

Comment No.	Comments from (Forum Member)	Chapter No. / section No. (if available)	Chapter title (only if there is no section or chapter No.)	BAT	Page # (PDF version)	Comment description	Proposed amendment	Rationale
1	EUROFER		Scope	0	xxiii	An exhaustive description of sulfuric acid plants in coking plants is already reported in the chapter 5.3.12.4 of this draft BREF.	Modify as follows: "This BREF does not address the following activities: • production of lime in kilns, covered by the Cement, Lime and Magnesium Oxide Manufacturing Industries BREF (CLM) • the treatment of dusts to recover non-ferrous metals (e.g. electric arc furnace dust) and the production of ferroalloys, covered by the Non Ferrous Metals Industries BREF (NFM) • sulphuric acid plants in coke ovens, covered by the Large Volume Inorganic Chemicals-Ammonia, Acids and Fertilisers Industries (LVIC-AAF-BREF). Other reference documents which are of relevance for the activities covered by these BAT conclusions are the following."	In the chapter 5.3.12.4 (pages 258-264) "Reduction of SO ₂ by coke oven gas desulphurisation" are reported the techniques of the sulphuric acid plants utilized and integrated with the coke oven gas desulphurisation plants. Therefore it is not necessary this activity to address to LVIC-AAF BREF.
2	Germany		Preface	0	iv	In chapter 3 of the Preface, the content of the chapter 5 of a BREF should be described in more detail.	Chapter 3 of the Preface: Add the description of chapter 5 of a BREF of the document IEF 22-4-3 (7 April 2010) (p. 5/6), taking into account the new provisions of the IED.	The BREFs are used by a large variety of groups of people who have different knowledge of the IED. In addition, the BREFs are used worldwide. This additional explanation of the former standard texts under the IPPCD was very helpful for the user. Therefore, we recommend to keep it also in the new standard texts. Of course, the text has to be amended taking into account the provisions of the IED.
3	Germany	2 5 1		1	50	Important aspects, which are concerning the components of an EMS and which were part of the former standard texts, are missing.	Please add the full information on the components of an EMS of the former standard texts including the paragraph on standardized and non-standardised EMS (pags 10 - 15 of document 22-4-3, 7 April 2010). In addition, we should speak of top or senior management, as it was done in the former standard texts.	Important information of the former standard texts.
4	Spain	8 3 2		0	449	We do not consider scrap preheating as a BAT as it is implemented for productivity reasons.	Delete the <i>Scrap preheating</i> from the chapter of Techniques to consider in the determination of BAT in EAF	Scrap pre-heating is not a BAT. It has been implemented for productivity reasons. Quite often there are even no energy savings due to the necessity of post-combustion systems. Many facilities in Europe stopped working in recent years (In Spain 2)
5	Spain	8 3 3		0	455	It makes no sense to set an emission associated value for the bag filter installation in slag crushing and screening. Same approach should be applicable in case of a wet collection systems for cooling and pretreatment of slag. (Wet collection is often use for cooling since the high humidity together with the collected dust can saturate the textiles). It is only necessary to quote good practices.	Achieved environmental benefits <i>With this technique a residual dust concentration of <math>10-20\text{ mg/m}^3\text{ can be reached}</math>.</i>	It makes no sense to set an emission associated value for this technique. It is only necessary to quote good practices. The dust collection in the slag treatment installation are an open air process which collects fugitive emissions from bells, screenings, crushers, etc. Therefore the dust concentration is linked to the absorption power (m3) and not necessary with the collection efficiency.
6	Spain	8 3 5 1		0	459	The real annual average emission values for EAF with well designed and well operated bag filters, taking into account the whole Europe, is 5 mg/Nm ³ for new or major rebumpings and 10 for existing.	Achieved environmental benefits <i>Figure 8-17 shows the dust emissions profile from one EAF plant for three years (2004 – 2006). The data show that with well designed and well operated bag filters, annual dust emission values of + 5 mg/Nm³ are achievable for new installations, and 10 mg/Nm³ for existing installations. A well designed and well maintained bag filter has a residual emission of less than 5-10 mg/Nm³ (daily average)."</i>	Just little data of a few companies (3) were used to establish this emission value. The real average, taking into account the whole Europe, is 5 mg/Nm ³ for new or major rebumpings and 10 for existing installations. There are many investments made 2 years ago with about 6-10 M€ to reach 10 mg/Nm ³ .
7	Spain	8 3 5 2		0	463	The realistic emission concentration that could be achieved in EAF, with proper post-combustion followed by rapid cooling is less than 0.2 ng I-TEQ/Nm ³ .	<i>"In general with proper post-combustion followed by rapid cooling (by dilution with air or water quenching) emission concentrations of PCDD/F of lower than <math>0.4-0.2\text{ ng I-TEQ/Nm}^3\text{ can be achieved}</math>. In some cases, for the aforementioned reasons higher PCDD/F concentrations can occur."</i>	Just little data of a few companies were used to establish the emission value for PCDD/F in EAF. The realistic emission concentration that could be achieved with proper post-combustion followed by rapid cooling is less than 0.2 ng I-TEQ/Nm ³ . These values are referred to almost air concentrations since the EAF smelting and refining processes do happen at open conditions.
8	Spain	8 3 5 3		0	466	Levels of mercury in the exhaust gases of EAF are very low, it's not necessary to install reduction systems to reduce it.	<i>"Besides PCDD/F adsorption, activated carbon and pulverised activated lignite coke have shown a high efficiency of separation of heavy metals and a certain efficiency in removing mercury from the gas phase. In any case, mercury emissions are usually very low in EAF so reducing systems are not necessary. In the future the level of mercury will be even lower by the full implementation of the several directives which relates to the mercury contain in many material streams as electric and electronic equipments, end of live vehicles, batteries, etc"</i>	Removing mercury is not a necessity in EAF because levels in the exhaust gases are very low, less than 0,05 mg/m ³ . If a plant detects higher levels of this contaminant it must implement a specific reduction plan with, for instance, scrap inspections and better selection criteria. In addition mercury concentration will decrease even more in the scrap.
9	Spain	8 3 9		0	472	Promoting of the use of slag is necessary to minimize landfilling. There are more applications than road construction for EAF slags.	Achieved environmental benefits <i>Slags from EAF that produce carbon or low alloyed steel can be treated with subsequent recycling in road construction or other environmentally sound applications as unbound surface layers, cement and other hydraulic binders, waste water treatment, embankments, fill and railway ballast, etc.</i> Driving force for implementation <i>The main driving forces are limited space for landfilling and cost aspects like taxes on landfilled wastes. Competent authorities should promote the use of slag to minimize landfilling and increase recycling rates.</i>	EAF Slags could be use in several environmentally sound applications, most of them meets all requirements of national standards concerning environmental aspects. Their legal status and the unjustified refusal of potential users due to lack of information are the main causes which hamper its use. Today there are numerous studies and much more information available, even more, the slags have been register under REACH Regulation. The results of the tests performed in relation to the REACH registration, support the conclusion that the use of steel slag will not lead to overall adverse environmental or human health impacts. To promote the use of EAF slag requires the support and commitment of the administration.
10	Spain	8 3 11		0	476	Near net shape strip casting is only available for some types of products and can only be applied when carrying out large rebumpings.	<i>"The techniques for continuous near net shape strip casting for electric arc steelmaking are similar to those described in Section 7.3.11 for basic oxygen steelmaking. This technique is only available for some types of products and can only be installed when carrying out large rebumpings."</i>	Near net shape strip casting is only available for some types of products. Due to technical reasons this technique can only be installed and implemented when carrying out large rebumpings of the installations.
11	Sweden, Germany	9		0		We have noted that no proposals for modifications will be accepted if the matter was not discussed in the TWG. For principal reasons, we anyway want to make this comment number 1.	All BAT conclusions with BAT-AELs should have averaging periods, reference conditions, and analytical methods unambiguously defined.	The Guidance document of 24 June 2011 states at page 24 that the units, the reference condition and the averaging period "must be unambiguously defined" for BAT conclusions with BAT-AELs. Any ambiguity will cause unnecessary administrative burdens for both MS and Industry. Moreover, ambiguities will make it problematic for the Commission to monitor the degree of implementation of BAT-conclusions by MS.
12	EUROFER	5	General comment	0	479	A transitional period is needed for existing installations	We urge the IED Article 13 Forum, when expressing its opinion on both our BREFs, to acknowledge that BAT AELs stipulated in our revised BREFs (being made IED ready after completion under the former IPPC regime) should only be imposed for existing installations at their next cold repair. Nothing in the IED expressly forbids inserting transitional measures for existing installations in the BAT Conclusions.	The review of both BREFs - Glass Manufacturing (GLS) started in 2007 and Iron and Steel production (I&S) started in 2006 - was done under the scope of the IPPC Directive (96/61/EC) and not under the scope of the IE Directive (2010/75/EU). Furthermore, it was repeatedly stated by the Commission and confirmed in the February 2011 Draft GLS BREF and the October 2010 Draft I&S BREF[1], that both BREFs were to be revised under the scope of the IPPC Directive (96/61/EC) and not under the scope of the IE Directive (2010/75/EU). [1] See Executive summary of both sectors: "The Best Available Techniques (BAT) Reference Document (BREF) entitled "Reference Document on Best Available Techniques for the Production of Iron and Steel" reflects an information exchange carried out under Article 17(2) of Directive 2008/1/EC of the European Parliament and of the Council (IPPC Directive)." Both Glass and Iron & Steel industries constructively participated in the review of their BREFs taking into account the spirit of the IPPC Directive and having in mind the flexibility mechanism left to the Member States for the implementation of the associated emission levels with the use of BAT and in particular the appropriate timing of their specific implementation at installation level. Now however these BREFs are to be treated by the Commission as having been revised under the IE Directive which places unreasonable obligations on existing installations. One of the specificities of both our industries is that the furnaces are operated continuously and for several years. Major modifications to those installations which are needed in some cases to comply with the BAT conclusions, can only be applied during a cold repair or during the rebuild of the furnaces, i.e. when the furnaces are stopped and cooled down. This important point has not been recognised in the BAT Conclusions as currently drafted. However, the BAT conclusions are legally binding under the IE Directive. Moreover, it is legally questionable whether the IE Directive applies to the revised GLS and I&S BREFs and the conclusions contained therein, as the BAT Conclusions were not developed in accordance with the procedure for developing (and adopting) BAT Conclusions as provided in Article 13 of the IE Directive.
13	EUROFER	5	General comment	0	479	fully apply the definition of Article 3(12) on BAT conclusions of the IE Directive	We urge the IED Article 13 Forum, when expressing its opinion on both BREFs, to acknowledge that this failure in the drafting of the BAT conclusions – legally binding for permitting under the IED – cannot be accepted. The only way to correct our BAT conclusions is to fully apply the definition of Article 3(12) on "BAT conclusions" of the IE Directive.	The revision of both GLS and I&S BREFs were conducted under the rules of the Information Exchange Forum, making use of the BREF Outline and Guide. On the basis of background papers – provided by the EIPPCB – their final TWG meetings concentrated on all conclusions on BAT sections disseminated in the various chapters of their respective BREFs. It is important to understand and recognise that the standard structure of a "conclusions on BAT section" is such that all of these sections contain several cross references to previous sections. The reader is consequently referred back to other parts of the BREF in order to get the full picture and sufficiently detailed information in terms of e.g. description of the technique in question as well as its applicability. The final drafts of both GLS and I&S BREFs – respectively dated February 2011/October 2010 - still contained all cross references in the conclusions on BAT sections. The "BAT conclusions" do not. In November 2010, the EIPPCB informed us that the final drafts of our BREFs had to be re-written with the objective to align it with the IE Directive (BAT conclusions as defined under the IE Directive have now to be elaborated in the framework of the review/elaboration of BREFs). In accordance with the definition of Article 3(12) on "BAT conclusions" of the IE Directive, industry was expecting a fair result from this exercise (made solely by EIPPCB) mirroring to the largest feasible extent the discussions and outcomes achieved in the Seville TWGs.

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										The definition of Article 3(12) on "BAT conclusions" of the IE Directive reads as follows: means a document containing the parts of a BAT reference document laying down the conclusions on best available techniques, their description, information to assess their applicability, the emission levels associated with the best available techniques, associated monitoring, associated consumption levels and, where appropriate, relevant site remediation measures; Having scrutinised the latest version of our BREFs – submitted to the opinion of the IED Article 13 Forum last June – both Glass and Iron & Steel industries are of the opinion that the way the BAT conclusions have been narrowed down – notably excluding parts of the valuable information to assess the applicability of best available techniques – is neither appropriate nor acceptable.
14	Germany	9				0	479	We recommend to add again an introduction to this chapter compared to the introduction of the corresponding chapter of the document IEF 22-4-3.	Add the introduction of chapter 5 of the document IEF 22-4-3 (7 April 2010) (p. 17/18), taking into account the new provisions of the IED.	After adoption by the Article 75 committee, only the BAT conclusions will be translated into the official EU languages and they will be published separately from the BREF. Hence this standalone document will need a kind of introduction describing at least its legal basis, its objectives and how to understand and to use this document. The BREFs are used by a large variety of groups of people who have different knowledge of the IED. In addition, the BREFs are used worldwide. This chapter of the former standard texts under the IPPCD was very helpful for the user. Therefore, we recommend to keep it also in the new standard texts. Of course, the text has to be amended taking into account the provisions of the IED.
15	Germany	9				0	479	Without cross references it is very difficult to trace back individual BAT conclusions to their corresponding BREF section. This is crucial, as the BAT conclusions by nature only provide a short excerpt of the relevant information from the BREF. Hence at least a sentence should be included in the introduction of Chapter 9 to make clear that detailed information can be found in Chapter 4 of the BREF.	The cross references in Chapter 9 to the corresponding sections of the BREF should be retained. If for any reason these cross references have to be removed in the standalone BAT conclusion document, the following sentence should be included in the general section of Chapter 9: "As these BAT conclusions by nature can only provide an excerpt of the relevant information from the BAT Reference Document (i.e. the 'IS BREF'), it is of utmost importance that the information contained in the corresponding sections 2.5, 3.3, 4.3, 5.3, 6.3, 7.3 and 8.3 of the BREF be fully taken into account by permitting authorities."	BREFs are very complex documents, hence cross references from the BAT conclusions to the corresponding sections of the BREF are extremely useful. This applies both to the BAT Chapters in the BREF itself as well as to the standalone BAT conclusions document. According to the IED, the BREFs should serve as a kind of background documents for the corresponding BAT conclusions, but without cross references it would be very difficult to trace back individual BAT conclusions to the corresponding BREF section. So removing the cross references from the BAT conclusions leads to a significant loss of information and thus hampers an equal implementation of BAT. If this can not be avoided for the standalone BAT conclusion document, at least a general reference to the corresponding sections of the BREF is required.
16	Bulgaria	9				0	480	The definitions for the new and existing plant does not take into consideration the process of plant/installation design. In this case the word 'introduced' have to be clarified.	We suggest as existing plants to be considered not only these build before the publication of the BAT conclusions but also these designed before that date.	
17	Bulgaria	9	1			0	481 - 490	The chapter deals with a lot of general recommendations on the management of the operation. There is missing criteria for compliance with the described recommendations.	Such type of recommendations should be excluded from BAT conclusions not only from this section but from other parts of BAT conclusions also.	Such recommendations are quite sound but the right place to deal with EMS's elements should not be there (incl. because they are quite applicable to all IPPC activities).
18	Finland	9				0	479 - 517	BAT conclusions contain over 90 individual conclusions and it is evident that not all of them are applicable to be utilized in permitting. Because of the IED it will become increasingly important to write BAT conclusions as concise as possible to avoid different kind of interpretations. Therefore it is important that the distinction between BAT conclusion with or without an BAT-AEL according to the IED directive should be clarified in the beginning of the BAT conclusions.	As clarification add at least articles 14 (3) and 15 (3) of the IED in the beginning of the BAT conclusions.	Chapter BAT conclusions is too wide and detailed in view of what is practical and applicable for permitting. Discussion on the use of BREFs in permitting and implementation of IED should be started as soon as possible, because it would help the development of BAT conclusions to be a transparent and uniform basis for permitting.
19	United Kingdom	9			Scope	0	479	A 4th bullet point is suggested for inclusion under "These BAT Conclusions do not address the following activities:"	Suggested additional bullet is: 'the processing of iron and steel (ferrous metals) as covered by the Ferrous Metals Processing BREF.	This BREF covers ferrous metal production, but not ferrous metal processing. Clarification of text.
20	United Kingdom	9			Scope	0	479	3 of Brefs listed (in table at the bottom of page 479) as also being of relevance to Iron and Steel production activities are being considered for incorporation into the sector-facing Brefs and/or being transformed into Commission guidance. [see Cover Note to the proposed Work Programme (dated 11 August 2011)]. The Brefs in question are: (i) Emissions from Storage BREF (EFS), (ii) Industrial Cooling Systems (ICS) and (iii) Energy Efficiency BREF (ENE).	Consider / re-consider how the Iron & Steel sector-useful content of these 3 Brefs can be best referenced (in this BREF), cross-referenced and generally made available. For example, is there a need for a later supplement to this BREF to cover relevant storage, cooling system and energy efficiency issues.	This BREF will be in-place for many years. Referencing needs to try to take into account changes in other guidance and reference documents.
21	United Kingdom	9	1	2		2	482	BAT 2 - the 5th bullet point under "Description of BAT 1.i" refers to the Energy Efficiency BREF.	As comment 20 (UK)	As comment 20 (UK)
22	EUROFER	9				0	479	An exhaustive description of sulfuric acid plants in coking plants is already reported in the chapter 5.3.12.4 of this draft BREF.	Modify as follows: "These BAT conclusions do not address the following activities: • production of lime in kilns, covered by the Cement, Lime and Magnesium Oxide Manufacturing Industries BREF (CLM) • the treatment of dusts to recover non-ferrous metals (e.g. electric arc furnace dust) and the production of ferroalloys, covered by the Non Ferrous Metals Industries BREF (NFM) plants in coke ovens, covered by the Large Volume Inorganic Chemicals Ammonia, Acids and Fertilisers Industries (LVIC-AAF BREF). → sulphuric acid plants in coke ovens, covered by the Large Volume Inorganic Chemicals Ammonia, Acids and Fertilisers Industries (LVIC-AAF BREF). Other reference documents which are of relevance for the activities covered by these BAT conclusions are the following:"	In the chapter 5.3.12.4 (pages 258-264, pages 282-288 in PDF version) "Reduction of SO ₂ by coke oven gas desulphurisation" are reported the techniques of the sulphuric acid plants utilized and integrated with the coke oven gas desulphurisation plants. Therefore it is not necessary to address this activity to LVIC-AAF BREF.
23	EUROFER	9				0	479	Table Reference documents. A table with a compilation of documents (BREFs/REFs) relevant for our activities has been included with no reference to the year of publication.	Specify which version of the BREF/REF has been taken into account during the discussion of the Iron & Steel BREF	Such clarification accurately reflects the agreement reached at the TWG level during its meeting held in February 2010
24	EUROFER	9				0	481 - 517	The process of changing and amending the BAT conclusions from the starting point, i.e. the final conclusions from the TWG Seville February 2010, has been not transparent	Rewrite the BAT as originally agreed and modify as EUROFER suggests in the following comments.	Compared to the original conclusions from February 2010 conclusions have been re-written in such a way that the original meaning was lost or partly lost, in some cases the opposite is concluded in the latest version. And this is not aligned with the accompanying letter of the EIPPCB (Review of the I&S BREF - Draft conclusions, 22th March 2011) which clearly stated: "For this purpose, the European IPPC Bureau [...], without altering the technical content of the conclusions reached at the TWG level."
25	EUROFER	9				0	481 - 517	The formulated BATs in the conclusion are in most cases without description, applicability, cross media effects and costs. The applicability of techniques depends on local situation, like space and other prerequisites. In the BAT conclusions these prerequisites for applicability are often not properly described.	Add all relevant prerequisites for application as stated in EUROFER comments as well as introduce the cross media effects and costs.	All the content in the applicability paragraph considered in the BREF (Draft October 2010) should be included in the BAT Conclusions. Such additions accurately reflect the agreement reached at the TWG level during its meeting held in February 2010. The addition of cross media effects and costs is also in accordance with the prescription of the Guidance Document under IED Article 13(3)(c) and (d) - 24 June 2011 of the EC for the IED Forum, chapter 3.2.3
26	EUROFER					0	481 - 517	Explanation about how to interpret lists of techniques within BAT conclusions BAT Conclusions with Lists of Techniques Many of the BAT conclusions within this document refer to lists of techniques.	Clarify in the BAT Conclusions that: 1. If a list is introduced with terms such as: - 'Techniques include:' - 'Measures can include:' - 'BAT is to use one or a combination of the following techniques:' - 'The following techniques can be used individually or in combination:' - 'The following techniques can be used:' - 'By using one or more of the following techniques:' Then this should be taken to mean that application of any individual technique within the list constitutes BAT. 2. If a list is introduced with terms such as: 'by using a combination of the following techniques' then this should be taken to mean that any combination of two or more of the listed techniques constitutes BAT.	In most cases, it is not intended that all of the techniques within a list must be implemented in combination in order to constitute BAT. Close attention must be afforded to the language used to preface each such list in determining whether one, more than one or all of the techniques on a list have to be applied to constitute BAT.
27	Spain	9	1	1		1	481	These are some examples that techniques could be used. Not all of them might be suitable or worthy for a specific installation. Energy Audits can help on this regard.	We propose to make a reference to the Sections of the BREF where the corresponding explanation appears.	References to the BREF document will contribute to a better interpretation of the BAT conclusions and will add value to the summarized information.
28	EUROFER	9	1	1		1	481	BAT 1. The Applicability should be included as defined in the article 1 (12) of IED.	"BAT is to implement and adhere to an EMS that incorporates, as appropriate to the local circumstances, the following features: [...]". Applicability: The components described above can typically be applied to all installations within the scope of this document. The scope (e.g. level of detail) and nature of the EMS (e.g. standardised or non-standardised) will be related to the nature, scale and complexity of the installation, and the range of environmental impacts it may have."	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 (page 95) and in the draft BREF June 2011 (Applicability, page 51).
29	EUROFER	9	1	1		1	481	BAT 1.V.i. Reference document has no date	Add "EC, REF on General Principles of Monitoring (MON), EIPPCB, 2003, p123"	By following the last versions of the REF Monitoring the agreement of the principles of monitoring in the BREF I&S has no value anymore. In Sevilla we made an agreement with the bureau about monitoring based on the content of "EC, REF on General Principles of Monitoring (MON), EIPPCB, 2003".

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30	Bulgaria	9	1	2		2	481	The consumption levels are missing in the chapter. Energy consumption issues are dealt with in a quite general way, the presented justification of the approach apparently is valid to the emissions as well, though the emissions are described in a much greater detail. The described measures (eg. BAT I.i) disallow to be assessed if the plant is in compliance of not because of missing criteria of appliance.	See our proposal nr. 2	We are of the opinion that the missing of concrete consumption data will create a broad variety and hard to reason (in favour or against) implementation of the Art.14.6 and Art.15.4 of IED and difficulties in the judgment of both the CA and the industry on the proper implementation of those articles. Based on the comments above we consider that the present content of the BAT conclusions chapter does not comply to the "BAT conclusions definition" in the IED. That makes very difficult to judge on the technical characteristics of the concerned installation, compared to those described in the "BAT conclusions" chapter.
31	Italy	9	1	2		2	482	BAT 2. Description of BAT II-IV The first bullet point on the recovery of waste heat is not in accordance with the sentence reported in the section 2.5.2.3 of this draft BREF (see page 54).	We propose to modify the paragraph as follows: "Process integrated techniques used to improve energy efficiency in steel manufacturing by improved heat recovery include: • combined heat and power production with recovery of waste heat by heat exchangers and distribution either to other parts of the steelworks or to a district heating network the recovery of waste heat by heat exchangers and distribution either to other parts of the steelworks or to a district heating network (if there are consumers in the vicinity)".	The conclusion on this item should be reported as clearly pointed out in the section 2.5.2.3 of this draft BREF (see page 54).
32	EUROFER	9	1	2		2	482	BAT 2. Description of BAT I.i. and II-IV. Clarification is needed in the description of BAT I.i and BAT II-IV where lists of items/measures are mentioned. When phrasing "by using a combination of the following techniques" is used in a BAT, this means that, amongst the basket of techniques mentioned, the implementation of at least 2 techniques as suggested is enough to comply with the BAT. First bullet point on the recovery of waste heat is not in accordance with the sentence in this draft (page 54, page 78 in the PDF version).	Modify as follows: "Process integrated techniques used to improve energy efficiency in steel manufacturing by improved heat recovery may include: • combined heat and power production with recovery of waste heat by heat exchangers and distribution either to other parts of the steelworks or to a district heating network the recovery of waste heat by heat exchangers and distribution either to other parts of the steelworks or to a district heating network (if there are consumers in the vicinity)".	Such clarification accurately reflects the agreement reached at the TWG level during its meeting held in February 2010 The text has to be the same reported in the paragraph 2.5.2.3 of the Bref (see page 54, page 78 in the PDF version).
33	United Kingdom	9	1	2		4	483	Query about BAT 4: shouldn't there be standards for the gas set for the S (H2S) content and dust content of desulphurised and dedusted coke oven gas? In effect, the equivalent of a BATAEL. Similarly, should we set a dust standard for the other fuel gases (BF gas and BOF gas)?	None.	Setting internal process standards will help protect the environment.
34	Germany	9	1	3		7	484	BAT 7 does not reflect the TWG agreement regarding radioactivity control, and it does not adequately address this serious issue (radioactivity control is only mentioned as a technique which 'can be used' to improve the use of scrap).	Please add the following text to BAT 7: 'For radioactivity control, BAT is to follow the UN-ECE recommendations and examples of best practise for the management of radiation protection aspects in the recycling of metal scrap, as far as they are applicable for operators of iron and steel plants.'	In the final meeting, the TWG agreed to include a reference to the UN-ECE recommendations in the BAT conclusions, because the input of radioactive material into the process would not only cause emissions of radiation (which would be outside the scope of the IED), but also lead to a disruption of the process and hence affect energy and resource efficiency as well as process emissions (which is definitely in the scope of the IED). Accordingly, it is not sufficient if this issue is only mentioned as a technique which 'can be used' to improve the use of scrap.
35	United Kingdom	9	1	3		7	484	BAT 7 - The additional note in brackets (that is: "Note: The selection of scrap might not be entirely within the control of the operator") is of some concern. The steelworks operator is a customer and should ensure it gets what it wants from a supplier, or should change to one who will exclude problematic materials.	Consider removing the Note. The BAT conclusion itself remains clear.	The Operator of the steelworks holds a permit to operate and use BAT in doing so. If an Operator can not rely on the quality of imported materials then an improved internal management system for accepting, sorting and rejecting unsuitable materials is needed and should be set-up.
36	EUROFER	9	1	4		8	484	BAT 8. and 9. These BATs should be rewritten and must emphasize that the choice of a recycling technique depends on the composition of the solid residues i.e. residues from carbon steel production versus residues from stainless or high alloy steel production. <u>Special consideration should be given not only to the iron content but also to the other non-ferrous compounds.</u>	Remove the Description from BAT 8. and keep it in BAT 9. Add Applicability in BAT 9. "Applicability: Implementation of a technique is depending on the nature and composition of the residues and on local conditions. "	Such clarification accurately reflects the agreement reached at the TWG level during its meeting held in February 2010. Furthermore several examples given are not on-site recycling techniques but external recovery options and therefore they are not within the control of the operators in the I&S processes.
37	EUROFER	9	1	4		9	484	BAT 9. Keep the wording that has been agreed in the TWG meeting held in February 2010.	Modify the text as in the Draft BREF October 2010: "BAT is to maximise external use or recycling for solid residues which cannot be used or recycled on-site wherever this is possible. Residues which can neither be avoided nor recycled should be managed in a controlled manner. "	Such modification accurately reflect the agreement reached at the TWG level during its meeting held in February 2010 and reflect the existing text in the draft BREF October 2010 (pg 97).
38	EUROFER	9	1	5		11	485	BAT 11. I. General techniques. At page 65 (page 89 in the PDF version) of the current Draft June 2011, it is written "General techniques should include" versus "General techniques include" in the BAT conclusion.	Modify BAT 11 as follows: "General techniques should include: [...]".	Such clarification accurately reflects the agreement reached at the TWG level during its meeting held in February 2010 and the text as reported at page 65 of this draft, page 89 in the PDF version.
39	Bulgaria	9	1	6		12	487	The waste water issues are dealt with very generally and not production wise or by process wise	See our proposal nr. 2	see comment 30 (Bulgaria)
40	Germany	9	1	7		14	488	Without the cross reference to section 2.5.5.1, the last sentence of BAT 14 is not meaningful.	Either reintroduce the cross reference to section 2.5.5.1 into the last sentence of BAT 14, or include the following sentence from section 2.5.5.1 (Applicability): "To determine what could be meant by a relevant emission source, an example of mass flow thresholds is given in Annex IV in Section 13.4. of the BREF"	see comment description
41	Sweden	9	1	7		14	488	BAT # 14	Define what a large electric arc furnace is.	As there is currently no definition on what constitutes a "large" electric arc furnace it will be difficult for the competent authority and industry to know when to implement this BAT conclusion.
42	EUROFER	9	1	7		14	488	BAT 14. Add "of process-specific pollutants" when reference to the process gas-fired power plants is made.	Modify as follows: "BAT is to measure the stack emissions of pollutants from the main emission sources from all processes included in the specific BAT Sections 9.2 – 9.7, whenever BAT-AELs are given, and of process-specific pollutants in process gas-fired power plants in iron and steel works."	This addition reflects better the agreement reached at the TWG level during its meeting held in February 2010. Since there are no BAT-AELs given for these installations, we propose to replace "whenever BAT-AELs are given" with "process-specific pollutants".
43	Poland	9	1	7		14	488	Large EAF - scale is not defined	Large EAF - scale should be precisely defined, e.g. >150 t/cast	Keeping in mind that this document will be the most important guide both for operators and authorities, we should keep the text as clear as possible to avoid a necessity of additional interpretations. To make it fully understandable for all interested parties we should avoid leaving some abbreviations and descriptors without definition or at least clear introduction where it is necessary. Otherwise it should be removed from the text or transformed to more general (neutral) form if applicable. Example from Germany shown in Annex IV is not using word "large" and is not enough.
44	Germany	9	1	7		15	488	When BAT 15 was rephrased in the context of the IED, its content was altered, i.e. it does not correctly reflect the outcome of the final TWG meeting. Hence the wording of BAT 15 has to be changed again, in order to clarify where periodical monitoring was regarded as BAT.	Please change the first sentence of BAT 15 as follows: "For relevant emission sources not mentioned in BAT 14, and for pollutants from the sources mentioned in BAT 14 which are not monitored continuously, BAT is to measure the emissions of all pollutants from all processes included addressed 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 discontinuously."	According to the present wording of BAT 15, only emissions from 'relevant emission sources not mentioned in BAT 14' would be monitored periodically, i.e. at the emission sources mentioned in BAT 14 the pollutants not mentioned in BAT 14 would not be monitored at all.
45	Bulgaria	9	1	7		15	488	BAT conclusions do not include monitoring conditions for the emissions in waste water	Such information have to be collected and added to the document.	see comment 30 (Bulgaria)
46	Germany	9	1	7		16	488	The BAT section on Monitoring lacks rules for monitoring and compliance, in order to clarify under which circumstances monitoring results would be considered to proof compliance with the BAT-AEL ranges specified in this document. This should also include a definition of the operating conditions to be covered during emission monitoring.	Please include a BAT conclusion on monitoring and compliance rules in Chapter 9.1.7. This section should include specifications which operating conditions have to be covered during emission monitoring (e.g. full and low capacity operation, in case of discontinuous processes the whole cycle should be covered). Additionally, it should be specified how to round measurement values, how to deal with outliers (e.g. '4 out of 5 measurement values should not exceed the range'), how to calculate the specified average values etc. These specifications should cover both continuous and periodical monitoring of air pollutants as well as the monitoring of pollutants in the waste water. Where appropriate, these general rules might be completed by specific compliance rules for individual BAT conclusions.	Monitoring results may be highly dependent on the operating conditions of the plant. Hence it has to be specified under which operating conditions emission monitoring has to be carried out in order to prove compliance with the BAT-AELs specified in these BAT conclusions. This is especially important for periodical measurements. Additionally, as monitoring results generally tend to vary, it has to be clarified under which circumstances monitoring results would be considered to proof compliance with the given BAT-AEL range, respectively when exceedances of the upper value from the BAT-AEL range would require additional measurements or additional measures. If the definition of monitoring and compliance rules was up to the member states or even to local authorities, the formal decision on BAT conclusions would fail to create a level playing field for operators within the EU.
47	France	9	1	7		16	488	BAT 16 : In the paragraph "2.5.5.6.3 Calculation of emissions with emissions factors", the I&S BREF states an adaptation of the US-EPA method by France, providing a good quantification of the diffuse dust from open air sources. Several external parameters are taken into account with this French adaptation. This information is not given to the I&S BREF Chapter 9 (June 2011) and BAT Conclusions (march 2011) because the description text have been summarized.		

Comment No.	Comments from (Forum Member)	Chapter No. / section No. (if available)			Chapter title (only if there is no section or chapter No.)	BAT	Page # (PDF version)	Comment description	Proposed amendment	Rationale
48	EUROFER	9	1	7		16	BAT 16. Description The current description does not reflect the reality as it is too restrictive.	Remove the current description in BAT 16.	The description of "Direct or quasi-direct measurement", "Indirect measurements" and "Calculation of emissions with emission factors" are too restrictive and incorrect compare to what is written in chapter 3.	
49	Bulgaria	9	1	9		18	This chapter consist of too general recommendations and there is nothing specific for the I&S producing sector.	See our proposal nr. 2	see comment 30 (Bulgaria)	
50	Bulgaria	9	2			19 - 32	The levels of energy, water, raw materials (at least basic and hazardous), fuel use and waste produced are missing in the chapter. This part of overall process performance is described in quite general terms.	Specific values of energy, water, raw materials consumption and waste produced of each described process should be added to the section.	see comment 30 (Bulgaria)	
51	Bulgaria	9	2			19 20 25	BAT 19, 20 and 25 describes a concrete technique for the waste gases abatement. We think this is inconsistent with the Art. 15(2) of IED		see comment 30 (Bulgaria)	
52	Germany	9	2			20	The split view to BAT 20 should have been retained, at least until the Article 13-Forum had expressed its opinion on the draft.	Reintroduce the split view to BAT 20 (see Table 12.1 on page 585) as an option for decision by the Article 13 Forum or even by the Article 75 Committee.	Removing the split views from the BAT Chapters in the BREF actually means to 'alter the technical content of the conclusions reached at the TWG level'. As the information exchange under the IPPCD as well as under the IED is a consensual process, the split views form an integral part of the conclusions reached at the TWG level. As the technical experts were not able to find consensus on this particular issue, it is the task of the Article 13 Forum or even the Article 75 Committee to resolve the split views. Relocating the split views to Chapter 12 is no appropriate solution, as the split views completely lose their context (i.e. the conclusions on BAT). Then split views would only be regarded as details of the process or as recommendations for future work, although they were a core result of the process, actually referring to data present in the current BREF (otherwise they had not been accepted by the EIPPCB).	
53	Germany	9	2			20	Some relevant aspects from the description of bag filters in Chapter 3.3.2.2 are missing in the corresponding description in BAT 20	Please add the following text (taken from the description in the BREF) to the description for bag filters: Usually the filter is divided into several filter lines of similar design, each of which is further subdivided into several chambers. The pre-dusted waste gas stream is distributed uniformly to the top of each of the filter lines and is sucked to the bottom of each chamber. Within the chamber, the waste gas enters from the outside of the filter tube and dust is collected on the fabric as the gas passes through the bag. The bags are supported by cages and can be mounted vertically (longer bags) or horizontally (shorter bags). During waste gas cleaning, a filter cake builds up on the exterior surface of the bag resulting in an increase in the pressure drop across the bag. Once the pressure drop reaches a set point (usual differential pressure between the filter and the clean gas chamber of 10 to 20 mbar) the chamber is taken off-line for cleaning by a reverse pulse of compressed air. The dust removed is collected in conical bins below the filter chambers and discharged by screw conveyors. About 98 % of this dust may be recycled back to the process. Usually, the removal of dust is combined with the removal of acidic waste gas compounds such as HCl, HF and SO ₂ by solutions and the removal of persistent organic pollutants such as PCDD/F, PCB, HCB or PAH by injection of adsorbent carbon, and/or sometimes zeolites (see Figure 3.15). All the dust, the carbon/coke and unreacted desulphurisation reagents and reaction products (gypsum sulphate) are filtered off by means of the bag filter.	See comment description	
54	EUROFER	9	2			20	BAT 20. Applicability. Bag Filter. Report also the relevant Cross Media Effect that results in restriction on the applicability .	Complete as follows: " <i>For existing plants requirements such as space for a downstream installation to the electrostatic precipitator can be relevant. Special regard should be given to the age and the performance of the existing electrostatic precipitator.</i> <i>The use of a bag filter requires the installation of new booster fans. The additional electricity energy demand including fans is relevant.</i> "	This relevant cross media effect is reported in this draft (page 133, page 157 in the PDF version) and results in restriction on the applicability.	
55	Germany	9	2			21	In BAT 21 a description should be added for the application of activated carbon of activated lignite coke injection in order to capture mercury from the raw material.	Please add the following description to BAT 21: "If activated carbon of activated lignite coke is injected in order to reduce mercury emissions from the use of raw material with a higher mercury content, attention has to be paid not to accumulate mercury in the inner material cycle of the sinter plant. In this case, some or the entire filter dust should be discarded as waste for further treatment or disposal."	If activated carbon of activated lignite coke is injected in order to reduce mercury emissions from the use of raw material with a higher mercury content, and then the filter dust is recycled in the sinter feed, this could lead to an accumulation of mercury in the inner material cycle of the sinter plant and thus to higher mercury emissions. The BAT conclusion from the final TWG meeting included a reference to Sections 3.3.2.1.1 and 3.3.2.2, where the need to dispose some or the entire filter dust is addressed. This information needs to be retained in the BAT conclusion.	
56	Germany	9	2			22	In order to clarify which BAT-AEL applies for BAT 22, the emission level associated with the techniques mentioned under V. should only be indicative, and thus not be named 'BAT-AEL'.	For clarification the 2nd sentence of the BAT-AEL description in BAT 22 should be changed as follows: "The emission level associated with the techniques mentioned under V. is <100 mg SO _x /Nm ³ , expressed as SO ₂ and determined as a daily mean value."	If different emission levels are associated with individual techniques considered as BAT, this is an interesting information. But these emission levels should not be classified as individual BAT-AELs, unless the applicability of the mentioned techniques is clearly restricted. Article 15-2 IED demands that permit conditions shall be based on BAT "without prescribing the use of any technique or specific technology". Accordingly the BAT-AELs should describe a certain level of environmental protection; it should not depend on the operator's choice of techniques.	
57	France	9	2			22	BAT 22 : Following the letter from the European IPPC Bureau (22/03/11), the part V of the BAT was not included. The current version of the I&S BREF now retains the part V. France is not opposed to this introduction of two technologies-Wet desulphurisation and RAC-considered like a BAT because of the existence of other BATs, which can be used by the Industrials . However, these two technologies are not used in Europe, this important point might be mentioned -with the cross effects- to indicate the representativity of implementing of these technologies and provide all information needed to Member States that will implement the I&S BREF. Moreover, it seems necessary : "to include a description of the Wet Desulphurisation like it has been done for the RAC technique, "to be faithful in the applicability text of the RAC. There is a difference between the two versions - I&S BREF in October 2010 & I&S BREF June 2011 chapter 9 "BAT 22": - I&S BREF June 2011 Chapter 3 : "Although, it might be an option in new plants targeting SO _x , NO _x , dust and PCDD/F simultaneously or in Circumstances Where Environmental Quality standards are not Likely to Be met." - I&S BREF June 2011 chapter 9 "BAT 22": This technique is applicable in new plants targeting SO _x , NO _x , dust and PCDD/F simultaneously or in circumstances where environmental quality standards are unlikely to be met through the application of other techniques."			
58	United Kingdom	9	2			22	BAT 22 - The additional technique now listed at V is satisfactory. We note there is significant additional text below this section, which covers the description of the RAC process mentioned and applicability of under BAT 22 (V).	Could the description text be moved to the Chapter on Sinter Plants?	Possibly more appropriate for descriptive text to remain in the appropriate techniques chapter. Clarification of text.	
59	EUROFER	9	2			22	BAT 22. Wet desulphurisation and RAC have been reintroduced in the final draft after being removed in the first draft BAT conclusions. In this process the original agreed text in the TWG has been modified and the reference to the <i>particular attention that should be given for the applicability of these techniques has been removed.</i> Moreover the sections including the applicability of these techniques should fully reflect the text that is included in this BREF.	Add the sentence "Particular attention should be given to the applicability of these techniques." at the end of the last paragraph when referring to BAT-AEL using BAT V: "22. BAT for primary emissions from sinter strands is to reduce sulphur oxide (SO _x) emissions by using one or a combination of the following techniques: [...] The BAT-associated emission level for sulphur oxides (SO _x) using BAT V is <100 mg/Nm ³ , expressed as sulphur dioxide (SO ₂) and determined as a daily mean value. Particular attention should be given to the applicability of these techniques."	These additions accurately reflect the agreement reached at the TWG level during its meeting held in February 2010 and the text present in the draft BREF October 2010. See attached document:	
60	EUROFER	9	2			22	BAT 22. Applicability of techniques mentioned under BAT V. Wet desulphurisation. Report as described in the Applicability of this draft (page 151, page 175 of the PDF version): "The wet desulphurisation process is not applied in Europe". Furthermore, the relevant cross media effects that are described in the BREF must be reported also in the BAT conclusion when describing the technique. This is also in accordance with the prescription of the Guidance Document under IED Article 13(3)(c) and (d) - 24 June 2011 of the EC for the IED Forum, chapter 3.2.3	Applicability of techniques mentioned under BAT V. Wet desulphurisation: "The requirements of space may be of significance and may restrict the applicability. High investment and operational costs and significant cross-media effects such as slurry generation and disposal and additional waste water treatment measures, have to be taken into account. <u>Applicable in circumstances where environmental quality standards are unlikely to be met through the application of other techniques; The wet desulphurisation process is not applied in Europe, although, it might be an option in circumstances where environmental quality standards are not likely to be met.</u> "	The Applicability has to be completely in accordance with the BREF draft (page 151, page 175 of the PDF version). These additions accurately reflect the the text present in the draft BREF October 2010.	

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61	EUROFER, Czech Republic	9 2		22	492	BAT 22. Applicability of techniques mentioned under BAT V. RAC. Report as described in the Applicability of this draft (page 156, page 180 of the PDF version): "The RAC process is not applied in Europe". As highlighted in the document attached in comment no. 24, RAC process might be an option (as agreed in the TWG); the text has been unilaterally changed by the EIPPCB in "this technique is applicable..." Furthermore, the relevant cross media effects that are described in the BREF must be reported also in the BAT conclusion when describing the technique: the increase of NRJ consumption, nor waste generation are mentioned. This is also in accordance with the prescription of the Guidance Document under IED Article 13(3)(c) and (d) - 24 June 2011 of the EC for the IED Forum, chapter 3.2.3	Applicability of techniques mentioned under BAT V. RAC: "Dust abatement should be installed prior to the RAC process to reduce the inlet dust concentration. Generally the layout of the plant and space requirements are important factors when considering this technique but especially for a site with more than one sinter strand. High investment and operational costs, in particular when high quality, expensive, activated carbon types may be used and a sulphuric acid plant is needed, have to be taken into account. This technique is applicable in new plants targeting SO_x, NO_x, dust and PCDD/F simultaneously or in circumstances where environmental quality standards are unlikely to be met through the application of other techniques. The RAC process is not applied in Europe. Although, it might be an option in new plants targeting SO_x, NO_x, dust and PCDD/F simultaneously or in circumstances where environmental quality standards are not likely to be met. "	The Applicability has to be completely in accordance with the BREF draft (page 156, page 180 of the PDF version). These additions accurately reflect the the text present in the draft BREF October 2010.
62	EUROFER	9 2		23	492	BAT 23. SCR and RAC have been reintroduced in the final draft after being removed in the first draft BAT conclusions. In this process the original agreed text in the TWG has been modified and the reference to the particular consideration of the prerequisites for application has been removed. Moreover the sections including the applicability of these techniques should fully reflect the text that is included in this BREF.	Add the sentence "with particular consideration of the prerequisites for application." as follows: "23. BAT for primary emissions from sinter strands is to reduce total nitrogen oxides (NO _x) emissions by using one or a combination of the following techniques: [...] If end-of-pipe techniques with particular consideration of the prerequisites for application which can include i. the regenerative activated carbon (RAC) process ii. selective catalytic reduction (SCR)."	These additions accurately reflect the agreement reached at the TWG level during its meeting held in February 2010 and the text present in the draft BREF October 2010. See attached document:
63	Germany	9 2		23	493	In order to clarify which BAT-AEL applies for BAT 23, the emission level associated with the techniques mentioned under II. should only be indicative, and not be named 'BAT-AEL'. Additionally, the specification of a reference oxygen content exclusively for RAC and SCR does not seem to be justified.	For clarification the 2nd sentence of the BAT-AEL description in BAT 23 should be changed as follows: "By application of RAC an emission level <250 mg NO _x /Nm ₃ , expressed as NO ₂ , is achieved, respectively <120 mg NO _x /Nm ₃ in the case of SCR."	If different emission levels are associated with individual techniques considered as BAT, this is an interesting information. But these emission levels should not be classified as individual BAT-AELs, unless the applicability of the mentioned techniques is clearly restricted. Article 15-2 IED demands that permit conditions shall be based on BAT "without prescribing the use of any technique or specific technology". Accordingly the BAT-AELs should describe a certain level of environmental protection; it should not depend on the operator's choice of techniques. Additionally, the specification of a reference oxygen content exclusively for RAC and SCR does not seem to be justified, as the oxygen content in the off-gas from the sinter strand may differ widely dependent on the configuration of the plant, and thus no reference oxygen content was specified for any other pollutant.
64	France	9 2		23	493	BAT 23 : Part II: Following the letter from the European IPPC Bureau (22/03/11), the part II of the BAT was not included. The current version of the I&S BREF now retains the part II. France is not opposed to the introduction of the two technologies, SCR & RAC-, considered like a BAT because of the existence of other BATs. However, these two technologies are not used in Europe. This important point might be mentioned --with the cross effects- to indicate the representativity of implementing of these technologies and provide all information needed to Member States that will implement the I&S BREF. However, the formulation of BAT 23 is not fully in accordance with the Seville agreement (22/03/10): It is not mentioned "with Particular considerations for the prerequisites for application" for the part II like it is mentioned for the BAT 22 part V.		
65	United Kingdom	9 2		23	493 - 494	BAT 23 - The additional (end-of-pipe) techniques are now included. As a catalyst-enhanced process SCR effectiveness would be reduced by blinding or poisoning of the catalyst. Poor filter bag performance could be costly. The last sentence covering applicability of the SCR process under BAT II(ii) appears to suggest that applicability is in circumstances where air quality standards are unlikely to be met through other techniques.	SCR on sinter plants should possibly be considered as an "additional measure" (under IED Article 18) rather than necessarily BAT. If so, then should it be mentioned here?	Brefs are focussed on BAT.
66	EUROFER, Czech Republic	9 2		23	493	BAT 23. Applicability of BAT I.i. The sentence "The application of waste gas recirculation requires special efforts to ensure that the sinter quality and productivity are not affected negatively" has been removed	Reintroduce the sentence "The application of waste gas recirculation requires special efforts to ensure that the sinter quality and productivity are not affected negatively"	Such reintroduction 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
67	EUROFER, Italy	9 2		23	493	BAT 23. Applicability of BAT I.i. This relevant cross media effect is reported in this draft (page 171, page 195 in the PDF version). This is also in accordance with the prescription of the Guidance Document under IED Article 13(3)(c) and (d) - 24 June 2011 of the EC for the IED Forum, chapter 3.2.3	Add the Cross-media effects: "Special attention needs to be paid to carbon monoxide (CO) in the recirculated waste gas in order to prevent carbon monoxide poisoning of employees."	It is important to consider also the relevant cross media effect that results in a restriction on the applicability.
68	United Kingdom	9 2		24	494	BAT 24 - A significant proportion of dioxins are associated with particulate.	Suggested addition as follows: "IV. Minimising emissions dust/particulate (see BAT 25)	Putting additional emphasis on lowering particulate emissions as part of the effort to minimise dioxin emissions. Clarification of text.
69	EUROFER, Italy	9 2		24	494	BAT 24. III. For the application of this BAT it is necessary to give particular attention to the prerequisites for the application.	Modify as follows: "using waste gas recirculation with particular consideration for the prerequisites for application (see BAT 23)".	Report as described in the BAT of the draft BREF Oct. 2010 to page 195. 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.
70	Germany	9 2		25	494	The split view to BAT 25 should have been retained, at least until the Article 13-Forum had expressed its opinion on the draft.	Reintroduce the split view to BAT 25 (see Table 12.1 on page 585) as an option for decision by the Article 13 Forum or even by the Article 75 Committee.	Removing the split views from the BAT Chapters in the BREF actually means to 'alter the technical content of the conclusions reached at the TWG level'. As the information exchange under the IPPCD as well as under the IED is a consensual process, the split views form an integral part of the conclusions reached at the TWG level. As the technical experts were not able to find consensus on this particular issue, it is the task of the Article 13 Forum or even the Article 75 Committee to resolve the split views. Relocating the split views to Chapter 12 is no appropriate solution, as the split views completely lose their context (i.e. the conclusions on BAT). Then split views would only be regarded as details of the process or as recommendations for future work, although they were a core result of the process, actually referring to data present in the current BREF (otherwise they had not been accepted by the EIPPCB).
71	Germany, Sweden	9 2		26	494	In order to clarify which BAT-AEL applies for BAT 26, only one BAT-AEL range should be specified, unless the applicability of the mentioned techniques is clearly restricted.	For clarification, the applicability of the techniques mentioned in BAT 26 should be specified. Otherwise the wording of the BAT-AEL sentence in BAT 26 should be changed as follows: "The BAT-AEL for dust is <10 - 30 mg/Nm ₃ , determined as a daily mean value. The lower value refers to use of bag filters."	If different emission levels are associated with individual techniques considered as BAT, this is an interesting information. But these emission levels should not be classified as individual BAT-AELs, unless the applicability of the mentioned techniques is clearly restricted. Article 15-2 IED demands that permit conditions shall be based on BAT "without prescribing the use of any technique or specific technology". Accordingly the BAT-AELs should describe a certain level of environmental protection; it should not depend on the operator's choice of techniques.
72	Germany	9 2		27	495	BAT 27 needs clarification, otherwise it can not be implemented meaningfully.	Either include some description and information regarding applicability restrictions of the technical options mentioned in BAT 27 or delete it.	BAT 27 can not be implemented meaningfully, as it calls either for a maximum recycling of waste water or no recycling at all, without any indication when to apply the one or the other option. Additionally, it is not comprehensible why any option in between should generally no be considered as BAT.
73	Germany	9 2		31	495	It should be clarified that the specification of maximum oil contents in BAT 31 is only indicative, and not intended to serve as a kind of BAT-AELs. Additionally, it should be specified how the oil content in the process residues as well as in the sinter feed could be monitored (how to be sampled and how to be measured).	For clarification, relocate the second sentence of BAT 31 to the end of the 'Description' part as follows: "In oil-easesAs a result, the oil content of the recycled process residues should be <0.5 % and the content of the sinter feed <0.1%."	The specification of maximum oil contents in BAT 31 is not qualified to serve as BAT-AELs, and hence can not be transposed meaningfully into permit conditions.
74	Germany	9 2		32	496	According to the description, none of the options for BAT 32 is applicable to all plants. This needs to be clarified in the BAT conclusion itself.	Please add 'if applicable' at the end of BAT 32.	According to the description, only the techniques No. II. and III. are practically available (in the sense of BAT), being variants of waste gas recycling (WGR) systems. According to BAT 23, where WGR was already presented as an option to reduce NO _x emissions, the applicability of WGR is restricted. Hence, if no other technique is practically available for BAT 32, the applicability of BAT 32 itself is restricted.
75	EUROFER, Italy	9 2		32	496	BAT 32. III. For the application of this BAT it is necessary to give particular attention to the prerequisites for the application.	Modify as follows: "maximizing the recirculation of waste gases to use sensible heat with particular consideration for the prerequisites for application (see BAT 23)".	Report as described in the BAT of the draft BREF Oct. 2010 to page 197. 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.
76	Bulgaria	9 3		33 - 41	497 - 499	The levels of energy, water, raw materials (at least basic and hazardous), fuel use and waste produced are missing in the chapter. This part of overall process performance is described in quite general terms.	Specific values of energy, water, raw materials consumption and waste produced of each described process should be added to the section.	see comment 30 (Bulgaria)
77	Euromines	9 3		34	497	The level for HF should be increased from 3 mg/Nm ₃ to 4 mg/Nm ₃ .	The level for HF should be increased from 3 mg/Nm ₃ to 4 mg/Nm ₃ .	It would take into account the higher fluoride content of the ores extracted in Sweden. Finally, it would be in line with the IED which supports the principle of balance between environmental benefits and economic costs.

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78	The Netherlands	9	3			36	497	A NOx reduction efficiency of at least 80% is not applicable for all existing pelletplants due to the facts that process integrated measures are sometimes complicated and tailor made and due to the limited possibility for companies to use the most appropriate ores.	Add in BAT 36: Applicability of BAT II particularly with consideration of the prerequisites for application. Due to the complexity of measures in existing installations and the limited availability of the most appropriate ores, a reduction efficiency of 80% is not possible for all existing installations.	In the TWG the sentence: " particularly with consideration of the prerequisites for application" was included.
79	EUROFER	9	3			36	497	BAT 36. For the application of this BAT it is necessary to give particular attention to the prerequisites for the application.	Add "BAT for existing plants is to reduce NOX emissions from the drying and grinding section and induration strand waste gases by applying one of the following techniques: <i>with particular consideration for the prerequisites for application</i> "	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.
80	EUROFER	9	3			36	497	BAT 36. SCR has been reintroduced in the final draft after being removed in the first draft BAT conclusions. In this process the original agreed text in the TWG has been modified and the reference to the <i>particular consideration of the prerequisites for application has been removed.</i>	Add the sentence "with particular consideration of the prerequisites for application" as follows: "36. BAT for existing plants is to reduce NOX emissions from the drying and grinding section and induration strand waste gases by applying one of the following techniques: <i>with particular consideration for prerequisites for application</i> ."	These additions accurately reflect the agreement reached at the TWG level during its meeting held in February 2010 and the text present in the draft BREF October 2010. See attached document:
81	EUROFER	9	3			39	498	BAT 39. The value refer to only one pelletization plant and it must be highlighted in the BAT Conclusions.	Add the reference to the single pelletization plant: "The BAT-associated emission levels, based on a qualified random sample or a 24-hour composite sample and referring only to single pelletization plant water treatment plant, are: ..."	Coherence and similar wording to the text in BAT 46. "The BAT-associated emission levels, based on a qualified random sample or a 24-hour composite samples and referring only to single coke oven water treatment plants, are:"
82	EUROFER	9	3			41	498	BAT 41. Prerequisites must be added when reference is made to BAT 41.I.	Add the prerequisites as follows: "I. process-integrated reuse of sensible heat as far as possible from the different sections of the induration strand (pelletisation plants usually recover energy to a large extent; for further improvements, tailor-made solutions are necessary)"	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.
83	Bulgaria	9	4			42 - 58	501-505	The levels of energy, water, raw materials (at least basic and hazardous), fuel use and waste produced are missing in the chapter. This part of overall process performance is described in quite general terms.	Specific values of energy, water, raw materials consumption and waste produced of each described process should be added to the section.	see comment 30 (Bulgaria)
84	Germany	9	4			43	501	The choice of techniques presented in BAT 43 is not meaningful. None of the techniques would individually be sufficient in order to reduce diffuse emissions significantly. Additionally, the specified BAT-AEL should generally apply for channelled off-gases from the storage and handling of pulverised coal.	For clarification, change the wording of BAT 43 as follows (changes highlighted in red color): "BAT for storage and handling of pulverised coal is to prevent or reduce diffuse dust emissions by using one or a combination of the following techniques, where applicable: I. storing pulverised materials in bunkers and warehouses II. using closed or enclosed conveyors III. minimising the drop heights depending on the plant size and construction. IV. reducing emissions from charging of the coal tower and the charging car. V. using efficient extraction and subsequent dedusting. When using BAT-V. The BAT-associated emission level for channeled dust emissions is <10 – 20 mg/Nm3, as the average over the sampling period (spot measurement, for at least half an hour)."	In order to reduce the generation of diffuse dust emissions several measures have to be applied in combination. E.g. technique No. I has to be applied in combination with technique No. V., efficient extraction and dedusting systems should generally be applied to reduce dust emissions from storage and handling of pulverised coal, but it can not entirely replace primary measures. Additionally, the specified BAT-AEL should generally apply to channelled off-gases from the storage and handling of pulverised coal, not only to those sources where the operator volunteered to apply dust extraction and dedusting.
85	Germany	9	4			44	501	BAT 44 needs a lot of clarification: 1. The list of techniques considered as BAT is missing. 2. If some techniques are preferred compared to others, this should already be expressed in the BAT conclusion itself. 3. The specification of BAT-AELs should follow before the individual techniques are described. 4. The relation between both BAT-AELs specified for dust emissions from coal charging with land-based gas treatment needs to be clarified: How to decide which value applies? 5. If some techniques are preferred in comparison to other techniques which are also considered as BAT, this only makes sense when applicability of the individual techniques is restricted and these restrictions are described. 6. The specified duration of visible emissions is not qualified to serve as a BAT-AEL, and thus should either be characterised as indicative or be deleted.	Please restructure and complement BAT 44 according to our comment. Additionally, either only one BAT-AEL should be specified for dust emissions from coal charging with land-based gas treatment, or the relation between the 2 BAT-AELs should be clearly defined (e.g. in the sense that both values have to be met at the same time). The specified duration of visible emissions should either be characterised as indicative or be deleted.	The present wording of BAT 44 is incomplete, not consistent with the presentation of the other BAT conclusions, can not be transposed meaningfully into permit conditions, and hence is not appropriate for an equal implementation of BAT conclusions. Regarding the maximum duration of visible emissions the reference to BAT 16 does not help, as BAT 16 does not address the determination of visible emissions.
86	Germany	9	4			46	502	The BAT-AELs for the percentage of visible emissions in BAT 46 needs clarification regarding monitoring requirements. Additionally, full references should be provided for the mentioned methods, as they are not common yet.	Please specify the required duration, frequency and – if necessary – averaging period for the determination of visible emissions. Additionally, please include full references for the mentioned monitoring methods.	see comment description
87	EUROFER	9	4			46	502	BAT 46. Clarification of the list of techniques is needed. (see comment no. 24 (EUROFER))	Clarify the meaning of the wording "by using the following techniques"	In most cases, it is not intended that all of the techniques within a list must be implemented in combination in order to constitute BAT. Close attention must be afforded to the language used to preface each such list in determining whether one, more than one or all of the techniques on a list have to be applied to constitute BAT.
88	EUROFER	9	4			46	502	BAT 46. 2 methods (BCRA method and Dutch method) are added for estimation of the diffuse emissions. These methods are not described in BREF Oct. 2010 (and even in the BREF from June 2011) and they were added after the information collection period.	Delete BCRA method and methodology applied in the Netherlands.	These methods were added after the TWG are even at this moment not described in the relating chapters (just in the conclusions). Local authorities always have the possibility to prescribe other methods in the permit. In principal new information should only be added in agreement with the TWG.
89	Poland	9	4			46	501	Additional sealing method should be added		Apart from water seals of ascension pipes the pneumatic seals should be added - this kind of sealing is applied among others in the "Radlin" coking improvement.
90	United Kingdom	9	4			48	502 - 503	BAT 48 - At BAT 4 (General BAT Conclusions: Energy Management) BAT describes use of desulphurised and dedusted COG. Yet the residual dust concentration associated with dedusting COG is not mentioned. [This is inconsistent with BAT 64 - for blast furnaces - where a residual dust concentration is given (see page 508). It is also inconsistent with BAT 75 - for basic oxygen steelmaking - where a residual dust concentration is given (see page 511)].	If data is available could a residual dust concentration associated with dedusting COG be given and BAT 48 (or BAT 49) be amended to include the figure?	
91	Germany	9	4			48	503	As the BAT-AELs for the two techniques mentioned in BAT 48 are extremely different (by factor 30–100), this BAT conclusion is not comprehensible without a proper description of the techniques and their applicability restrictions. Otherwise either one or the other technique should not be considered as BAT.	The applicability of the individual techniques mentioned in BAT 48 needs to be specified. If technique No. II was applicable in general, technique No. I should not be considered as BAT, and only the BAT-AEL range specified for technique No. II should be retained. If technique No. II was generally not applicable, e.g. due to cross-media effects or unproportional costs, only technique No. I should be considered as BAT, and only the BAT-AEL range specified for technique No. I should be retained. However, the latter option can not be drawn from the information present in the BREF.	According to the information in the BREF, the only reason for considering technique No. I as BAT seems to be that technique No. II is applied throughout Europe, whereas technique No. is almost exclusively applied in Japan. Either the information in the BREF is incomplete, or the determination of BAT does not seem to be justified according to the provisions of the IED.
92	Germany	9	4			49	503	According to our split view and the information included in the BREF, in particular in Section 5.3.12.1, the BAT-AEL for dust in BAT 49 should be changed to <1 – 10 mg/Nm ³ . At least the split view to BAT 49 from Germany and the EEB should have been retained until the Article 13-Forum had expressed its opinion on this issue.	Please change the BAT-AEL for dust in BAT 49 to <1 – 10 mg/Nm ³ . Otherwise, please reintroduce the split view to BAT 49 (see Table 12.1 on page 585) as an option for decision by the Article 13 Forum or even by the Article 75 Committee.	All figures for dust emissions from coke oven underfiring included in the BREF are below 10 mg/Nm ³ . The issue that dust emissions may increase over time and exceed 10 mg/Nm ³ is already addressed in Section 5.3.12.1, where techniques are described which can be used to locate the causative cracks in the oven walls, and to repair the walls efficiently. Nevertheless, in the final meeting industry claimed that only 20 mg/Nm ³ were achievable over time. A majority in the TWG followed this claim, although it referred only to one plant which is more than 40 years old, and no detailed information was provided, e.g. if the maintenance techniques mentioned in Section 5.3.12.1 had been applied. As no sufficient information has been provided to conclude on a BAT-AEL of 20 mg/Nm ³ , this BAT-AEL is not acceptable. It should be clarified that BAT is to apply the techniques described in Section 5.3.12.1 as soon as the dust emission level rises to 10 mg/Nm ³ or more.
93	Germany	9	4			49	503	According to our split view and the information included in the BREF, in particular in Section 5.3.12.1, the BAT-AEL for dust in BAT 49 should be changed to <1 – 10 mg/Nm ³ . At least the split view to BAT 49 from Germany and the EEB should have been retained until the Article 13-Forum had expressed its opinion on this issue.	Please change the BAT-AEL for dust in BAT 49 to <1 – 10 mg/Nm ³ . Otherwise, please reintroduce the split view to BAT 49 (see Table 12.1 on page 585) as an option for decision by the Article 13 Forum or even by the Article 75 Committee.	Please note that removing the split views from the BAT Chapters in the BREF actually means to 'alter the technical content of the conclusions reached at the TWG level'. As the information exchange under the IPPCD as well as under the IED is a consensual process, the split views form an integral part of the conclusions reached at the TWG level. As the technical experts were not able to find consensus on this particular issue, it is the task of the Article 13 Forum or even the Article 75 Committee to resolve the split views. Relocating the split views to Chapter 12 is no appropriate solution, as the split views completely lose their context (i.e. the conclusions on BAT). Then split views would only be regarded as details of the process or as recommendations for future work, although they were a core result of the process, actually referring to the information in the BREF (otherwise they had not been accepted by the EIPPCB).
94	EUROFER, France, Spain	9	4			49	503	BAT 49 : The O ₂ (5%) had not been integrated with the Seville Conclusions (22/02/2010). After re-reading the I&S BREF Oct 2010, the 5% O ₂ was identified for nitrogen measurements (p 277-249 in I&S BREF Oct 2010) and not for the measurement of dust and SO _x . France would like that this precision do not appear in the I&S BREF and the BAT Conclusions like in the Seville conclusions. This requirement has been explained in the templates of may 2011 like Spain. Otherwise, the precision of 5% O ₂ should refer in the I&S BREF and the BAT Conclusions with the NO _x measurements like it mentions in the BAT Conclusions (March 2011).	Cancel the reference of BAT-AELs to an oxygen content of 5%. "The BAT-associated emission levels, determined as daily mean values and relating to an oxygen content of 5-% are: • sulphur oxides (SO _x), expressed as sulphur dioxide (SO ₂) <200 – 500 mg/Nm ³ • dust <1 – 20 mg/Nm ³ • nitrogen oxides (NO _x), expressed as nitrogen dioxide (NO ₂) <350 – 500 mg/Nm ³ for new or substantially revamped plants (less than 10 years old) and 500 – 650 mg/Nm ³ for older plants with well maintained batteries and incorporated low-nitrogen oxides (NO _x) techniques."	This unilateral addition by the EIPPCB alters the agreement reached at the TWG level during its meeting held in February 2010. Only the reference to daily mean values was agreed. The only reference to a % of oxygen discussed and agreed in Seville was in the discussion of BAT 65. It has also to be underlined that whenever reference to 5% O ₂ was raised in the past, it was only referring to NO _x and never to SO _x or dust. In the attached documents, it must be noted that this O ₂ reference is missing both from the introductory slide presented at the TWG and in the final slides that represent the agreement of the TWG.

Comment No.	Comments from (Forum Member)	Chapter No. / section No. (if available)			Chapter title (only if there is no section or chapter No.)	BAT	Page # (PDF version)	Comment description	Proposed amendment	Rationale
95	United Kingdom	9	4			49	503	BAT 49 - We note that in BAT 48 the residual hydrogen sulphide concentration associated with BATII is <10 mg/Nm3. This being so, the lower end of the emission concentration range BATAEL for sulphur oxides given in BAT 49 looks wrong. It looks too high, at <200 mg/Nm3.	Suggestion is to re-check the expected release concentration when burning COG with a hydrogen sulphide concentration of 10 mg/Nm3. This may give a lower figure for the low end of the sulphur oxides release concentration range.	A check is suggested. Possible problem not previously identified.
96	EUROFER	9	4			49	503	BAT 49. Clarification of the list of techniques is needed. (see EUROFER comment no. 9)	Clarify the meaning of the wording "by using the following techniques"	In most cases, it is not intended that all of the techniques within a list must be implemented in combination in order to constitute BAT. Close attention must be afforded to the language used to preface each such list in determining whether one, more than one or all of the techniques on a list have to be applied to constitute BAT.
97	EUROFER, Czech Republic	9	4			49	503	BAT 49.III. The use of thinner bricks is not always an option since it is not applicable everywhere, especially not for new plants on existing foundations.	Remove reference to thinner bricks: "49. BAT for the coke oven underfiring is to reduce the emissions by using the following techniques: [...] III. incorporating low-nitrogen oxides (NOX) techniques in the construction of new batteries, such as staged combustion and the use of thinner bricks and refractory with a better thermal conductivity (only applicable to new plants)"	This unilateral addition by the EIPPCB alters the agreement reached at the TWG level during its meeting held in February 2010. In the previous comment, in the attached document, it must be noted that the reference to thinner bricks has only been added in the BAT Conclusions without any agreement of the TWG
98	Poland	9	4			49	503	Point No. 49 IV - for old installations a variation range of concentrations should be extended	Nitrogen oxides (NOX), expressed as nitrogen dioxide (NO2) <350 – 500 mg/Nm3 for new or substantially revamped plants (less than 10 years old) and 500 – 800 mg/Nm3 for older plants with well maintained batteries and incorporated low nitrogen oxides (NOX) techniques.	This range shall be applied to cases where there is no possibility of applying low-nitrogen techniques (small batteries heated by rong"(COG) gas).
99	Germany, Sweden	9	4			50	503	In order to clarify which BAT-AEL applies for BAT 50 only one BAT-AEL range should be specified, unless the applicability of the mentioned techniques is clearly restricted. The present text under 'Applicability' is too general to be meaningful; at least it does not refer to the named dust abatement techniques.	For clarification, the applicability of the individual techniques mentioned in BAT 50 should be specified. Otherwise the wording of the BAT-AEL sentence in BAT 50 should be changed as follows: The BAT-AEL for dust is <10 - 20 mg/Nm3, determined as average over the sampling period. The lower value refers to use of bag filters .	If different emission levels are associated with individual techniques considered as BAT, this is an interesting information. But these emission levels should not be classified as individual BAT-AELs, unless the applicability of the mentioned techniques is clearly restricted. Article 15-2 IED demands that permit conditions shall be based on BAT 'without prescribing the use of any technique or specific technology'. Accordingly the BAT-AELs should describe a certain level of environmental protection; it should not depend on the operator's choice of techniques.
100	Sweden	9	4			50	503		BAT-AEL should be 2-10 mg/Nm3.	A TWG should not end up with two different technologies regarded as BAT when they perform very differently. Bag-filters are clearly BAT.
101	Germany, Sweden	9	4			51	503	The present descriptions and applicability restrictions for the techniques mentioned in BAT 51 are too incomplete in order to determine BAT for a particular plant. In order to clarify which BAT-AEL applies, the applicability of the mentioned techniques should be clearly defined. Otherwise only one BAT-AEL range should be specified for the techniques No. II and III.	The description and the applicability restrictions for all mentioned techniques should be completed. As long as the applicability restrictions for techniques No. II and III are not clearly defined, a common BAT-AEL range should be specified: <10 - 25 g/t for techniques II and III. The lower value refers to coke stabilisation quenching.'	If different emission levels are associated with individual techniques considered as BAT, this is an interesting information. But these emission levels should not be classified as individual BAT-AELs, unless the applicability of the mentioned techniques is clearly restricted. Article 15-2 IED demands that permit conditions shall be based on BAT 'without prescribing the use of any technique or specific technology'. Accordingly the BAT-AELs should describe a certain level of environmental protection; it should not depend on the operator's choice of techniques.
102	Poland	9	4			51	503	Emission level value for dust dust should remain unchanged in relation to previous BREF	<50 g/t coke in case of emission minimised conventional wet quenching	Level of 25 g / t of coke with existing technologies of wet quenching is questionable - the highest level of the most common range is up to 100 g / t of coke. Furthermore that a new proposed level refers to the average of the measurement period, without indicating the methodology for measuring emissions, which - in turn - due to its nature cannot be measured with using a reference methods as for the chimney. Standard without any indication of verification methods is debatable.
103	Sweden	9	4			52	504		The BAT associated emission level for dust should be given as "2-10 mg/Nm3".	The Guidance document of 24 June 2011 states at page 23 that it is preferable to use a true range rather than an expression of the type <x. For a bag filter BAT-AEL is better written 2-10 mg/Nm3 than <10 mg/Nm3.
104	Bulgaria					58	505	BAT 58 recommends to use coke oven gas as fuel but there is no conclusion of how this measure influence over emissions in waste gases.	Such information have to be collected and added to the document.	see comment 30 (Bulgaria)
105	United Kingdom	9	5			64	508	BAT 64 - We note that applicability text has been deleted. A cross-reference to BAT 73 would still be useful as top gas turbine and gas cleaning facilities need to be compatible to work efficiently.	Suggestion is to insert a simple cross reference to BAT 73 and state that gas cleaning facilities and top gas turbines need to be compatible to work efficiently	Cross referencing would be useful to highlight potential interface of 2 BATs. Clarification of text.
106	Sweden	9	5			67	508		It should be made clear what is meant by "iron". Metallic iron is clearly no problem from an environmental point of view.	Any ambiguity creates uncertainties and extra administrative burdens
107	Bulgaria					70	509	BAT 70 recommends to use waste in the blast furnace but without any conclusion how this will affect air emissions.		see comment 30 (Bulgaria)
108	Austria	9	5			70	509	As our comments have already been accepted to a large extent, we refrain from sending comments in an Excel list. We only would like to reiterate our comment 15 of the Austrian Comments sent at 29.04.2011 regarding plastic injection into the blast furnace: Here we would welcome, if the sentence that plastic should meet certain input criteria could be added.	Add sentence that 'plastic should meet certain input criteria'	
109	EUROFER	9	5			74	510	BAT 74. Description. To optimize the energy efficiency, the listed techniques can be applied also individually.	Modify the first sentence of the Description as follow: "For optimization of the energy efficiency of the hot stove the following techniques can be applied individually or in combination:"	The energy saving techniques are applicable individually or in combination. The total energy saving depends from the possible combination of the techniques applicable.
110	EUROFER, Italy	9	5			74	510	BAT 74. The described applicability is a combination of description and economics of the relating chapter. Also other prerequisites like space availability could effect the applicability. That's the main reason why applicability should be extended. It is appropriate to transfer the Applicability described at page 349.	Add "The techniques mentioned above for saving energy at the hot stoves are applicable both at new and existing plants where design permits and the prerequisites are present."	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.
111	Germany, Sweden	9	6			78	512	In order to clarify which BAT-AEL applies for BAT 78 only one BAT-AEL range should be specified, unless the applicability of the mentioned techniques is clearly restricted. The same applies whether the emissions from hot metal pretreatment and secondary metallurgy are treated separately or not.	Please unify of the two BAT-AEL sentences in BAT 78 as follows: The BAT-associated emission level for dust for all dedusted off-gases is <10 – 20 mg/Nm3, determined as daily mean value. The lower value refers to use of bag filters.'	If different emission levels are associated with individual techniques considered as BAT, this is an interesting information. But these emission levels should not be classified as individual BAT-AELs, unless the applicability of the mentioned techniques is clearly restricted. The same applies to separate collection and treatment of the emissions from hot metal pretreatment and secondary metallurgy, as no indication is provided whether and when this would be beneficial or not. Article 15-2 IED demands that permit conditions shall be based on BAT 'without prescribing the use of any technique or specific technology'. Accordingly the BAT-AELs should describe a certain level of environmental protection; it should not depend on the operator's choice of techniques.
112	Germany	9	6			78	512	The 'overall average dust collection efficiency' as described in BAT 78 can not be calculated from 'the order of magnitude of diffuse emissions' as determined according to BAT 16. Either the 'overall average dust collection efficiency' would have such a high uncertainty that would not qualify to serve as BAT-AEL, or the efforts required to determine the 'overall average dust collection efficiency' would be disproportional.	Either delete the BAT-AEL for the 'overall average dust collection efficiency' in BAT 78, or relocate the sentence to the end of the 'Description' part and change its wording as follows: The overall average dust collection efficiency associated with BAT is by applying the mentioned techniques should be >90 %.	Without a proper description of the method to determine the 'overall average dust collection efficiency', this parameter is not qualified to serve as a BAT-AEL. Additionally, taking into account the high effort required for determining diffuse emissions, as well as the high uncertainty of such estimations, the obligation to determine 'overall average dust collection efficiencies' – even periodically – would be disproportional.
113	EUROFER, Italy	9	6			78	512	BAT 78. Complete the sentence as described in the draft BREF Oct. 2010 (page 448).	Complete as follows: "BAT for secondary dedusting including the emissions from the following processes: [...] is to minimise dust emissions by means of process integrated techniques, such as general techniques to prevent or control diffuse or fugitive emissions, and by using appropriate enclosures and hoods with efficient extraction and a subsequent off-gas cleaning by means of a bag filter or an ESP or any other technique with the same removal efficiency."	Such addition accurately reflects the agreement reached at the TWG level during its meeting held in February 2010. To report as described in the draft BREF Oct. 2010 at page 448 and in last version of BAT Conclusions of March 2011 (page 40).
114	EUROFER	9	6			80	513	BAT 80. This BAT has been reintroduced in the final draft despite it was removed in the first BAT Conclusions draft since prerequisites are not defined in the BREF.	Delete BAT 80.	BAT 80. (i.e. 'BAT is to apply dry BOF gas cleaning where prerequisites are present') has not been included in the first draft BAT Conclusions because the exchange of information did not define what these 'prerequisites' are and therefore it must be deleted. Moreover if read as such, it is contradictory to BAT 75 & 76 where wet dedusting are BAT for existing plants mostly equipped with this technology. In the attached table, the comparison of the different versions of this BAT: the agreed text in the TWG, the BAT in Oct 2010 draft I&S BREF, the BAT in the first draft of the BAT Conclusions and then the text in this final draft.
115	EUROFER, Italy	9	6			86	514	BAT 86. Applicability. Modify the Applicability as described in this draft BREF (page 412, page 436 of the PDF version).	Modify as follows: "Applicability. A suitable hot metal analyser and slag stopping facilities are required and the availability of a ladle furnace facilitates implementation of the technique. The practice is principally applicable in BOF plants with certain preconditions. The realisation of the practice without extra facilities means several years of developmental work. For succeeded direct tapping, some preconditions are needed, like a suitable hot metal analyser and slag stopping facilities. The availability of a ladle furnace makes the practice easier to realise."	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.
116	EUROFER, Italy	9	7			88-90	515	BAT 88, 89, 90. As "BAT conclusions" is designed to be a stand alone and self explanatory document (art. 13, paragraph 4 and 5 of Directive 2010/75/EU), is essential to understand how to consider BAT-AELs in case of separated treatment of primary and secondary emissions.	With refer of BAT 88, 89, 90, add the following sentence as introduction to the section "Air emissions": "Abatement techniques for primary and secondary emissions to air from EAFs (for example PCDD/F concentrations in air emission) refer to the total primary and secondary emissions. Therefore if primary and secondary emissions are treated separately, the concentration indicated as achievable performance should be compared with the weighted average of concentrations in primary and secondary emissions, both measured downstream of the dust collection system".	The sentence is extracted for BREF (section 8.3.5, pag. 458, page 482 in the PDF version). This sentence has to be explicitly reported in "BAT Conclusions" in order to explain how to consider and apply BAT-AELs in case of separated treatment of primary and secondary emissions.

Comment No.	Comments from (Forum Member)	Chapter No. / section No. (if available)				Chapter title (only if there is no section or chapter No.)	BAT	Page # (PDF version)	Comment description	Proposed amendment	Rationale
117	France	9	7				89	539	BAT 89 : The BREF chapter about the Air emissions is called : 8.3.5 Abatement techniques for primary and secondary emissions to air from electric arc furnaces. Into the introduction of this chapter, the case where the primary and secondary emissions are treated separately is noticed : "Therefore if primary and secondary emissions are treated separately, the concentration indicated as achievable performance should be compared with the weighted average of concentrations in primary and secondary emissions, both measured downstream of the dust collection system."	Add this precision	
118	Germany	9	7				89	515	The 'overall average dust collection efficiency' as described in BAT 89 can not be calculated from 'the order of magnitude of diffuse emissions' as determined according to BAT 16. Either the 'overall average dust collection efficiency' would have such a high uncertainty that would not qualify to serve as BAT-AEL, or the efforts required to determine the 'overall average dust collection efficiency' would be disproportional.	Either delete the BAT-AEL for the 'overall average dust collection efficiency' in BAT 89, or relocate the sentence to the end of the 'Description' part and change its wording as follows: The overall average dust collection efficiency associated with BAT is by applying the mentioned techniques should be >99.98%.	Without a proper description of the method to determine the 'overall average dust collection efficiency', this parameter is not qualified to serve as a BAT-AEL. Additionally, taking into account the high effort required for determining diffuse emissions, as well as the high uncertainty of such estimations, the obligation to determine 'overall average dust collection efficiencies' – even periodically – would be disproportional.
119	Germany	9	7				89	515	The BAT-AELs for dust and mercury emissions from EAF in BAT 89 should be specified as a range, as it is common for other BATs.	Please change the BAT-AEL for dust emissions in BAT 89 to '<2 - 5 mg/Nm ³ ' and the BAT-AEL for mercury emissions to '<0.02 - 0.05 mg/Nm ³ '.	In order to be consistent with the notation of BAT-AELs in the rest of the BREF, this BAT-AEL should also be expressed as a range in form <x to y. According to the figures presented in section 8.3.5.1 of the BREF, <2 mg/Nm ³ appears to be appropriate as the lower value for dust emissions, and <0.02 mg/Nm ³ for mercury emissions.
120	Sweden	9	7				89	515		BAT-AEL NOx-value should be added	Missing NOx is serious from an environmental point of view
121	EUROFER, Italy	9	7				89	515	BAT 89. In order to be consistent with the outcome of TWG (BREF October 2010; pag. 512) it is necessary to add a sentence as agreed in the TWG	Modify BAT 89 as follows "BAT for the electric arc furnace (EAF) primary and secondary dedusting (including scrap preheating, charging, melting, tapping, ladle furnace and secondary metallurgy) is to achieve an efficient extraction of dust emissions from all emission sources by using one of the techniques listed below and to use subsequent dedusting by means of a bag filter or other techniques with the same efficiency"	Such addition accurately reflects the agreement reached at the TWG level during its meeting held in February 2010.
122	Poland	9	4				89	515	The overall average collection efficiency associated with BAT is >98%	Do not define required rate of exhaust gases collection efficiency	Collection efficiency is hard to calculate precisely because of many different sources of unorganized emission and specificity of some processes (significant variability of load capacity). Value of 98% is hard to accomplish - probable irrationally high costs.
123	Poland	9	4				89	515	BAT-EAL dust emission is <5 mg/Nm ³ , determined as a daily mean value	Dust emission <10 mg/Nm ³	Typical fabric filters in electric furnaces installations provides efficiency of 10 mg/Nm ³ . It is incomprehensible to impose the rate of 5 mg/Nm ³ for EAF, whereas for other installation with application of the same fabric filters one suggest the rate of 10 or even 20 mg/Nm ³ . Remaking of EAF dedusting installation will generate high costs.
124	EUROFER	9					91	515	BAT 90. (BAT 91. in March 2011 BAT Conclusions version) The sentence on applicability for existing plants should cover not only BAT I but also BAT II	Modify as follows: "Applicability BAT I and II: <i>in existing plants the local circumstances and possibilities (like available space, given off-gas duct system, etc.) should be checked on a plant by plant basis.</i> "	Information on applicability and cross media effect (as results in restrictions on the applicability) should be included in "BAT conclusions" consistently with the BREF text agreed in the TWG
125	Poland	9	4				93	516	BAT-EAL for suspended solids in waste water from continuous casting machines is <20 mg/l	Increase of boundary value to at least 50 mg/l for wastewater drained directly to the surface water, in case of wastewater drained to the urban sewerage and then to the wastewater treatment plant - 500 mg/l	In case of directing wastewater to the external wastewater treatment plant, there is no reason to establish such drastic parameters (sufficient level would be 500 mg/l). In case of draining wastewater directly to the surface water, one suggest to accept the level of 50 mg/l (the level for II class of water quality, as well as standards obliging in wastewater treatment plants).
126	Italy	9	7				94	516	BAT n. 94 - V It is necessary to make mention of the term "byproduct" in describing this BAT to prevent waste generation, in order to be consistent with other parts of the BRef (e.g. see title of section 9.1.4 pag. 484) and in order to be consistent with the possible legal status of the material.	We ask for the following modification: "V external use of refractory materials and slag from the electric arc furnace(EAF) process as a secondary raw material / <i>byproduct</i> where market conditions allow for it"	To be consistent with other parts of this BRef (e.g. see title of section 9.1.4 pag. 484) and with the possible legal status of the material.
127	EUROFER	9	7				95	517	BAT 95. Available space and layout of existing plant should be also considered in the applicability of this BAT.	Modify the sentence in the applicability paragraph: " <i>In the existing plant local circumstances like existing layout or available space have to be considered a constraint for applicability (e.g. retrofitting existing plant with strip caster requires approximately 100 m in length).</i> "	The 100 m length needed, as reported in the BREF text (7.3.11 at page 414, page 438 of the PDF version) represents only an example of circumstances that have to be considered for the applicability of the BAT .
128	United Kingdom	9	7				96	517	BAT 96 - The BAT Conclusion is aimed at covering the installation, yet focusses on the furnace, the building and generally inside activities. Receiving scrap, handling, sorting, stockpiling and recovering it from stockpiles to fill charge baskets can be significant noise sources. This is not addressed directly by BAT elements I to V.	Suggestion is: "VI Design, construct and operate scrap receipt, handling, sorting, stockpiling and preparation areas to minimise noise creation and transmission.	Scrap handling, etc. can give rise to noise complaints. Issue raised at TWG.
129	EUROFER	9	7				96	517	BAT 96. The BREF (October 2010 version), in the applicability part of section 8.3.12, simply states that the mentioned techniques are applicable to all EAF type plants, but does not consider the issue of already constructed plant and the impossibility of application of some constructional techniques in already existing installations.	Add the following sentence in the applicability paragraph " <i>In existing plants constructional techniques are not always applicable</i> "	As mentioned in the draft "Article 13 Guidelines" (Version 24 June 2011 - among others section 2.3.7.2.6), as far as applicability is concerned, special considerations should be devoted to the differences between new and existing installations.
130	Bulgaria	9	5				59 - 74	507-510	The levels of energy, water, raw materials (at least basic and hazardous), fuel use and waste produced are missing in the chapter. This part of overall process performance is described in quite general terms.	Specific values of energy, water, raw materials consumption and waste produced of each described process should be added to the section.	see comment 30 (Bulgaria)
131	Bulgaria	9	6				75 - 87	511-514	The levels of energy, water, raw materials (at least basic and hazardous), fuel use and waste produced are missing in the chapter. This part of overall process performance is described in quite general terms.	Specific values of energy, water, raw materials consumption and waste produced of each described process should be added to the section.	see comment 30 (Bulgaria)
132	Sweden	9	6				78 79	511and 512		One should avoid having BAT-AELs defined as < a number. BAT-AEL should be 2-10 mg/Nm ³ .	As bag-filters are said to be BAT the level is 2-10 mg/Nm ³ .
133	Sweden	9	6				82 93	513 and 516		It should be made clear what is meant by "iron".	Metallic iron is clearly no problem from an environmental point of view.
134	Bulgaria	9	7				88 - 96	515-517	The levels of energy, water, raw materials (at least basic and hazardous), fuel use and waste produced are missing in the chapter. This part of overall process performance is described in quite general terms.	Specific values of energy, water, raw materials consumption and waste produced of each described process should be added to the section.	see comment 30 (Bulgaria)