

Glossary of

# Terms relating to solid fuel burning equipment —

Part 1: Domestic appliances

UDC 697.243:001.4

|                            |
|----------------------------|
| Confirmed<br>December 2011 |
|----------------------------|

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

**BSI**  
Documents

AVA

Document Sharing Hub

# Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Refrigeration, Heating and Air Conditioning Standards Policy Committee (RHE/-) to Technical Committee RHE/29, upon which the following bodies were represented:

- Association of British Solid Fuel Appliances Manufacturers
- British Coal Corporation
- Chartered Institution of Building Services Engineers
- Combustion Engineering Association
- HETAS Ltd.
- Institute of British Foundrymen
- Institution of Mechanical Engineers
- Low Temperature Coal Distillers' Association of Great Britain Ltd.
- Solid Fuel Advisory Service

This British Standard, having been prepared under the direction of the Refrigeration, Heating and Air Conditioning Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 January 1994

© BSI 03-2000

First published April 1952  
Second edition March 1968  
Third edition January 1994

The following BSI references relate to the work on this standard:  
Committee reference RHE/29  
Draft for comment 93/702955

ISBN 0 580 22315 9

## Amendments issued since publication

| Amd. No. | Date | Comments |
|----------|------|----------|
|          |      |          |
|          |      |          |
|          |      |          |
|          |      |          |

# Contents

|                                   | Page               |
|-----------------------------------|--------------------|
| Committees responsible            | Inside front cover |
| Foreword                          | ii                 |
| 1 General terms                   | 1                  |
| 2 Appliances                      | 1                  |
| 3 Fittings                        | 2                  |
| 4 Finish                          | 4                  |
| 5 Insulation                      | 5                  |
| 6 Installation                    | 5                  |
| 7 Ignition                        | 6                  |
| 8 Control                         | 7                  |
| 9 Products disposal               | 8                  |
| 10 Operation and tests            | 9                  |
| Annex A (informative) Solid fuels | 14                 |
| Index                             | 15                 |
| List of references                | Inside back cover  |

## Foreword

This Part of BS 1846 has been prepared under the direction of the Refrigeration, Heating and Air Conditioning Standards Policy Committee. It supersedes BS 1846-1:1968, which is withdrawn.

This glossary deals specifically with terms used in connection with solid fuel burning equipment and bearing on their function, performance and construction. Where a term is in common usage in other fields, only the definition applying to solid fuel equipment is given.

The glossary is divided into two Parts. Part 1 covers equipment for domestic solid fuel burning appliances, with rated heat outputs up to 45 kW. Part 2 covers equipment for industrial solid fuel burning appliances, with rated heat outputs above 45 kW. Each part of the glossary is divided into sections and an index is provided for ease of reference. Every endeavour has been made to group terms which are descriptive of related items, processes or phenomena together and to cover all relevant terms in each part.

In certain instances alternative terms are given. Where the use of such terms is “non-preferred” or “deprecated”, their status is indicated.

The main changes from BS 1846-1:1968 reflect the introduction of more complicated designs of appliance and control device, the use of new materials and the consequent extensions to the various British Standard specifications and test methods relating to these changes.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their 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, pages i and ii, pages 1 to 18, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

## 1 General terms

| No.  | Term                                     | Definition                                                                                   |
|------|------------------------------------------|----------------------------------------------------------------------------------------------|
| 1 01 | <b>calorie</b>                           | Quantity of heat required to raise the temperature of 1 g of water by 1 K.                   |
| 1 02 | <b>radiation heat shield (thermal)</b>   | Material, used to restrict the transmission of radiant heat.                                 |
| 1 03 | <b>nominal size</b>                      | Dimension within a given or specific tolerance.                                              |
| 1 04 | <b>firebar spacing</b>                   | Designed spaces between <i>firebars</i> .                                                    |
| 1 05 | <b>free air space</b>                    | That part of a <i>bottomgrate</i> permitting the free passage of air.                        |
| 1 06 | <b>fuelbed<br/>firebed</b>               | Fuel contained in the <i>firebox</i> .                                                       |
| 1 07 | <b>combustion zone</b>                   | That region of the <i>fuelbed</i> in which combustion is proceeding.                         |
| 1 08 | <b>primary air</b>                       | Combustion air which passes through the <i>fuelbed</i> .                                     |
| 1 09 | <b>secondary air</b>                     | Air supplied for the purpose of completing combustion of gases leaving the <i>fuelbed</i> .  |
| 1 10 | <b>underfloor primary<br/>air supply</b> | Combustion air taken from the underfloor air space or ducted from the exterior of the house. |

## 2 Appliances

|      |                                                   |                                                                                                                                                                |
|------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 01 | <b>solid fuel appliance</b>                       | Appliance that provides heat by burning <i>solid fuel</i> , with means of removing products of combustion.                                                     |
| 2 02 | <b>domestic solid<br/>fuel appliance</b>          | <i>Solid fuel appliance of rated heat output up to and including 45 kW.</i>                                                                                    |
| 2 03 | <b>approved domestic<br/>solid fuel appliance</b> | <i>Domestic solid fuel appliance, that burns solid mineral fuel.</i>                                                                                           |
| 2 04 | <b>open fire</b>                                  | Heating appliance, with or without <i>boiler</i> , with a permanent open front which distributes heat directly to the room by radiation.                       |
| 2 05 | <b>open fire with<br/>convection</b>              | <i>Open fire</i> , that also distributes heat by convection.                                                                                                   |
| 2 06 | <b>roomheater</b>                                 | Appliance with a fully enclosed fire with <i>firedoors</i> that are usually glazed, that distributes heat by radiation, convection and sometimes by hot water. |
| 2 07 | <b>inset appliance</b>                            | Appliance that is designed to be built into a <i>fireplace recess</i> .                                                                                        |
| 2 08 | <b>freestanding appliance</b>                     | Appliance designed to operate without being built into a <i>fireplace recess</i> .                                                                             |
| 2 09 | <b>stool bottomgrate</b>                          | Single piece <i>bottomgrate</i> with integral legs, that stands freely on the <i>hearth</i> .                                                                  |
| 2 10 | <b>inset open fire</b>                            | <i>Open fire</i> fixed firmly to the <i>hearth</i> with an attached <i>firefront</i> .                                                                         |
| 2 11 | <b>hopper fed<br/>gravity feed</b>                | Appliance fitted with a <i>fuel hopper</i> which permits extension of the intervals between refuelling.                                                        |

| No.  | Term                                     | Definition                                                                                                                                                                                                                                                            |
|------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 12 | <b>cooker</b>                            | Appliance primarily designed for cooking, incorporating one or more externally heated ovens and <i>hotplates</i> , heated from a fire by conduction or by circulating <i>flue gases</i> , or both. It may also be fitted with a <i>boiler</i> .                       |
| 2 13 | <b>heat storage cooker</b>               | Freestanding <i>cooker</i> , with <i>hotplate(s)</i> , and oven(s) heated mainly by conduction from a source of stored heat, the heat being built up over a period which overlaps the normal cooking time. A heat storage cooker may be fitted with a <i>boiler</i> . |
| 2 14 | <b>independent boiler</b>                | Closed <i>freestanding appliance</i> designed solely for a water heating service.                                                                                                                                                                                     |
| 2 15 | <b>open fire boiler</b>                  | Free-standing <i>boiler</i> with an operable front above the level of the top of the <i>bottomgrate</i> , to give <i>open fire</i> facilities.                                                                                                                        |
| 2 16 | <b>overnight burning appliance</b>       | Appliance designed to maintain combustion for at least 10 h without the need to refuel.                                                                                                                                                                               |
| 2 17 | <b>intermittent burning appliance</b>    | <i>Open fire</i> not designed to maintain combustion for 10 h but should maintain combustion for at least 6 h without the need to refuel.                                                                                                                             |
| 2 18 | <b>underfeed stoker</b>                  | Mechanical stoker with a <i>retort</i> into which the fuel is fed at the bottom and air for combustion is introduced through tuyeres near the top.                                                                                                                    |
| 2 19 | <b>independent cooker</b>                | <i>Cooker</i> where the design/control allows <i>water heating output</i> priority over cooking/oven heating.                                                                                                                                                         |
| 2 20 | <b>non-independent cooker</b>            | <i>Cooker</i> where the design/control does not allow <i>water heating output</i> priority over cooking/oven heating.                                                                                                                                                 |
| 2 21 | <b>exempted smoke-reducing appliance</b> | Appliance designed to burn <i>bituminous coal</i> with low smoke emission, enabling authorization by statute for use in smoke control areas.                                                                                                                          |

### 3 Fittings

|      |                                                              |                                                                                                                                       |
|------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 3 01 | <b>lug</b>                                                   | Protrusion at the edge of a component, sometimes drilled or tapped, to take a pin or bolt.                                            |
| 3 02 | <b>nibs</b>                                                  | Reducible extension pieces, usually on the back or sides of a <i>bottomgrate</i> .                                                    |
| 3 03 | <b>bottomgrate</b><br>grate ( <i>non-preferred</i> )         | Grating of one or more pieces on which the <i>fuelbed</i> rests.                                                                      |
| 3 04 | <b>bottomgrate frame</b>                                     | Frame supporting a <i>bottomgrate</i> .                                                                                               |
| 3 05 | <b>rectangular bottomgrate</b>                               | <i>Bottomgrate</i> for use with an <i>open fire</i> , the sides of which form a rectangle.                                            |
| 3 06 | <b>tapered bottomgrate</b>                                   | <i>Bottomgrate</i> for use with an <i>open fire</i> , the sides of which form a trapezium.                                            |
| 3 07 | <b>bottomgrate bars</b><br>firebars ( <i>non-preferred</i> ) | Bars supporting the <i>fuelbed</i> , separate or integral with a surrounding frame.                                                   |
| 3 08 | <b>front firebars</b>                                        | Grating fitted at the front of a <i>firebox</i> opening to prevent spillage of fuel or to increase <i>firebox capacity</i> , or both. |
| 3 09 | <b>firefront</b><br>fret ( <i>deprecated</i> )               | Front of an <i>open fire</i> that may be an integral or separate part which may be functional and/or decorative.                      |

| No.  | Term                                                  | Definition                                                                                                                                                                                                                                                     |
|------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3 10 | <b>firedoor</b>                                       | Hinged or sliding door to close the front of a <i>firebox</i> .                                                                                                                                                                                                |
| 3 11 | <b>glass panelled door</b>                            | <i>Firedoor</i> having a panel or panels of heat resisting glass.                                                                                                                                                                                              |
| 3 12 | <b>firebox</b>                                        | That part of an appliance in which the fuel is burned.                                                                                                                                                                                                         |
| 3 13 | <b>retort</b>                                         | Vessel forming the <i>firebox</i> of an <i>underfeed stoker</i> .                                                                                                                                                                                              |
| 3 14 | <b>fuel hopper</b>                                    | Fuel store integral with the appliance from which fuel is fed to the <i>firebox</i> .                                                                                                                                                                          |
| 3 15 | <b>charging door</b>                                  | Hinged or sliding door which covers the refuelling opening.                                                                                                                                                                                                    |
| 3 16 | <b>drop front</b><br>fall plate ( <i>deprecated</i> ) | Movable cover plate to an <i>open fire</i> for closing off the <i>front firebars</i> .                                                                                                                                                                         |
| 3 17 | <b>closure plate</b>                                  | Fire cover with egress for <i>flue gases</i> .                                                                                                                                                                                                                 |
| 3 18 | <b>deepening bar</b>                                  | Removable bar, fitted to the <i>firefront</i> , which increases the <i>firebox capacity</i> of an appliance.                                                                                                                                                   |
| 3 19 | <b>log guard</b>                                      | One or more <i>deepening</i> bars for an appliance designed to burn wood logs.                                                                                                                                                                                 |
| 3 20 | <b>deepening plate</b>                                | Solid removable plate, fitted to the <i>firefront</i> , which increases the <i>firebox capacity</i> of an appliance.                                                                                                                                           |
| 3 21 | <b>back register plate</b>                            | Metal plate in the vertical plane, closing a <i>fireplace recess</i> , having an opening to fit the back <i>flue pipe</i> or <i>flue adaptor</i> of a <i>solid fuel appliance</i> .                                                                            |
| 3 22 | <b>top register plate</b>                             | Metal plate in the horizontal plane, closing the opening to the <i>flue</i> at the top of a <i>fireplace recess</i> , having an opening to fit the <i>flue pipe</i> or <i>flue adaptor</i> of a <i>solid fuel appliance</i> .                                  |
| 3 23 | <b>top plate</b>                                      | Top of a <i>cooker</i> surrounding and including the <i>hotplate</i> .                                                                                                                                                                                         |
| 3 24 | <b>hotplate</b>                                       | Plate(s) provided on a cooker mainly for boiling, simmering or frying.                                                                                                                                                                                         |
| 3 25 | <b>splash plate</b>                                   | Vertical plate at the rear of the <i>top plate</i> .                                                                                                                                                                                                           |
| 3 26 | <b>bolster</b><br>hotplate cover                      | Heat insulating cover, for the <i>hotplate</i> when not in use.                                                                                                                                                                                                |
| 3 27 | <b>roasting oven</b>                                  | Oven capable of maintaining, when empty, a temperature of 205 °C or above under specified test conditions.<br>NOTE Test conditions specified in BS 1252:1991.                                                                                                  |
| 3 28 | <b>oven shelf</b>                                     | Oven grid or steel plate for supporting cooking vessels within an oven.                                                                                                                                                                                        |
| 3 29 | <b>operating tool</b>                                 | Tool supplied with an appliance for the purpose of manipulating movable parts and to avoid touching hot parts of the appliance by hand.                                                                                                                        |
| 3 30 | <b>clamping ring</b>                                  | Flanged metal ring, usually in two parts which clamp together. Used around a <i>flue adaptor</i> to confine the sealing material between the adaptor and the <i>flue connecting block</i> or <i>top</i> or <i>back register plate</i> through which it passes. |
| 3 31 | <b>throat restrictor</b>                              | Device fitted in the throat of a <i>chimney flue</i> or in the <i>flue outlet</i> of an appliance to reduce the cross-sectional area.                                                                                                                          |
| 3 32 | <b>canopy</b>                                         | Projection from the top of an <i>open fire</i> that collects and diverts products of combustion up a <i>chimney flue</i> .                                                                                                                                     |
| 3 33 | <b>boiler</b><br>heat exchanger                       | Vessel in which water is heated, intended for fitting in or forming part of a <i>solid fuel appliance</i> .                                                                                                                                                    |

| No.  | Term                                                                            | Definition                                                                                                                                             |
|------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3 34 | <b>back boiler</b>                                                              | <i>Boiler fitted at the back of a solid fuel appliance.</i>                                                                                            |
| 3 35 | <b>normal output boiler</b>                                                     | <i>Boiler that provides hot water primarily for domestic use.</i>                                                                                      |
| 3 36 | <b>boiling plate area</b>                                                       | mechanical or surface-ground surface incorporated into the <i>hotplate</i> , designed for rapid heating.                                               |
| 3 37 | <b>high output boiler</b><br>central heating boiler<br>( <i>non-preferred</i> ) | <i>Boiler that provides hot water for domestic use and for space heating.</i>                                                                          |
| 3 38 | <b>boiler flue set</b>                                                          | Complete unit, consisting of a combination of <i>back boiler</i> and associated <i>firebricks</i> which form a <i>boiler flueway</i> .                 |
| 3 39 | <b>boiler with integral flue</b>                                                | <i>Boiler with a flueway formed within its shell.</i>                                                                                                  |
| 3 40 | <b>boiler shell</b>                                                             | That part of a <i>boiler</i> which contains the water.                                                                                                 |
| 3 41 | <b>boiler tappings</b>                                                          | Screwed connections for connecting the <i>boiler</i> to the water system.                                                                              |
| 3 42 | <b>flow tapping</b>                                                             | Connection on a <i>boiler</i> from which the heated water exits.                                                                                       |
| 3 43 | <b>return tapping</b>                                                           | Connection on a <i>boiler</i> into which cooled water enters.                                                                                          |
| 3 44 | <b>domed tapping</b>                                                            | <i>Flow tapping</i> of a <i>boiler</i> which is domed to prevent the entrapment of air within the <i>boiler shell</i> .                                |
| 3 45 | <b>waterways</b>                                                                | Space within a <i>boiler shell</i> which contains water.                                                                                               |
| 3 46 | <b>pressure relief valve</b>                                                    | Automatic pressure relief device opening at a pre-determined pressure.                                                                                 |
| 3 47 | <b>drain cock</b><br>draining tap<br>( <i>non-preferred</i> )                   | Cock or tap fitted at the lowest point of a water system for draining down.                                                                            |
| 3 48 | <b>insulating jacket</b>                                                        | Flexible construction, comprising an insulating material totally enclosed in fabric, plastic or thin metal designed to fit around individual vessels.  |
| 3 49 | <b>convection case</b>                                                          | Case surrounding a heat source with inlets and outlets positioned to assist in the transfer of heat to the air passing between it and the heat source. |
| 3 50 | <b>fireguard</b>                                                                | Safety barrier for a <i>solid fuel appliance</i> .                                                                                                     |
| 3 51 | <b>nursery type fireguard</b>                                                   | <i>Fireguard</i> designed for fitting outside the <i>fireplace surround</i> and any <i>superimposed hearth</i> .                                       |
| 3 52 | <b>spark guard</b>                                                              | Removable wire mesh cover in front of an <i>open fire</i> to reduce the possibility of sparks being ejected beyond the <i>hearth</i> .                 |

## 4 Finish

|      |                                                       |                                                                                                                                  |
|------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 4 01 | <b>finish</b>                                         | Generic term denoting the final surfacing.                                                                                       |
| 4 02 | <b>satin chrome finish</b>                            | Semi-matt surface chromium plating.                                                                                              |
| 4 03 | <b>ground coat</b><br>grip coat ( <i>deprecated</i> ) | Primer coat on steel or cast iron preparatory to <i>vitreous enamelling</i> .                                                    |
| 4 04 | <b>vitreous enamel</b>                                | Glazed surface <i>finish</i> produced by the application of a powdered inorganic glass to metal parts and its subsequent fusion. |