AMERICAN NATIONAL STANDARD

Large Rivets

ANSI B18.1.2 - 1972

(REVISION OF B18.4–1960)

1/2 Inch Nominal Diameter and Larger

REAFFIRMED 2016

SECRETARIAT

SOCIETY OF AUTOMOTIVE ENGINEERS
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

PUBLISHED BY

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

United Engineering Center 345 East 47th Street New York, N. Y. 10017

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FOREWORD

American National Standards Committee B18 for the standardization of bolts, screws, nuts, rivets and similar fasteners was organized in March 1922, as Sectional Committee B18, under the aegis of the American Engineering Standards Committee (later the American Standards Association, then the United States of America Standards Institute and, as of October 6, 1969, the American National Standards Institute, Inc.) with the Society of Automotive Engineers and the American Society of Mechanical Engineers as joint sponsors. Subcommittee 1 was subsequently appointed and charged with responsibility for the standardization of rivets.

Initial efforts of the Subcommittee were directed at development of a standard covering solid rivets of less than 1/2 inch nominal diameter which was approved and designated B18a–1927. This was followed by a standard covering tinners, coopers and belt rivets that was adopted under the designation B18g–1928.

Extensive research, periods of experimentation, and consultation with the American Society for Testing and Materials and the Boiler Code Committee of the American Society of Mechanical Engineers during the ensuing years culminated in Subcommittee acceptance, in 1936, of a proposal covering rivets 1/2 inch nominal size and larger. This proposal, following approval by the Sectional Committee and sponsor organizations was designated an American Standard, B18.4–1937, in March of 1937.

Following reorganization of Sectional Committee B18, in 1947, Subcommittee 1 was requested to review the documents under its jurisdiction to bring them up to date and, as necessary, develop them into complete product standards. A thorough study of the B18.4 standard was conducted over meetings of the Subcommittee held on October 9, 1947, June 4, 1948 and December 1, 1948. This resulted in a recommendation that the pan head rivets should be changed to conform with the American Bureau of Shipping and U. S. Navy design which all manufacturers, except one, were found to be producing. A proposal dated September 1959, reflecting this change and additional refinements was approved by letter ballot of the B18 Committee and sponsors, and presented to the American Standards Association for approval and designation as an American Standard. This was given on August 30, 1950.

The B18 Committee by letter ballot of August 13, 1956 approved reaffirmation of the B18.4–1950 document and, following approval by the sponsors, this status was confirmed by the American Standards Association on May 27, 1957.

A proposed revision dated August, 1959 was approved by the Sectional Committee, the sponsors, and the American Standards Association and was designated an American Standard on March 9, 1960.

During 1970, Subcommittee 1 developed a proposed revision incorporating changes to the nomenclature and the method of dimensioning applicable to countersunk type heads and a complete editorial revamping of the format to conform with related documents. Following letter ballot approval by the B18 Committee and sponsor organizations, the revision was submitted to the American National Standards Institute and was designated an American National Standard, ANSI B18.1.2–1972, on January 28, 1972.

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Standardization of Bolts, Nuts, Rivets, Screws and Similar Fasteners

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CONTENTS

AMERICAN NATIONAL STANDARD

LARGE RIVETS

1/2 INCH NOMINAL DIAMETER AND LARGER

1 INTRODUCTORY NOTES

1.1 SCOPE

1.1.1 This standard covers complete general and dimensional data for those types of large solid rivets recognized as "American National Standard" together with dimensional data applicable to manufactured heads after driving, driven heads, and hold-on (dolly bar) and rivet set impressions. Also included are appendixes covering formulas on which dimensional data are based. It should be understood, however, that where questions arise concerning acceptance of product, the dimensions in the tables shall govern over recalculation by formula.

1.1.2 The inclusion of dimensional data in this standard is not intended to imply that all of the products described are stock production sizes. Consumers should consult with manufacturers concerning the availability of products.

1.2 RIVETS

1.2.1 Head Types. The head types covered by this standard are designated, respectively, as button head, high button head (acorn), cone head, flat countersunk head, oval countersunk head and pan head. All other head types for large solid rivets shall be considered special.

1.2.2 Shank Diameters. The diameters of rivet shanks as given for the respective types of rivets in the tables shall be standard. This, however, does not preclude the manufacture or use of rivets having other diameters required for special applications.

1.2.3 Head Proportions. The dimensions for heads of rivets specified in the respective tables shall be standard. Other head proportions shall be considered special. Where non-standard diameter rivets are required for special applications, the proportions of heads shall preferably be based on the formulations given in the appendixes.

1.2.4 Swell Necks. Large rivets are normally furnished with straight shanks up to the head. When specified, however, the swell neck included in Table 7 of this standard is applicable to all standard large rivets except the flat countersunk head and oval countersunk head.

1.3 MANUFACTURED HEADS AFTER DRIVING, DRIVEN HEADS, AND HOLD-ON (DOLLY BAR) AND RIVET SET IMPRESSIONS

Dimensions of manufactured heads after driving for button head, high button head, cone head and pan head types of rivets and for hold-on (dolly bar) impressions are included in this standard for design reference purposes. These dimensions apply also to driven heads of rivets as formed from the end and to the corresponding rivet set impressions. See Figure 1 for explanation of terms.

1.4 DIMENSIONS

All dimensions in this standard are given in inches, unless otherwise stated.

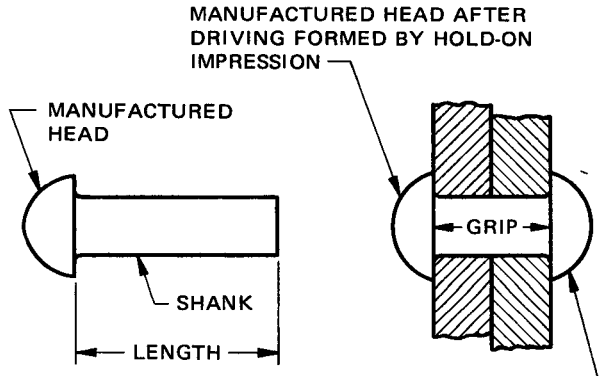

FIGURE 1 RIVET TERMS

1.5 TERMINOLOGY

The nomenclature applicable to rivets as manufactured and after driving is depicted in Figure 1. For definitions of other terms relating to fasteners or