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	T2 NS								
Method(s) applied										
D	Default									
T1	Tier 1 / Simple Metho	Tier 1 / Simple Methodology *								
T2	Tier 2*	Tier 2*								
Т3	Tier 3 / Detailed Meth	Tier 3 / Detailed Methodology *								
С	CORINAIR	CORINAIR								
CS	Country Specific	Country Specific								
M	Model									
st as described in the EMI	EP/EEA Emission Inventory	Guidebook - 2019, ii	n category chapters.							
(source for) Activity D	ata									
NS	National Statistics	National Statistics								
RS	Regional Statistics	Regional Statistics								
IS	International Statistic	International Statistics								
PS	Plant Specific	Plant Specific								
As	Associations, busines	Associations, business organisations								
Q	specific Questionnair	specific Questionnaires (or surveys)								
M	Model / Modelled									
С	Confidential	Confidential								
(source for) Emission	Factors									
D	Default (EMEP Guidel	Default (EMEP Guidebook)								
CS	Country Specific	Country Specific								
PS	Plant Specific	Plant Specific								
M	Model / Modelled	Model / Modelled								
С	Confidential									

NO _x	NM	voc	SO ₂	NH ₃	PM _{2.5}	PM ₁₀	TSP	вс	СО	Heavy	Metals	PCDD/F	PAHs	нсв	PCBs
-/-	-/-		-/-	-/-	IE	IE	ΙE	ΙE	-/-	IE		IE	IE	IE	IE
	L/-	key source by L evel only													
	-/ T	key source by T rend only													
	L/T	key source by both L evel and T rend													
	-/-	no key source for this pollutant													
	ΙE	emission of specific pollutant Included Elsewhere (i.e. in another category)										')			
	NE	emission of specific pollutant N ot E stimated (yet)													
	NA	specific pollutant not emitted from this source or activity = N ot A pplicable										9			
	*	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