

B65/NAPIM 177.1-2007

(Revised 2017)

AMERICAN NATIONAL STANDARD

Safety standard — Three-roll printing ink mills

SECRETARIAT
NPES THE ASSOCIATION FOR SUPPLIERS OF PRINTING, PUBLISHING
AND CONVERTING TECHNOLOGIES

APPROVED SEPTEMBER 15, 2017
AMERICAN NATIONAL STANDARDS INSTITUTE, INC.

B65



AMERICAN NATIONAL STANDARD

Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution. This process brings together volunteers and/or seeks out the views of persons who have an interest in the topic covered by this publication. While the B65 Committee administers the process, and establishes procedures to promote fairness in the development of consensus, it does not independently test, evaluate or verify the accuracy or completeness of any information or the soundness of any judgments contained in its standards or guidelines.

The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he has approved the standard or not, from manufacturing, marketing, purchasing or using products, processes, or procedures not conforming to the standards.

The American National Standards Institute does not develop standards and will in no circumstances give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretations should be addressed to, B65 Secretariat, NPES, 1899 Preston White Drive, Reston, VA 20191.

The B65 committee makes no warranty, either expressed or implied as to the fitness of merchantability or accuracy of the information contained within this standard, and disclaims and makes no warranty that the information in this document will fulfil any of your purposes or needs. The B65 Committee disclaims liability for any personal injury, property or other damages of any nature whatsoever, whether special, indirect, consequential or compensatory, directly or indirectly resulting from, and subsequent to, the publication, use of, application or reliance on this document. the B65 Committee does not undertake to guarantee the performance of any individual manufacturer or seller's products or services by virtue of this standard or guide, nor does it take any position with respect to the validity of any patent rights asserted in connection with the items which are mentioned in or are the subject of this document, and the B65 Committee disclaims liability for the infringement of any patent resulting from the use of or reliance on this document. Users of this document are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, is entirely their own responsibility.

In publishing or making this document available, the B65 Committee is not undertaking to render professional or other services for or on behalf of any person or entity, nor is the B65 Committee undertaking to perform any duty owed by any person or entity to someone else. Anyone using this document should rely on his or her own independent judgment, or as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given circumstances.

The B65 Committee has no power, nor does it undertake to police or enforce conformance to the requirements of this document. The B65 Committee does not certify, test or inspect products, designs, or installations for safety or health purposes. Any certification or other statement of conformance to any health or safety-related information in this document shall not be attributable to the B65 Committee, and is solely the responsibility of the certifier or maker of the statement.

CAUTION NOTICE: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken to reaffirm, revise, or withdraw this standard periodically. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

NPES The Association for Suppliers of Printing, Publishing and Converting Technologies
1899 Preston White Drive
Reston, Virginia 20191-4367

Contents

Foreword.....	iv
Introduction	v
1 Scope	1
2 Effective date	1
3 Existing equipment.....	1
4 Rebuilt equipment	1
5 Normative references	1
6 Terms and definitions	2
7 Emergency stop.....	5
7.1 Emergency stop function.....	5
7.2 Emergency stop devices	5
8 Mill controls, emergency stop procedures and wash-up mode	7
8.1 General	7
8.2 Mills with rolls (working surface) less than 19 in. (482.6 mm) in length.....	7
8.3 Mills with rolls (working surface) 19 in. (482.6 mm) or greater in length.....	7
8.4 Wash-up mode	8
8.5 Requirements for emergency braking.....	8
8.6 Trip and emergency switches	8
9 Mechanical mill guarding and work platforms	8
9.1 Guarding power transmission equipment	8
9.2 Work platforms	8
10 Nip point guards and safety procedures.....	9
10.1 General	9
10.2 Nip point guards/wash up sticks	9
10.3 General safety procedures	9
11 Safe wash-up procedures	10
11.1 Responsibility	10
11.2 Mill and roll cleaning procedures	10
12 Safe knife-changing procedures.....	12
13 General safety requirements	12
13.1 Training.....	12
13.2 Housekeeping	12
13.3 Tub tilters and monorail hoists	13
13.4 Tools and equipment.....	13
13.5 General safety.....	13
13.6 Employee safety	14
Bibliography	15

Foreword

This is a revision of B65/NAPIM 177.1-2007, *American National Standard for Three-Roller Printing Ink Mills — Safety Requirements*, developed under the administration of the National Association of Printing Ink Manufacturers (NAPIM). Responsibility for this standard has since been transferred to the ANSI-accredited B65 Committee, under the administration of NPES The Association for Suppliers of Printing, Publishing and Converting Technologies. The revision of this standard is being conducted under the B65 Committee, with assistance from NAPIM.

The B65 Committee was accredited by the American National Standards Institute in 1983 to develop safety standards for the printing and publishing industry.

The B65 Committee recommends the voluntary adoption and use of this standard by the printing industry and its suppliers. It is hoped that individual companies will not only use it in the purchase of new equipment, but will also apply the requirements of this standard during any major change or alternation of existing equipment.

It is recommended that this standard, or applicable parts of it, be referenced in purchase orders for equipment, when appropriate, thus making its provisions a part of the purchase contract.

It is also recommended that this standard be a part of the total safety program in the workplace. Application of this standard will promote safety, and management at all levels is urged to recommend its implementation.

Requests for interpretation must be sent in writing to the B65 Secretariat. This request will be forwarded to the appropriate committee, which will review the request in accordance with the B65 Committee Procedures for Interpretations and will provide a written response. A statement, written or oral, that is not processed in accordance with the procedures noted above will not be considered the official position of the B65 Committee, and should not be relied upon as a Formal Interpretation.

Suggestions for improving this standard are welcome. They should be sent to the B65 Secretariat, NPES The Association for Suppliers of Printing, Publishing and Converting Technologies, 1899 Preston White Drive, Reston, Virginia 20191.

This standard was prepared by B65 Subcommittee 6 (Ink-Making Equipment Safety) and was processed and approved for submittal to ANSI by the members of B65 SC6. Committee approval of the standard does not necessarily imply that all committee members voted for its approval.

At the time it approved this revision, B65 SC6 had the following personnel:

Chairman – George Fuchs

Secretary – Debbie Orf

Organization

Buhler Inc.
Chemical Research Technology
Colorcon
Joules Angstrom
Individual Expert
INX International
Keith Machinery Corporation
National Association of Printing Ink Manufacturers

Representative

Mr. Patrik Maeder
Mr. John Tingle
Mr. Gerald Napiecek
Ms. Lisa Fine
Mr. Neal Growney
Mr. James Bailen, Mr. Kevin Cochran, Mr. Joseph Cichon
Mr. Jon Hatz
Mr. George Fuchs

Introduction

The purpose of this standard is to provide standardized guidance, advice and recommendations to both equipment designers, equipment operators (referred to in this standard as authorized persons), and equipment owners aimed at reducing the risk of injury to personnel during the operation of three-roll printing ink mills.

The information contained in this document is intended to be used in conjunction with the development, implementation and maintenance of process specific/in-house safe operating procedures, safety training, inspection and maintenance programs and other accepted means of minimizing hazards associated with the operation of three-roll printing ink mills.

Safety standard — Three-roll printing ink mills

1 Scope

The requirements of this standard apply to all three-roll mills used for the manufacturing of printing inks or similar materials used in the printing ink manufacturing industry. The purpose of this standard is to establish safety requirements with respect to safety controls, operating procedures and design of three-roll mills used for the manufacturing of printing inks.

2 Effective date

The effective date of this standard shall be 1 year after its approval date as an American National Standard.

3 Existing equipment

All existing three-roll mills shall be brought into compliance with this standard by January 1, 2020, unless otherwise noted.

NOTE: Small-scale (twelve 12 inches or less), non-production mills are excluded from sections 8.4, 8.5 and the nip-point interlock requirement (only) in section 10.2.

Exception: If existing equipment changes both ownership and location, it shall comply with the provisions of this standard before the equipment is placed into service.

4 Rebuilt equipment

When existing three-roll mills are rebuilt, the owner of the three-roll mill shall bring the machinery into compliance with this standard.

5 Normative references

The following normative documents contain provisions that, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below.

ANSI/NFPA 70, *National Electrical Code*

ANSI/NFPA 79, *Electrical Standard for Industrial Machinery*

ANSI Z535.4, *Product Safety Signs and Labels*

IEC 60204-1, *Safety of machinery — Electrical equipment of industrial machines — Part 1: General requirements*

ISO 12100-2, *Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles*

OSHA 1910.23(c)(1), *Guarding floor and wall openings and holes*