BS EN 858-1:2002

Incorporating Amendment No. 1

# Separator systems for light liquids (e.g. oil and petrol) —

Part 1: Principles of product design, performance and testing, marking and quality control

The European Standard EN 858-1:2002, with the incorporation of amendment A1:2004, has the status of a British Standard

ICS 13.060.99



# National foreword

This British Standard is the official English language version of EN 858-1:2002, including amendment A1:2004.

EN 858-1:2002 is now a candidate "harmonized" European Standard and fully takes into account the requirements of the European Commission mandate M118, Wastewater engineering products, given under the EU Construction Products Directive (89/106/EEC), and is intended to lead to CE marking. The date of applicability of the amended EN 858-1:2002 as a harmonized European Standard, i.e. the date after which this standard may be used for CE marking purposes, is subject to an announcement in the Official Journal of the European Communities. The Commission in consultation with Member States have agreed a transition period for the co-existence of harmonized European Standards and their corresponding national standard(s). It is intended that this period will comprise a period, usually nine months after the date of availability of the European Standard, during which any required changes to national regulations are to be made, followed by a further twelve-month period for the implementation of CE marking. At the end of this co-existence period, the national standard(s) will be withdrawn.

EN 858-1 is the subject of transitional arrangements agreed under the Commission mandate. In the UK there are no corrsponding national standards. There are no regulations in the UK dealing with reaction to fire of light liquid separators. Therefore the requirements of **6.2.8** and **8.4** are not applicable to separators intended for use in the UK.

The UK participation in its preparation was entrusted to Technical Committee B/505, Wastewater engineering, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

#### **Cross-references**

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled "International Standards Correspondence Index", or by using the "Search" facility of the *BSI Electronic Catalogue* or of British Standards Online.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

# Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 55 and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

# Amendments issued since publication

Amd. No.	Date	Comments
15525	21 March 2005	see national foreword

This British Standard, having been prepared under the direction of the Building and Civil Engineering Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 26 February 2002

© BSI 21 March 2005

ISBN 0 580 39180 9

EUROPEAN STANDARD

..

NORME EUROPÉENNE

**EUROPÄISCHE NORM** 

EN 858-1

January 2002

+ A1

November 2004

ICS 13.060.99

English version

# Separator systems for light liquids (e.g. oil and petrol) — Part 1: Principles of product design, performance and testing, marking and quality control

(includes amendment A1:2004)

Installations de séparation de liquids légers (par exemple hydrocarbures) — Partie 1: Principes pour la conception, les performances et les essays, le marquage et la maîtrise de la qualité (inclut l'amendement A1:2004) Abscheideranlagen für Leichtflüssigkeiten (z.B – Öl und Benzin) — Teil 1: Bau-, Funktions- und Prüfgrundsätze, Kennzeichnung und Güteüberwachung (enthält Änderung A1:2004)

This European Standard was approved by CEN on 8 March 2001; amendment A1 was approved by CEN on 14 October 2004.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national electrotechnical committees of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

# CEN

European Committee for Electrotechnical Standardization Comité Européen de Normalisation Electrotechnique Europäisches Komitee für Elektrotechnische Normung

Management Centre: rue de Stassart 36, B - 1050 Brussels

© 2002 CEN - All

All rights of exploitation in any form and by any means reserved worldwide for CEN national members.

Ref. No. EN 858-1:2002 + A1:2004 E

This is a preview. Click here to purchase the full publication.

# **Contents**

_			page
Forew	rord		
1	Scope		4
2	Normative references		5
3	Terms and definitions		7
4	Classes of separators		8
5	Nominal sizes		
6	Requirements		
6.1	General		
6.2	Materials		
6.2.1	General		
6.2.2	Concrete		
6.2.3	Metallic materials		
6.2.4	Plastic materials		
6.2.5	Sealing materials		
6.2.6	Coatings/linings		
6.2.7	Chemical resistance		
6.2.8	Reaction to fire		
6.3	Design requirements		
6.3.1	Area of the separator or sludge trap		
6.3.2	Watertightness of components		
6.3.3	Accessibility		
6.3.4	Water seals		
6.3.5	Pipes and pipe joints		
6.3.6	Internal components		
6.3.7	Sludge traps		
6.3.8	Access covers		
6.4	Structural stability		
6.4.1	General		
6.4.2	Separator systems made of unreinforced concrete, fibre-reinforced con	ncrete, re	inforced
	concrete		14
6.4.3	Separator systems made of glass fibre-reinforced plastics		
6.5	Functional requirements		
6.5.1	General		
6.5.2	Storage capacity for light liquids		
6.5.3	Automatic closure devices		
6.5.4	Automatic warning devices and additional devices		
6.5.5	Separators with a bypass device		
6.5.6	Determination of the nominal size and class		
6.6	Marking		
6.6.1	Separator systems		
6.6.2	Automatic closure devices, automatic warning devices		17
7	Manufacturer's product information		17
8	Test methods		17
8.1	Materials		
8.1.1	Concrete		
8.1.2	Plastics materials		
8.1.3	Coatings		
8.1.4	Chemical resistance of internal surfaces		
8.1.5	Chemical resistance of external coatings		
8.2	Watertighness of system components		20
•	This is a preview. Click here to purchase the full public		

8.3	Functional requirements	
8.3.1	Storage capacity for light liquid	
8.3.2	Automatic closure device	
8.3.3	Determination of the nominal size and class	
8.4	Reaction for fire	
8.4.1 8.4.2	Products deemed to satisfy the requirements for reaction to fire Class A1  Products not deemed to satisfy reaction to fire Class A1	
0.4.2	-	
9	Type testing of factory made separator systems	
9.1	General	
9.2	Prototypes and documentation	31
10	A <sub>1</sub> ) Evaluation of conformity (A <sub>1</sub> )	34
10.1	General	
10.2	Factory production control	
Annov	x A (normative) Analysis of effluent samples	
Annex A.1	General	
A. 1 A.2	Infrared spectroscopy method	
A.2.1	Extraction and preparation of the extract	
A.2.2	Evaluation	
A.3	Gas chromatography method	
A.3.1	General	
A.3.2	Reagents	
A.3.3	Interferences	
A.3.4	Procedure	37
A.3.5	Gas chromatographic analysis	37
A.3.6	Example GC conditions	
A.3.7	Calibration	
A.3.8	Calculation of the oil concentration	39
Annex	B (normative) Factory production control	40
Annex	C (informative) Established methods of calculation and testing	46
C.1	Germany	
C.2	The Netherlands	
C.3	France	
C.4	Austria	47
Annov	D (informative) Control by third party (third party control)	15
D.1	General	
D.2	Procedure of the third party control	
D.2.1	Factories certified to EN ISO 9001	48
D.2.2	Factories not certified to EN ISO 9001	
D.3	Report by the third party	
D.4	Non-conforming products	49
Annex	x E (informative) Relevant extracts from EC Decision 96/603/EC, as amended	50
	z ZA (informative) Clauses of this European Standard addressing the provisions of EU	
	Constructions Products Directve	51
Riblio	graphy	55

# **Foreword**

This European Standard has been prepared by Technical Committee CEN /TC 165, "Wastewater engineering", the secretariat of which is held by DIN.

This document has been prepared under Mandate M/118 "Wastewater engineering products" given to CEN/CENELEC by the European Commission and the European Free Trade Association to allow CE marking under the Construction Products Directive (89/106/EEC).

For relationship with this Directive, see informative Annex ZA, which is an integral part of this standard. [A]

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2002, and conflicting national standards shall be withdrawn at the latest by December 2002.

This is the first part of the two part standard for separator systems for light liquids. Part 2 of this standard contains the necessary statements on selection of nominal size, installation, operation and maintenance of separator systems for light liquids.

Annexes A and B are normative. The annexes C, D and E are informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

# Foreword to amendment A1

This document (EN 858-1:2002/A2:2004) has been prepared by Technical Committee CEN /TC 165, "Wastewater engineering", the secretariat of which is held by DIN.

This Amendment to the European Standard EN 858-1:2002 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2005, and conflicting national standards shall be withdrawn at the latest by August 2006.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

# 1 Scope

This standard specifies definitions, nominal sizes, principles of design, performance requirements, marking, testing and quality control for separator systems for light liquids.

This standard applies to separator systems for light liquids, where light liquids are separated from waste water by means of gravity and/or coalescence.

This standard does not apply to the treatment of stable emulsions, solutions of light liquids and water, grease and oils of vegetable and animal origin.

# 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

ISO 48, Rubber, vulcanized or thermoplastic – Determination of hardness (hardness between 10 IRHD and 100 IRHD).

ISO 178, Plastics – Determination of flexural properties.

ISO 180, Plastics – Determination of Izod impact strength.

ISO 185, Grey cast iron - Classification.

ISO 527-2, Plastics – Determination of tensile properties – Part 2: Test conditions for moulding and extrusion plastics.

ISO 630, Structural steels – Plates, wide flats, bars, sections and profiles.

[A] ISO 877; Plastics – Methods of exposure to direct weathering, to weathering using glass-filtered daylight, and to intensified weathering by daylight using Fresnel mirrors. [A]

ISO 1083, Spheroidal graphite cast iron - Classification.

ISO 1133, Plastics – Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics.

ISO 1183, Plastics – Methods for determining the density and relative density of non-cellular plastics.

ISO 1518, Paints and varnishes - Scratch test.

ISO 1817, Rubber, vulcanized – Determination of the effect of liquids.

ISO 1920, Concrete tests – Dimensions, tolerances and applicability of test specimens.

ISO 2409, Paints and varnishes - Cross-cut test.

ISO 2736-1, Concrete tests – Test specimens – Part 1: Sampling of fresh concrete.

ISO 2736-2, Concrete tests – Test specimens – Part 2: Making and curing of test specimens for strength tests.

ISO 2808, Paints and varnishes – Determination of film thickness.

ISO 2812-1, Paints and varnishes – Determination of resistance to liquids – Part 1: General methods.

ISO 2812-2, Paints and varnishes, determination of resistance to liquids, Part 2: water immersion method.

ISO 2815, Paints and varnishes – Buchholz indentation test.

ISO 3755, Cast carbon steels for general engineering purposes.

ISO 4012, Concrete – Determination of compressive strength of test specimens.

ISO 4624, Paints and varnishes - Pull-off test for adhesion.