

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)	NUMBER: MPAPS- A-1	
	Former Designation: CEMS A-1	
TITLE: Hot Rolled Steel, Carbon And Alloy Bars And Carbon Wire Rods	CURRENT REV No.: 1506	DATE: June 2015
WRITTEN/EDITED BY: W. Cook	APPROVED BY: R. Goluch	SUPERSEDES: October 2001
PRINTED COPIES OF THIS DOCUMENT MUST BE VERIFIED FOR CURRENT REVISION		
<i>This specification may involve hazardous materials, equipment, and procedures. This specification does not purport to address all of the safety issues associated with its use. The user is responsible to consult appropriate safety and health practices and to determine the applicability of regulatory limits prior to use.</i>		
Change Notice: Removed dimensional tolerance reference tables; Editorial changes; Combined appendix; MPAPS Formatting		

1.0 APPLICATION

Hot rolled steel bars have lower cost per pound than cold rolled and cold finished bars. These products can be used economically in many applications where limited surface decarburization is acceptable. (See A.0 – General Information)

2.0 SCOPE

This specification covers requirements for general applications of hot rolled carbon and alloy bars and carbon steel wire rods used in the Company's products. Whenever applicable, the specification should be used in conjunction with A-0, Part II, Navistar System of Steel Classification. Requirements for hot rolled bars and wire rods not included in this specification are in the following specifications:

Low Carbon Steel, Flat Rolled and Structural Shapes	MPAPS A-6
Wrought Corrosion and Heat Resisting Steels	MPAPS A-37
High Strength-Low Alloy Steels	MPAPS A-43

2.1 Restricted Chemical Substances

Effective January 1, 2007, all product supplied to the requirements of this specification must comply with the requirements of the MPAPS B-50 specification.

3.0 REFERENCE DOCUMENTS

Unless otherwise specified, the latest issue of all referenced standards shall apply. The following standards, specifications and regulations are referenced in this specification.

Quality System Standard ISO 9001 or TS-16949	NAVISTAR MPAPS B-50
CFR Title 29, Part 1910	NAVISTAR MPAPS A-0, Part I
NAVISTAR Manufacturing Std. MS-D-13	ASTM A29
NAVISTAR Engineering Design Std A-16	ASTM A575
	ASTM A576

This document is restricted and may not be sent outside Navistar, Inc. or reproduced without permission from Corporate Technical Standards. Suppliers are required to assume all patent liability. ©2015 by Navistar, Inc.

JUNE 2015

NUMBER: MPAPS A-1	TITLE: Hot Rolled Steel, Carbon And Alloy Bars And Carbon Wire Rods	CURRENT ISSUE DATE: June 2015
-----------------------------	--	---

4.0 REQUIREMENTS

Hot rolled steel bars are classified by chemical composition and by their quality designations. Product supplied shall meet the general requirements of ASTM A29.

4.1 Chemical Composition

Bars and wire rods purchased to this specification shall conform to the required analysis for the appropriate steel in MPAPS A-0, Part I.

4.2 Dimensional Tolerances

Materials purchased to this specification shall conform to dimensional tolerances as per ASTM A29.

5.0 QUALITY

Carbon steel bars are produced in two fundamental qualities: Merchant Quality (ASTM A575) and Special Quality (ASTM A576). Merchant Quality bars are available in certain compositions at a lower cost than Special Quality bars. However, Merchant Quality bars may contain surface or internal defects which may preclude their use in applications involving forging or heat treating. Special Quality bars shall be conditioned as necessary to remove injurious surface defects and shall be free of visible pipe. Carbon steel bars furnished to this specification shall be Special Quality unless otherwise specified.

5.1 Alloy steel bars are made with more than ordinary care throughout their manufacture. Therefore, for most applications, the quality of alloy bars produced to normal mill practice will be acceptable and no quality designation is necessary. Special applications may require alloy steel bars produced to a specific quality designation such as Axle Shaft Quality or Cold Heading Quality. Alloy steel bars furnished to this specification shall be produced to normal mill practice with no quality extras applicable unless otherwise specified.

5.2 Carbon steel wire rods are semifinished products intended primarily for the manufacture of wire. Unless otherwise specified, carbon wire rods furnished to this specification shall be Industrial Quality.

5.3 Qualities for steel bars and wire rods shall be specified on the purchase order. See "Designation on Drawings and Purchase Orders" and Appendix - General Information."

5.4 See ASTM A-29 for test Methods.

6.0 QUALIFICATION

Engineering qualification of sources is required in advance of production shipments. Samples shall be accompanied by test data certifying that all requirements of the specification have been met.

6.1 Quality Control Plan

A Quality Control Plan for products supplied to the requirements of this specification will be established by mutual agreement between NAVISTAR and the supplier. Unless specific exception is noted, the following characteristics, where applicable*, shall be included in the plan as features for management by statistical process control.**



* Other characteristics for inclusion in the control plan may be specified on the engineering drawing and/or purchase order.

** See NAVISTAR Engineering Design Standard A-16

This document is restricted and may not be sent outside Navistar, Inc. or reproduced without permission from Corporate Technical Standards. Suppliers are required to assume all patent liability. ©2015 by Navistar, Inc.

JUNE 2015