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Glossary of

Terms used in offset lithographic printing

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The Printing, Stationery and Allied Trades Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government department and industrial organizations:

- Advertisement Typesetting and Foundry Employers' Federation
- British Federation of Master Printers*
- British Paper and Board Makers' Association (Incorporated)
- British Printing Machinery Association*
- British Stationery and Office Equipment Association
- Business Equipment Trade Association*
- Envelope Makers' and Manufacturing Stationers' Association
- Federation of Master Process Engravers
- H.M. Stationery Office*
- National Association of Paper Merchants
- Newspaper Society
- Society of British Printing Ink Manufacturers*

The Government department 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:

- Amalgamated Society of Lithographic Printers
- London College of Printing
- Periodical Proprietors' Association
- Photo-litho Reproducers' Association
- Research Association for the Paper and Board, Printing and Packaging Industries (PIRA)
- Society of Lithographic Artists, Designers, Engravers and Process Workers

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Foreword

This standard makes reference to the following British Standards:

BS 2913, *Measurement of offset blanket thickness for lithographic printing*.

BS 3814, *Glossary of letterpress rotary printing terms used in connection with newspaper, magazine and similar machines*.

Following a conference on offset lithographic printing, it was suggested by the Printing, Packaging and Allied Trades Research Association (now the Research Association for the Paper and Board, Printing and Packaging Industries, PIRA) that a glossary of terms used in offset lithography should be prepared, similar to that drawn up for rotary letterpress printing and published as BS 3814¹⁾. An attempt has been made to limit the terms to those encountered only in offset lithographic printing; the number of terms, particularly photographic, whose definitions may be found in a dictionary or text-book has been kept to a minimum. The glossary, prepared under the authority of the Printing, Stationery and Allied Trades Standards Committee, has been drawn up in sections. For convenience these are given in a table of contents, and a detailed index of terms appears at the end.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 30 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⁾ BS 3814, "Glossary of letterpress rotary printing terms used in connection with newspaper, magazine and similar machines".

1 General terms

No.	Term	Definition
10001	lithographic printing	A planographic printing process in which the non-image areas of the printing plate are made hydrophillic and the image areas are made hydrophobic.
10002	offset printing	A method of printing in which the image is transferred to the final substrate via an intermediate surface.
10003	web offset	Printing on a reel-fed machine by the offset process.
10004	dry offset OFFSET LETTERPRESS	Printing as in the offset lithographic method, but from a relief plate.
10005	metal decoration	Printing by offset lithography on sheet metal such as tinfoil or aluminium.
10006	photolithography	A process for producing lithographic printing plates by photographic means (in contradistinction to “chromo” work).
10007	photosetting FILM SETTING PHOTOCOMPOSING, <i>deprecated</i>	The process of composing text matter directly onto a photographic or other light-sensitive material. NOTE The term “Photocomposing” has been deprecated because in some countries it is used to describe what is known in the United Kingdom as “Step and repeat”. It also includes the practice of producing combination images in the camera (photomontage).
10008	hygroinstability DIMENSIONAL STABILITY	Behaviour of film or paper in respect of dimensions and “flatness” with variations in moisture and temperature conditions, processing technique and ageing.

2 Copy preparation

201 General

20101	copy ARTWORK ORIGINAL	The original matter from which a reproduction is eventually made.
20102	reflection copy FLAT COPY	Copy which is viewed or photographed by reflected light.
20103	transmission copy TRANSPARENCY	Copy which is viewed or photographed by transmitted light.
20104	overlay	1. A transparent sheet attached to copy, carrying instructions and directions. 2. A method of preparing original artwork in which one or more colour components are drawn on a transparent sheet attached to the artwork.
20105	job layout	An outline drawing showing the relative positions of the various elements required in the complete assembly of the job, including dimensions, folds and any other necessary data.
20106	sheet layout	A diagram showing the disposition of individual jobs on the printed sheet.
20107	assembly	Positioning of copy to form a composite original (30304).
20108	paste-up	Assembly of reflection copy.
20109	patch-up	Assembly of transmission copy (30304).
20110	montage	An assembly of illustrations to form a composite picture.
20111	register marks REGISTER TICKS	A set of fine-line crosses or other suitable devices added to the original artwork to provide reference points for subsequent registration (30301).

No.	Term	Definition
20112	overdraw	The amount by which a particular colour is made to overlap an adjoining colour.
20113	underdraw	The opposite of overdraw.
20114	backing-up colour UNDER-COLOUR	A means of increasing the density of an ink film, especially black, by printing a suitable colour underneath.
20115	mechanical tint BENDAY, <i>deprecated</i>	A dot, line or other pattern used to produce tonal values.
20116	ghost FEINT	A key image usually prepared from a bromide print by chemical bleaching.
20117	monochrome	An original or print in a single colour.
20118	rough VISUAL	A preliminary sketch sufficiently complete to give a general idea of a customer's requirements. It may be anything from a few pencil lines to an artist's sketch in colour.
20119	type matter TYPE IMPRESSION	Reading matter produced by typesetting methods as distinct from hand drawn lettering.
20120	reverse lettering WHITE-OUT LETTERING	Open lettering on a printed background.
20121	cutting marks	Marks usually added at copy stage and carried through to printed work, to indicate positions for cutting, slitting, punching, etc.
20122	colour bias	The predominance or lack of one or more of the colours in an image.

202 Keys

20201	key	A master outline from which the previous elements of an assembly are positioned for patching up or stripping in.
20202	blue key	A form of key in which the image is produced photographically and is non-printing.
20203	key colour	That colour in a multicolour set which, by reason of its having the best overall pattern, can be used to position other colours of the set.
20204	artist's key KEY DRAWING	An artist's drawing which includes additional key lines, not intended to appear in the finished result, but showing limiting areas of colours, tones, etc.
20205	working key	A key used with or without modifications as a printing plate for colour work.

3 Photographic and associated operations

301 General

30101	negative	A photographic image with tonal values reversed relative to the original.
30102	positive	A photographic image with tonal values as in the original.
30103	multi-negative	A multiple image in negative form, usually the product of a step and repeat camera (30405) or machine (40108).
30104	multi-positive	A multiple image in positive form, usually the product of a step and repeat camera (30405) or machine (40108).

No.	Term	Definition
30105	contact method	A method of photographic reproduction without the use of an optical system, in which the surfaces of the original and the sensitive layer are in contact.
30106	contact negative	A photographic image produced from a positive by the contact method.
30107	contact positive	A photographic image produced from a negative by the contact method.
30108	right reading	An image which is correctly disposed when viewed from the emulsion side.
30109	wrong reading	An image which is laterally reversed when viewed from the emulsion side.
30110	continuous tone	An image in which tonal gradation is produced by changes in density (30501).
30111	vignette	A continuous gradation of density from a dark to a light tone.
30112	moiré	A periodic pattern due to interference of two or more regular dot or line patterns.
30113	contrast	The brightness difference between the light and the dark tones of an original or image.
30114	flat image	An image which lacks contrast.
30115	line work	Copy or reproduction consisting of solid elements only, as distinct from half-tone.
30116	reflectance	The ratio of the intensity of light reflected from a surface to that incident on the surface.
30117	transmittance	The ratio of the intensity of transmitted light to the intensity of incident light.
30118	opacity	Reciprocal of transmittance.
30119	density OPTICAL DENSITY	Log_{10} of opacity.
30120	density range	The difference in optical density between the highlight and shadow areas of a photographic or other image.
30121	characteristic curve	The curve relating image density, produced under specified development conditions, to the logarithm of the exposure producing that density.
30122	film (photographic)	A photographic product in which the light-sensitive layer is coated on a transparent flexible support.
30123	plate (photographic)	A photographic product in which the light-sensitive layer is supported on glass.
30124	emulsion (photographic)	The light-sensitive layer of a photographic image.
30125	grain (photographic)	The fineness of the structure of a photographic image.
30126	definition	The level of detail rendering that is provided by a part or the whole of a reproduction system.
30127	sensitivity	Response of a photosensitive material to incident light.
30128	colour sensitivity	Response of a photosensitive material to coloured light.
30129	stripping film	A photographic film in which the image-bearing layer can be separated from the base support.

No.	Term	Definition
30130	stripping	The operation of assembly where the image-bearing layer is removed from the base material and transferred to a new support.
30131	highlight CATCHLIGHT	The area of the original or print which transmits or reflects most light.
30132	drop-out	The areas of a picture which are clear of printing image.
30133	shadow	The area of the original or print which transmits or reflects least light.
30134	fog	An unwanted density of developed silver, caused by non-image light or by chemical means.
30135	reticulation	Distortion of the gelatine layer caused by stresses during wetting and drying, or mostly by great differences in temperatures of subsequent processing solutions resulting in a regular surface pattern of a wrinkled appearance.
30136	halation	Spreading of the image caused by light which has passed through the emulsion and has then been reflected back from the support.
30137	anti-halation layer	A dye layer coated on the back of the film support to prevent halation.
30138	colour temperature	The temperature to which a black body radiator must be raised in order to equal the visual appearance of a light source.
30139	safelamp SAFELIGHT	A lamp providing light of a spectral composition to which a photographic material is relatively or completely insensitive.
30140	cassette	Part of a photographic machine in which a film is carried.
30141	saturation	The upper limit to which a value can progress.

302 Light sources

30201	actinic light	Light of the wavelength or spectral band which will produce the desired reaction in a light-sensitive layer.
30202	non-actinic light	Light of the wavelength or spectral band which will produce little or no reaction in a light-sensitive layer.
30203	arc lamp	A source in which light is obtained by passage of electric current at low voltage across an air gap between electrodes.
30204	enclosed arc CLOSED ARC, <i>deprecated</i>	An arc lamp in which the electrodes burn within an enclosed space.
30205	open arc	An arc lamp in which the electrodes burn in free air.
30206	motorized arc	An arc lamp in which the electrodes are electrically driven in order to maintain a constant gap between them.
30207	discharge lamp	A lamp in which light is produced by an electric discharge through a gas.
30208	fluorescent lamp	A discharge lamp in which most of the light is emitted by a layer of fluorescent material excited by ultraviolet radiation from the discharge.
30209	tungsten filament lamp	A lamp in which light is produced by means of a tungsten filament heated to incandescence by the passage of an electric current.
30210	tungsten-halogen lamp	A tungsten filament lamp with a gas filling to which a proportion of halogen (e.g. iodine, bromine) has been added. The gas is enclosed in a quartz envelope.
30211	xenon arc lamp	A discharge lamp in which the discharge takes place in xenon gas.

No.	Term	Definition
30212	mercury vapour lamp	A discharge lamp in which the discharge takes place in mercury vapour.
30213	electronic flash lamp	A discharge lamp giving a high light output for a very brief period.
303 Photographic register		
30301	register marks	Reference marks to assist in the accurate superimposition of the colours of a set (20111).
30302	punch register	A system of registration using punched holes and pins.
30303	three-point register	A system of registration using two adjacent sides.
30304	assembly PATCH-UP	Positioning of negatives or positives to form a composite image (20107) and (20109).
30305	window	Where the centre position of a register mark has been removed on a negative to facilitate registration.
304 Process cameras and camera operation		
30401	darkroom camera	A camera in which the unit carrying the sensitive material is located in a darkroom.
30402	gallery camera	A camera in which the photographic material is transported from the darkroom to the camera in a dark slide (30421).
30403	horizontal camera	A camera in which the main movements and structure are in a horizontal plane.
30404	vertical camera	A camera in which the main movements and structure are in a vertical plane.
30405	step and repeat camera	A camera for producing multiple images in predetermined positions by projection from a single image.
30406	light meter	An instrument for measuring light intensity.
30407	light integrator INTEGRATING LIGHT METER	An instrument which measures a controlled quantity of light.
30408	contact printer	A device for exposing light-sensitive layers held in contact.
30409	contact box CONTACT CABINET	A contact printer where the light source is housed in a box, the top of which is fitted to take the light-sensitive material together with the original.
30410	contact frame	A contact printer consisting of a book-like assembly to hold the light-sensitive material and the original. The light source is independent.
30411	densitometer	An instrument for measuring optical density (30119).
30412	lens aperture STOP	The effective opening to a lens.
30413	highlight stop	A lens aperture used in half-tone photography which has a specific influence on the formation of highlight tones.
30414	focal length	The shortest distance from a reference plane through a lens to the point where incident parallel rays converge or from which they appear to diverge after passing through the lens.
30415	f/no.	The diameter of the lens aperture divided into the focal length of the lens.

No.	Term	Definition
30416	v/no. V/RATIO	The diameter of the lens aperture divided into the camera extension.
30417	camera extension	The distance between the lens and the image plane.
30418	vacuum back	A plate or board for holding light-sensitive film or paper in a camera by means of suction.
30419	copyboard	The unit on a camera which holds the original copy.
30420	focusing scale	A scale to determine the position of copyboard, lens and camera back for any predetermined magnification.
30421	dark slide	Part of a camera comprising a light-tight box used to transport light-sensitive material between the darkroom and the camera.
30422	magnification	The ratio of the linear size of the image with respect to the linear size of the original copy.
30423	reduce (optically)	To produce an image smaller than the original.
30424	enlarge	To produce an image larger than the original.
30425	flash exposure	A supplementary exposure, used in both continuous tone and half-tone photography to control image contrast.
30426	flare	Non-image light that reaches the light-sensitive material in the camera, usually caused by surface reflections in the optical system, extraneous light and/or reflection from sources other than the original (30134).
30427	double printing	A photographic operation by which two or more images are combined by multiple exposures.
30428	lateral reversal	The change of image from left to right, as seen in a mirror (40106).
305 Half-tone and screens		
30501	half-tone	The representation of tonal gradation by an image composed of dots of varied sizes, the centres of which are equidistant.
30502	crossline screen	A screen for making half-tones, consisting of a grid of opaque lines and clear spaces on a rigid support.
30503	half-tone screen	A grid in which the lines and spaces are of equal thickness and equidistant.
30504	chain dot screen	A half-tone screen producing an elongated dot formation.
30505	circular screen	A half-tone screen that rotates in the vertical plane to allow the angle of the screen ruling to be varied.
30506	contact screen	A flexible film consisting of a dot pattern in which the densities vary continuously across each individual dot. It is used in contact with the light-sensitive layer.
30507	screen ruling	Number of screen lines or dots per unit of measurement.
30508	screen aperture	The clear spaces in a half-tone screen.
30509	half-line screen SINGLE LINE SCREEN	A screen consisting of opaque parallel lines with clear interfaces and designed to produce tonal values by forming a pattern in lines of varying thickness.
30510	screen angle	The angle between the direction of lines or dot elements and the horizontal.
30511	screen distance	The distance between the plane of the screen pattern or ruling and the plane of the image.

No.	Term	Definition
30512	dot	Single element of a half-tone image.
30513	hard dot	A half-tone dot with a high edge density.
30514	soft dot	A half-tone dot with a lower edge than centre density.
30515	halo	An area of low density surrounding a half-tone dot.
306 Photographic processing		
30601	developer	A photographic processing solution that causes the latent image to become visible.
30602	development latitude	The degree of tolerance of a developer system in relation to the variation in contrast or the effective speed of the photographic material.
30603	fixer	A solution which changes undeveloped light-sensitive material into a water-soluble form for subsequent removal from the photographic layer by washing.
30604	stop-bath	A solution, usually acid, used to arrest the action of a developer.
30605	processor	A device for carrying out developing and fixing and some-times the subsequent stages of washing and drying of a photographic emulsion.
30606	agitation (photographic)	Physical movement of the processing solution in relation to the photographic emulsion.
30607	reduction (chemical)	Partial removal of the image by chemical means.
30608	intensification	Increase of image density by chemical means.
30609	chemical reversal	A processing method for changing a negative image into a positive image.
307 Colour separation, general		
30701	additive process	A system of colour synthesis based on the additive colours, red, green and blue.
30702	subtractive process	A system of colour synthesis based on the subtractive colours, yellow, magenta and cyan.
30703	cyan printer BLUE PRINTER, <i>deprecated</i>	The image in a subtractive colour process which is to be printed in cyan ink.
30704	magenta printer RED PRINTER, <i>deprecated</i>	The image in a subtractive colour process which is to be printed in magenta ink.
30705	yellow printer	The image in a subtractive colour process which is to be printed in yellow ink.
30706	black printer	The image in a subtractive colour process which is to be printed in black ink.
30707	colour tabs	Patches of colour that are used as control images when carrying out colour reproduction.
30708	colour density	The densities of a colour as measured through filters of defined spectral characteristics.
30709	colour correction	The modification of a set of separation images to counteract the deficiencies in the spectral characteristics of the subtractive primaries used for the reproduction.