

Commission Implementing Decision of 26 March 2013 establishing the best available techniques (BAT) conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for the production of cement, lime and magnesium oxide (notified under document C(2013) 1728) (Text with EEA relevance) (2013/163/EU)

- Article 1 The BAT conclusions for the production of cement, lime and...  
Article 2 This Decision is addressed to the Member States.  
Signature

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ANNEX

BAT CONCLUSIONS FOR THE PRODUCTION  
OF CEMENT, LIME AND MAGNESIUM OXIDE

SCOPE

- '3.1. Production of cement, lime and magnesium oxide', which involve:

NOTE ON THE EXCHANGE OF INFORMATION

DEFINITIONS

- Definition for certain products
- Definition for certain air pollutants
- Abbreviations

GENERAL CONSIDERATIONS

- Averaging periods and reference conditions for air emissions
- Conversion to reference oxygen concentration

BAT CONCLUSIONS

- 1.1 General BAT conclusions
  - 1.1.1 Environmental management systems (EMS)
    - 1. In order to improve the overall environmental performance of the...  
Applicability
  - 1.1.2 Noise
    - 2. In order to reduce/minimise noise emissions during the manufacturing processes...
- 1.2 BAT conclusions for the cement industry
  - 1.2.1 General primary techniques
    - 3. In order to reduce emissions from the kiln and use...
    - 4. In order to prevent and/or reduce emissions, BAT is to...  
Description
  - 1.2.2 Monitoring
    - 5. BAT is to carry out the monitoring and measurements of...  
Description
  - 1.2.3 Energy consumption and process selection

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- 1.2.3.1 Process selection
  - 6. In order to reduce energy consumption, BAT is to use...
    - Description
    - Applicability
    - BAT-associated energy consumption levels
- 1.2.3.2 Energy consumption
  - 7. In order to reduce/minimise thermal energy consumption, BAT is to...
    - Description
  - 8. In order to reduce primary energy consumption, BAT is to...
    - Description
    - Applicability
  - 9. In order to reduce primary energy consumption, BAT is to...
    - Description
    - Applicability
  - 10. In order to reduce/minimise electrical energy consumption, BAT is to...
- 1.2.4 Use of waste
  - 1.2.4.1 Waste quality control
    - 11. In order to guarantee the characteristics of the wastes to...
      - Description
  - 1.2.4.2 Waste feeding into the kiln
    - 12. In order to ensure appropriate treatment of the wastes used...
  - 1.2.4.3 Safety management for the use of hazardous waste materials
    - 13. BAT is to apply safety management for the storage, handling...
- 1.2.5 Dust emissions
  - 1.2.5.1 Diffuse dust emissions
    - 14. In order to minimise/prevent diffuse dust emissions from dusty operations,...
    - 15. In order to minimise/prevent diffuse dust emissions from bulk storage...
  - 1.2.5.2 Channelled dust emissions from dusty operations
    - 16. In order to reduce channelled dust emissions, BAT is to...
      - Description
      - BAT-associated emission levels
  - 1.2.5.3 Dust emissions from kiln firing processes
    - 17. In order to reduce dust emissions from flue-gases of kiln...
      - BAT-associated emission levels
  - 1.2.5.4 Dust emissions from cooling and milling processes
    - 18. In order to reduce dust emissions from the flue-gases of...
      - BAT-associated emission levels
- 1.2.6 Gaseous compounds
  - 1.2.6.1 NO<sub>x</sub> emissions
    - 19. In order to reduce the emissions of NO<sub>x</sub> from the...



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34. In order to minimise electrical energy consumption, BAT is to...
- Description – Technique (b)
- 1.3.4 Consumption of limestone
35. In order to minimise limestone consumption, BAT is to use...
- 1.3.5 Selection of fuels
36. In order to prevent/reduce emissions, BAT is to carry out...
- Description
- Applicability
- 1.3.5.1 Use of waste fuels
- 1.3.5.1.1 Waste quality control
37. In order to guarantee the characteristics of waste to be...
- 1.3.5.1.2 Waste feeding into the kiln
38. In order to prevent/reduce emissions occurring from the use of...
- ~~1.3.5.1.3 Safety management for the use of hazardous waste materials~~
39. In order to prevent accidental emissions, BAT is to use...
- Description
- 1.3.6 Dust emissions
- 1.3.6.1 Diffuse dust emissions
40. In order to minimise/prevent diffuse dust emissions from dusty operations,...
- Applicability
41. In order to minimise/prevent diffuse dust emissions from bulk storage...
- 1.3.6.2 Channelled dust emissions from dusty operations other than those from...
42. In order to reduce channelled dust emissions from dusty operations...
- BAT-associated emission levels
- 1.3.6.3 Dust emissions from kiln firing processes
43. In order to reduce dust emissions from the flue-gases of...
- BAT-associated emission levels
- 1.3.7 Gaseous compounds
- 1.3.7.1 Primary techniques for reducing emissions of gaseous compounds
44. In order to reduce the emissions of gaseous compounds (i.e....
- 1.3.7.2 NO<sub>x</sub> emissions
45. In order to reduce the emissions of NO<sub>x</sub> from the...
- BAT-associated emission levels
46. When SNCR is used, BAT is to achieve efficient NO<sub>x</sub>...
- Applicability
- BAT-associated emission levels
- 1.3.7.3 SO<sub>x</sub> emissions
47. In order to reduce the emissions of SO<sub>x</sub> from the...
- BAT-associated emission levels
- 1.3.7.4 CO emissions and CO trips

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- 1.3.7.4.1 CO emissions
  - 48. In order to reduce the emissions of CO from the...
    - BAT-associated emission levels
- 1.3.7.4.2 Reduction of CO trips
  - 49. In order to minimise the frequency of CO trips when...
    - Description
    - Applicability
- 1.3.7.5 Total organic carbon emissions (TOC)
  - 50. In order to reduce the emissions of TOC from the...
    - Applicability
    - BAT-associated emission levels
- 1.3.7.6 Hydrogen chloride (HCl) and hydrogen fluoride (HF) emissions
  - 51. In order to reduce the emissions of HCl and the...
    - Applicability
    - BAT-associated emission levels
- 1.3.8 PCDD/F emissions
  - 52. In order to prevent or reduce the emissions of PCDD/F...
    - BAT-associated emission levels
- 1.3.9 Metal emissions
  - 53. In order to minimise the emissions of metals from the...
    - BAT-associated emission levels
- 1.3.10 Process losses/waste
  - 54. In order to reduce the solid wastes from the lime...
- 1.4 BAT conclusions for the magnesium oxide industry
  - 1.4.1 Monitoring
    - 55. BAT is to carry out monitoring and measurements of process...
      - Description
  - 1.4.2 Energy consumption
    - 56. In order to reduce thermal energy consumption, BAT is to...
      - BAT-associated consumption levels
    - 57. In order to minimise electrical energy consumption, BAT is to...
  - 1.4.3 Dust emissions
    - 1.4.3.1 Diffuse dust emissions
      - 58. In order to minimise/prevent diffuse dust emissions from dusty operations,...
    - 1.4.3.2 Channelled dust emissions from dusty operations other than kiln firing...
      - 59. In order to reduce channelled dust emissions from dusty operations...
        - BAT-associated emission levels
    - 1.4.3.3 Dust emissions from the kiln firing process
      - 60. In order to reduce dust emissions from the flue-gases of...
        - BAT-associated emission levels
  - 1.4.4 Gaseous compounds
    - 1.4.4.1 General primary techniques for reducing emissions of gaseous compounds
      - 61. In order to reduce the emissions of gaseous compounds (i.e....

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- 1.4.4.2 NOx emissions
  - 62. In order to reduce the emissions of NOx from the...  
BAT-associated emission levels
- 1.4.4.3 CO emissions and CO trips
  - 1.4.4.3.1 CO emissions
    - 63. In order to reduce the emissions of CO from the...  
Applicability  
BAT-associated emission levels
  - 1.4.4.3.2 Reduction of CO trips
    - 64. In order to minimise the number of CO trips when...  
Description  
Applicability
- 1.4.4.4 SOx emissions
  - 65. In order to reduce the emissions of SOx from the...  
BAT-associated emission levels
- 1.4.5 Process losses/waste
  - 66. In order to reduce/minimise process losses/waste, BAT is to reuse...  
Applicability
  - 67. In order to reduce/minimise process losses/waste, BAT is to utilise...  
Applicability
  - 68. In order to reduce/minimise process losses/waste, BAT is to reuse...  
Applicability
- 1.4.6 Use of wastes as fuels and/or raw materials
  - 69. In order to guarantee the characteristics of waste to be...  
Applicability

## DESCRIPTION OF TECHNIQUES

- 1.5 Description of techniques for the cement industry
  - 1.5.1 Dust emissions
  - 1.5.2 NOx emissions
  - 1.5.3 SOx emissions
- 1.6 Description of techniques for lime industry
  - 1.6.1 Dust emissions
  - 1.6.2 NOx emissions
  - 1.6.3 SOx emissions
- 1.7 Description of techniques for the magnesia industry (dry process route)...
  - 1.7.1 Dust emissions
  - 1.7.2 SOx emissions

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- (1) [OJ L 334, 17.12.2010, p. 17.](#)
- (2) [OJ C 146, 17.5.2011, p. 3.](#)
- (3) [http://circa.europa.eu/Public/irc/env/ied/library?l=/ied\\_art\\_13\\_forum/opinions\\_article](http://circa.europa.eu/Public/irc/env/ied/library?l=/ied_art_13_forum/opinions_article)

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**Changes and effects yet to be applied to :**

- Art. 2 substituted by [S.I. 2018/1407 reg. 10\(2\)](#)