reference is made to the description of the techniques in Chapter 6.3 (see our general comment No. 4).
42	9	5				64	507	BAT 64. To complete the description of the BAT.	Modify the text as follows: "BAT is to reduce dust emissions from the blast furnace gas by using one or a combination of the following techniques: []".	According to the draft BRef October 2010 (page 378, point n. 5),and in order to improve understanding in the text.
43	9	6				76	511	Original text: BAT for basic oxygen furnace BOF gas recovery during oxygen blowing	BAT for basic oxygen furnace (BOF) gas recovery during oxygen blowing	To put "BOF" in brackets
44	9	6				80	537	BAT 80: Following the letter from the European IPPC Bureau of 22/02/2011, the BAT 80 was not included. The current version now retains it. This is in contradiction with the BAT 75, dealing with Air emissions. The BOF gas emissions could be reduced with in particular dry dedusting or wet dedusting. In the case of the BAT 80, dealing with Water and waste water, the only BAT for BOF gas dedusting is dry dedusting. It is obvious that it is better not to use process with water for restricting the water consummation and the water pollution. But in the case of plant with water process —or a new plant-, no BAT is proposed in BREF documentation whereas there is an appropriate chapter, named "7.3.3 Treatment of waste water from wet dedusting". The wet dedusting process has been operated for many years and must have been improved in order to limit the quantity of used water but no BAT is proposed.	Modify the text as follows:  BAT for new plants is to use dry de-dusting for basic oxygen furnace (BOF) gas	
45	9	6				83	513	The presention of individual techniques for BAT 83 is not consistent with the presentation of individual techniques for other BATs. This should be harmonised.	Please present the six techniques mentioned in BAT 83 as one consecutive list, and put their description or applicability restrictions below - in the same way as it was done in the other BATs.	For consistency with the presentation of other BAT conclusions.
46	9	6				87	514	The applicability of BAT 87 is more restricted than other BATs, so it would be appropriate to use the same wording as in BAT 95, which deals with the same issue.  Additionally, the second sentence under 'Applicability' falsely mirrors the information from Section 8.3.11.	Modify the text as follows:  "BAT is to reduce energy consumption by applying a continous near net shape strip casting if the quality and the product mix of the produced steel grades justify it."	See comment description. Near net shape strip casting is applicable to both BOF and EAF plants (with the same restrictions), so BATs 87 and 95 should have the same wording.  According to the agreement reached at the TWG level during the final meeting of February 2010 and to the text of the draft BREF October 2010. Including this tesxt is important in order to avoid a partial description of the BAT.
47	9	7				90		The presention of individual techniques for BAT 90 is not consistent with the presentation of individual techniques for other BATs. This should be harmonised.	Please present the six techniques mentioned in BAT 90 as one consecutive list, and put their description or applicability restrictions below - in the same way as it was done in the other BATs.	For consistency with the presentation of other BAT conclusions.
48	9	7				94	516	In BAT 94, the mentioned techniques No. III to V refer to the external use or recycling of production residues. It should be noted that external use or recycling can not be ruled in the IED permit.	Add the following text under 'Applicability': The cooperation and agreement of a third party may not be within the control of the operator, and therefore may not be within the scope of the permit.	In BAT 94, the mentioned techniques No. III to V refer to the external use or recycling of production residues. As the external use or recycling of production residues would be outside the control of the operator of the iron and steel plant, this can not be ruled in the IED permit. This should be noted under 'Applicability'.
49	9	7				95		In BAT 95, the second sentence under 'Applicability' falsely mirrors the information from Section 8.3.11 (see German comment to BAT 87 from page 514).	Delete the second sentence under 'Applicability'.	See comment description. Near net shape strip casting is applicable to both BOF and EAF plants (with the same restrictions), so BATs 87 and 95 should have the same wording.

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