

Characterization of sludges — Good practice for combined incineration of sludges and household wastes

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National foreword

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English version

Characterization of sludges - Good practice for combined incineration of sludges and household wastes

Caractérisation des boues - Bonne pratique pour
incinération combinée des boues et des déchets ménagers

Charakterisierung von Schlämmen - Anleitung für die gute
fachliche Praxis bei gemeinsamer Verbrennung von
Schlämmen und Haushaltsabfällen

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Foreword

This document has been prepared by CEN /TC 308, "Characterisation of sludges".

This document is currently submitted to the BT for publication as a CEN Report.

The status of this document as CEN Report has been chosen because the most of its content is not completely in line with practice and regulation in each member state. This document gives recommendations for a good practice concerning the combined incineration of sludges and household wastes but existing national regulations remain in force.

Introduction

All of the recommendations of this document constitute a framework within which the combined incineration process can be proposed in addition to and/or as a substitution for field spreading, waste site disposal (landfilling), specific incineration (see CR 13767), or any other process.

Combined incineration should abide by the European Directives 89/369/EEC (Prevention of air pollution from new municipal waste incineration plants), 94/67/EEC (incineration of hazardous waste) by the future European Directive studied by the CEN/TC 292, and should comply with the relevant regulations and recommendations in force within each member state to reduce as far as possible negative effects on the environment such as pollution of the air, ground, surface and underground water, and on human and animal health. This concern therefore relates to: the pre-treatment of the sludge in plants, the transfer of the material to the treatment centre, the actual destruction process, the treatment of gaseous discharge into the atmosphere, the future of the different by-products stemming from combustion and the treatment of the liquid effluents possibly resulting from the process.

Anyway, priority should be given to reduction of pollutants at the origin and or to recovery of valuable substances (phosphorus, potassium...) in sludge and derived products if technically and economically feasible.

As part of a process and company quality approach, the relevant issues are therefore :

- exploiting the operating data and the statutory inspections carried out ;
- rendering the process reliable, optimising and of perpetuating it, as well as guaranteeing a permanent development ;
- maintaining a climate of confidence between the authorities, the sludge producers, the transporters, the incineration plant and waste disposal site operators and to allow the services to be provided on a contractual basis.

When necessary, a distinction can be made between existing facilities and new incineration plants.

1 Scope

This CEN Report gives indication for dealing of the combined incineration treatment of sludge and household waste.

This European standard is applicable to sludges described in the scope of CEN/TC 308 i.e. specifically derived from :

- storm water handling ;
 - night soil ;
 - urban wastewater collecting systems ;
 - urban wastewater treatment plants ;
 - treating industrial wastewater similar to urban wastewater (as defined in Directive 91/271/EEC) ;
- but excluding hazardous sludges from industry.

Annex A gives information on various systems to input sludge into a household waste incineration plant.

2 References

EN 1085, *Wastewater treatment – Vocabulary*.

EN 12832, *Characterisation of sludges*.

prEN 13965-1, *Characterization of waste - Terminology - Part 1 : Materials related terms and definitions*.

prEN 13965-2, *Characterization of waste - Terminology - Part 2 : Management related terms and definitions*.

3 Terms and definitions

For the purposes of this CEN Report, the following terms and definitions given in EN 12832 and EN 1085 and the following in accordance with prEN 13965-1 and 2 except for the definition of combined incineration apply :

3.1

household waste

waste arising in households

[509 of EN 13965-1]

3.2

incineration

treatment by combustion

NOTE In contrast to pyrolysis, incineration is carried out with full supply of oxygen

[22 of EN 13965-2]

3.3

household waste incineration plant

all of the equipment required for the thermal conversion by incineration of household waste with or without energy recovery

3.4

combined incineration of sludge and household waste

incineration of sludge and household waste in a same combustion chamber

3.5

pyrolysis

thermal treatment with limited supply of oxygen

[29 of EN 13965-2]

3.6

thermolysis

one of the methods of application of pyrolysis

3.7

charge preparation

the operation of preparing sludge that can be necessary prior to entering the furnace

3.8

incinerator furnace

specific part of the incineration plant where the combustion reactions that destroy the organic matter take place, generating gaseous effluent and solid residues

3.9

boiler (heat exchanger)

specific part of the incineration plant where heat exchange takes place in view of recovering energy and of cooling down the fumes

3.10

waste gas treatment

any physical or chemical process aimed at cleaning the flue gas resulting from the thermal treatment with the regard to their discharge into the atmosphere

3.11

bottom ash)

combustion residue arising at the bottom of combustion furnaces

[502 of EN 13965-1]

3.12

fly ash

solid material that is entrained in a flue gas stream

[213 of EN 13965-1]

NOTE See waste Directive 91/156/EEC.

3.13

energy recovery

activity to use combustible waste as a means to generate energy through direct incineration with recovery of heat

[39 EN 13965-2]

NOTE See packaging Directive (94/62/EEC).

3.14

storage center (landfill)

NOTE See Landfill Directive.

3.15

leachate

NOTE See landfill Directive.