1.A.2.b - Stationary Combustion in Manufacturing Industries and Construction: Non-Ferrous Metals

Short description

Sub-category 1.A.2.b - Stationary Combustion in Manufacturing Industries and Construction: Non-Ferrous Metals includes aluminium production (sub-divided into primary and resmelted aluminium) as well as lead production, thermal galvanisation, copper and zinc production.

In Germany, aluminium is produced at four foundries, in electrolytic furnaces with pre-burnt anodes. The principal emission sources are resulting from fuel provided in the energy related processes.

NFR Code	Method	AD	EF								
1.A.2.b	T2	NS	?								
Method(s) applied											
D	Default										
T1	Tier 1 / Simple Methodology *										
T2	Tier 2*										
Т3	Tier 3 / Detailed Methodology *										
С	CORINAIR										
CS	Country Specific										
M	Model	Model									
* as described in the EMEF	/EEA Emission Inventory (Guidebook - 2019, in	category chapters.								
(source for) Activity Da	ta										
NS	National Statistics	National Statistics									
RS	Regional Statistics	Regional Statistics									
IS	International Statistics	International Statistics									
PS	Plant Specific										
As	Associations, business organisations										
Q	specific Questionnaires (or surveys)										
M	Model / Modelled										
С	Confidential										
(source for) Emission Fa	actors										
D	Default (EMEP Guidebook)										
CS	Country Specific										
PS	Plant Specific										
M	Model / Modelled										
С	Confidential										

	NO _x	NMVOC	SO ₂	NH ₃	PM _{2.5}	PM ₁₀	TSP	вс	со	Heavy Metals	PCDD/F	PAHs	нсв
	-/-	-/-	-/-	-/-	-	-	-/-	-	-/-	ΙE	IE	IE	IE
L/-	key source by L evel only												
-/T	-/T key source by Trend only												
L/T key source by both Level and Trend													
-/- no key source for this pollutant													
IE emission of specific pollutant Included Elsewhere (i.e. in another category)													
II	emission of specific pollutant N ot E stimated (yet)												
NA	specific pollutant not emitted from this source or activity = N ot A pplicable												
* no analysis done													

Method

Activity data

The source of the fuel inputs consists of the statistics for the manufacturing sector (Statistik 060 - Energieverwendung des produzierenden Gewerbes / energy use in the manufacturing sector), DESTATIS, reporting number 27.43 and 27.44, production and initial processing of lead, zinc and tin, production and initial processing of copper - and, for differentiations relative to heat and electricity production, Statistik 067 (DESTATIS).

Data for fuel consumption for production and initial processing of precious metals are also provided by these statistics.

Emission factors

Reported pollutants are NOx, NMVOC, SO₂, NH₃ and CO. Instead, all particulate matter emissions are reported as process emissions under 2.C.

The underlying data for the emission factors used is provided by the report on the research project "Ermittlung und Evaluierung von Emissionsfaktoren für Feuerungsanlagen in Deutschland für die Jahre 1995, 2000 und 2010" (Determination and evaluation of emission factors for combustion systems in Germany for the years 1995, 2000 and 2010"; RENTZ et al, 2002)¹⁾. The values for the intermediate years 1996 - 1999 and 2001 - 2010 are obtained via linear interpolation; adjusted values for the following years.

Recalculations

For the purpose of improving the data quality National Energy Balances for the years 2003 to 2021 have gone under revisions through fine-tuning of the computational models, consideration of new statistics or re-allocation of activity data, along with other revision mechanisms. These updates led to re-calculations in fuel uses in different sub-categories and in their corresponding emissions.



For pollutant-specific information on recalculated emission estimates for Base Year and 2021, please see the recalculation tables following chapter 8.1 - Recalculations.

Planned improvements

At the moment, no category specific improvements are planned.

¹⁾ RENTZ et al., 2002: Rentz, O.; Karl, U.; Peter, H.: Ermittlung und Evaluierung von Emissionsfaktoren für Feuerungsanlagen in Deutschland für die Jahre 1995, 2000 und 2010: Forschungsbericht 299 43 142; Forschungsvorhaben im Auftrag des Umweltbundesamt; Endbericht; Karlsruhe: Deutsch-Französisches Inst. f. Umweltforschung, Univ. (TH); 2002