

Specification for

Woodcutting bandsaw blades

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The Government departments and scientific and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

Agricultural Engineers' Association	Home Timber Merchants' Association of England and Wales
British Furniture Manufacturers Federated Associations	Ministry of Technology (F.P.R.L.)
British Woodwork Manufacturers' Association	National Sawmilling Association
	Saw Manufacturers' Association

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Contents

	Page
Co-operating organizations	Inside front cover
Foreword	ii
1 Scope	1
2 Nomenclature and definitions	1
3 Classification of wide bandsaw blades	2
4 Material	2
5 General quality requirements	2
6 Set	2
7 Dimensions	3
8 Recommended blade speeds	3
Appendix A Imperial units	9
Figure 1 — Narrow bandsaw tooth profile	4
Figure 2 — Wide bandsaw tooth profile: spring set	5
Figure 3 — Wide bandsaw tooth profile: swage set	6
Table 1 — Recommended minimum set for both narrow and wide blades	7
Table 2 — Standard widths and recommended thickness of narrow bandsaw blades	7
Table 3 — Recommended pitches for narrow bandsaw blades	8
Table 4 — Recommended thickness of narrow blades for use on different wheel diameters	8
Table 5 — Standard widths and recommended thickness of wide bandsaw blades	8
Table 6 — Rake and clearance angles for wide bandsaws	8
Table 7 — Recommended pitches and gullet angles for wide bandsaw blades	8
Table 8 — Recommended maximum thickness of wide blades for use on different wheel diameters	8
Table 1A — Recommended minimum set for both narrow and wide blades	9
Table 2A — Standard widths and recommended thickness of narrow bandsaw blades	9
Table 3A — Recommended pitches for narrow bandsaw blades	9
Table 4A — Recommended thickness of narrow blades for use on different wheel diameters	9
Table 5A — Standard widths and recommended thickness of wide bandsaw blades	9
Table 7A — Recommended pitches and gullet angles for wide bandsaw blades	9
Table 8A — Recommended thickness of wide blades for use on different wheel diameters	9

Foreword

This standard makes reference to the following British Standards:

BS 427, *Method for Vickers hardness test — Part 1: Testing of metals*.

BS 1449, *Steel plate, sheet and strip*.

This British Standard has been prepared under the authority of the Mechanical Engineering Industry Standards Committee, in an attempt to provide detailed information for both the users and the manufacturers of bandsaw blades.

The standard relates to both narrow and wide bandsaw blades, and includes details of set, tooth shape, blade dimensions, blade material and running speeds; a fairly comprehensive list of terms have been defined, in order to provide a vocabulary common to the users and the manufacturers.

In the case of wide bandsaws, tooth shape has been related to the density of timber being cut (see Table 6), as this was felt to be the most general classification method available. In this connection it should be noted that this standard specifically excludes bandsaws suitable for cutting synthetic material. Teeth tipped with hard metals and double cutting bandsaw blades have also been excluded, as it was felt that they should not be considered as a standard item.

Attention is drawn to the fact that the cutting efficiency of bandsaw blades must depend to a large extent on the skill of the user in choosing the correct combination of tooth shape, blade width, thickness, pitch, machine wheel diameter, and speed, from those values shown in this standard. In case of doubt, the Forest Products Research Laboratory and/or manufacturers should be consulted.

It should be noted that only blades made to inch dimensions are available at present, but it is expected that their metric equivalents will gradually be phased-in. It is for this reason that inch units have been included in this standard, but only in an appendix in order that their use is not encouraged. The values quoted are compatible to achieve the same degree of accuracy, but are not exact mathematical equivalents.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 9 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 Scope

This British Standard relates to the terminology, manufacture, properties, dimensions and tolerances of both “narrow” and “wide” bandsaw blades; either supplied in coil, or cut to length and joined ready for use. The blades specified in this standard, which does not include saws tipped with hard metals, are suitable for cutting timber in its naturally occurring form, but not its manufactured derivatives (i.e. plywood, blockboard, or any synthetic material).

2 Nomenclature and definitions

For the purposes of this British Standard the following definitions apply.

2.1 General

2.1.1

narrow bandsaw blade

a bandsaw blade which has a width not exceeding 65 mm (2½ in), and normally runs on a wheel covered by a tyre made of resilient material

2.1.2

wide bandsaw blade

a bandsaw blade which has a width greater than, or equal to 80 mm (3 in), and normally runs direct on the metal base of the wheel, and is processed to ensure correct tracking of the band on the wheel

2.1.3

minimum cutting radius

the radius of the arc of the smallest curvature that can be followed by a narrow bandsaw blade of given width

2.2 Elements

To promote the fullest understanding the various elements are illustrated in Figure 1, Figure 2 and Figure 3.

2.2.1

body

that part of the blade between the bottom of the gullet and the back edge

2.2.2

teeth

the serrations formed along one longitudinal edge of the blade to provide the cutting edges

2.2.3

toothed edge

the longitudinal edge along which the teeth have been formed

2.2.4

cutting edge

the transverse edge formed by the intersection of the back and the face of the tooth

2.2.5

face

that surface of the tooth adjacent to the cutting edge, on which the chip impinges as it is severed from the work

2.2.6

back

that surface behind the cutting edge which extends to the root radius of the gullet

2.2.7

sharpness angle

the angle between the face and the back of the tooth, at the tooth point

2.2.8

clearance angle

the angle between the back of the tooth, at the tooth point, and the cutting path

2.2.9

gullet angle (for narrow blades only)

that angle, in the gullet, between the front and the back of the tooth

2.2.10

rake (Hook)

the angle between the face of the tooth before setting, and a line from the tooth point at right angles to the cutting path

2.2.11

depth

the distance from the point of the tooth to the deepest part of the gullet, in a direction at right angles to the cutting path

2.2.12

root radius

the radius of the arc between the face and the back in the gullet

2.2.13

gullet

the space bounded by the face, root radius and back of a tooth, to contain severed chips

2.2.14 Set

The projection of the teeth from each side of the blade to provide cutting clearance.