
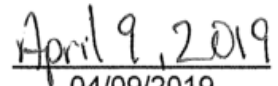




TAM International Incorporated

Carbon Steel Material for Load Bearing or Pressure Containing Parts, 80KSI Yield

ESMA-1005

Approval of Document <u>ESMA-1005</u>	
Signature	 Luis Garcia – Sustaining Engineering Manager
	 04/09/2019


 TAM INTERNATIONAL	Document Title	Carbon Steel Material for Load Bearing or Pressure Containing Parts, 80KSI Yield				
	Document No.	ESMA-1005	Rev	B	Page	1 OF 5
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Table of Contents

1.0 SCOPE..... 3

2.0 CHEMISTRY 3

3.0 MECHANICAL PROPERTIES 3


4.0 WELDABILITY..... 3

5.0 DIMENSIONAL TOLERANCES..... 3

6.0 REPORTS..... 4

7.0 MATERIAL ACCEPTANCE 4

8.0 DOCUMENT REVISION..... 4

 TAM INTERNATIONAL	Document Title	Carbon Steel Material for Load Bearing or Pressure Containing Parts, 80KSI Yield				
	Document No.	ESMA-1005	Rev	B	Page	2 OF 5
	CAUTION: Check for latest revision of this document before use. Information contained in copied or printed material may be superseded.					



1.0 Scope

- 1.1 This document provides specifications for DOM carbon steel material with 80KSI minimum yield strength used for producing load bearing or pressure containing component parts in TAM products.
- 1.2 Material specified by this document shall be in accordance with NACE MR-0175 (ISO 15156).

2.0 Chemistry

- 2.1 Material shall be carbon steel meeting the following chemistry requirements:

Carbon (C) .22-.28
 Manganese (Mn) .60-.90
 Phosphorus (P) .040 Max
 Sulfur (S) .050 Max

3.0 Mechanical Properties

- 3.1 The mechanical properties of this material shall conform to the following requirements:
 - 3.1.1 80,000 psi minimum yield strength as determined in accordance with ASTM A370.
 - 3.1.2 90,000 psi minimum tensile strength as determined in accordance with ASTM A370
 - 3.1.3 Minimum Elongation of 10%
 - 3.1.4 Material shall have a Minimum hardness of HRB 90 (HRC 11) and a Maximum hardness of HRB 99 (HRC 22) as determined in accordance with ASTM E18.

No other mechanical properties are required by this specification to be reported unless otherwise specified.

4.0 Weldability

- 4.1 Material weldability shall meet or exceed the requirements listed for ASTM A519, P1 materials as identified in ASME BPVC-IX.

	Document Title		Carbon Steel Material for Load Bearing or Pressure Containing Parts, 80KSI Yield			
	Document No.	ESMA-1005	Rev	B	Page	3 OF 5
	CAUTION: Check for latest revision of this document before use. Information contained in copied or printed material may be superseded.					



5.0 Dimensional Tolerances

5.1 Unless otherwise specified, dimensional tolerances shall comply with the following:

5.1.1 Plates shall comply with the dimensional requirements of ASTM A568.

5.1.2 Tubes shall comply with the dimensional requirements of ASTM A450.

5.1.3 Bars shall comply with the dimensional requirements of ASTM A29.

5.1.4 Shapes shall comply with the dimensional requirements of ASTM A6.

6.0 Reports

6.1 Material ordered to this specification shall be accompanied by a Material Test Report. Report shall contain the following minimum information which will be subject to inspection upon receipt:

6.1.1 Statement of material type/grade

6.1.2 Chemical analysis that shows the carbon content

6.1.3 Material yield strength

6.1.4 Material hardness

6.1.5 Material Identification Number


7.0 Material Acceptance

7.1 All requirements of this specification are subject to verification at the discretion of TAM International.

7.2 TAM Engineering Manager or designee is ultimately responsible for accepting or rejecting material that does not conform to any portion of this specification.


8.0 Document Revision

8.1 Document revisions will be handled in accordance with SOP-009 Document Control.

 TAM INTERNATIONAL	Document Title	Carbon Steel Material for Load Bearing or Pressure Containing Parts, 80KSI Yield				
	Document No.	ESMA-1005	Rev	B	Page	4 OF 5
	CAUTION: Check for latest revision of this document before use. Information contained in copied or printed material may be superseded.					



Rev	Date	Description	Prepared By:	Reviewed By / Approved By	Date
A	12/13/2017	New Document for 75KSI Carbon Steel	T. Young	M. Coronado / G. Fletcher	12/21/2017
B	04/09/2019	Change yield value to 80K minimum	D. Gregory	D. Gregory, L. Garcia, T. Young, G. Fletcher	04/23/2019

 TAM INTERNATIONAL	Document Title	Carbon Steel Material for Load Bearing or Pressure Containing Parts, 80KSI Yield				
	Document No.	ESMA-1005	Rev	B	Page	5 OF 5
	CAUTION: Check for latest revision of this document before use. Information contained in copied or printed material may be superseded.					