ISO 14404-1:2024-09 (E)

Calculation method of carbon dioxide emission intensity from iron and steel production - Part 1: Steel plant with blast furnace

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1
3.1 Emissions 1
3.2 Gas fuel 2
3.3 Liquid fuel 2
3.4 Solid fuel 3
3.5 Auxiliary material 4
3.6 Energy carriers 4
3.7 Ferrous containing materials 5
3.8 Alloys 5
3.9 Other imported/exported materials 6
3.10 Others 6

4 Symbols 7

5 Principles 8
5.1 General 8
5.2 Relevance 8
5.3 Completeness 8
5.4 Consistency 8
5.5 Accuracy 8
5.6 Transparency 8

6 Boundary 8
6.1 General 8
6.2 Category 1 9
6.3 Category 2 9
6.4 Category 3 10
6.5 Category 4 10

7 Calculation 10
7.1 General 10
7.2 Calculation procedure 10
7.2.1 Data collection of crude steel production 10
7.2.2 Data collection direct and/or upstream CO2 emission sources 11
7.2.3 Data collection of credit CO2 emission sources 12
7.2.4 Calculation 14

Annex A (informative) Calculation of energy consumption and intensity 16

Annex B (informative) Example of template for using different emission factors or emission sources from Table 4 18

Annex C (informative) Example of CO2 emission and intensity calculations for a steel plant -- Data of a steel plant 20

Annex D (informative) Explanation of emission factors for by-product gases in Table 4 24

Annex E (informative) Decarbonization strategies and its impact on CO2 calculation method 27

Bibliography 28