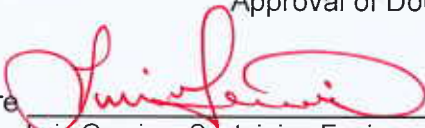


# TAM International Incorporated


## Carbon Steel Material for Load Bearing or Pressure Containing Components, 50 ksi Yield

### ESMA-1003

Approval of Document ESMA-1003

Signature  Date Feb. 9<sup>th</sup>, 2022

Luis Garcia – Sustaining Engineering Manager


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**1 SCOPE**

- 1.1. This document provides specifications for carbon steel material with 50 ksi minimum yield strength used for producing load bearing or pressure containing component parts in TAM products.
- 1.2. **Material specified by this document is compliant to NACE MR-0175, Part 2 Annex A (ISO 15156).**

**2. ACCEPTABLE MATERIALS / CHEMISTRY**

- 2.1. Any carbon steels that fall within **0.12 – 0.35 %** carbon content are acceptable as long as the material meets all other requirements of this specification.

**3 MECHANICAL PROPERTIES**

- 3.1 The mechanical properties of this material shall conform to the following requirements:
  - 3.1.1 50,000 psi minimum yield strength as determined in accordance with ASTM A370.
  - 3.1.2 22 RC maximum hardness as determined in accordance with ASTM E18.


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

**4 WELDABILITY**

- 4.1 **Material weldability shall meet or exceed the requirements listed for ASTM 519, P1 materials as identified in ASME BPVC-IX.**

Ferrous and Nonferrous P-Numbers

Spec No.	Type/Grade	P-No.
A519	1018 CW	1
A519	1018 HR	1
A519	1020 CW	1
A519	1020 HR	1
A519	1022 CW	1
A519	1022 HR	1
A519	1025 CW	1
A519	1025 HR	1
A519	1026 CW	1
A519	1026 HR	1

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**5 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 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 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.
- 7.3 Any material deviations must be submitted and approved on a Material Deviation Request (PF-09) before machining can begin.

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Rev	Date	Description	Prepared By:	Reviewed By / Approved By	Date
A	7/21/15	New Document	Mark Wyatt	M. Wyatt, G. Fletcher, T. Young	7/21/2015
B	9/25/2015	Material should be for 50 KSI instead of 55 KSI	Jeff Dinkel	J. Dinkel, M. Wyatt, G. Fletcher, T. Young	9/28/2015
C	01/21/2022	All changes marked in <b>Red</b> . (Sect. 1, Sect. 2, Sect. 4,)	G. Fletcher	J. Dinkel, L. Garcia, T. Young, D. Gregory; / G. Fletcher	01/28/2022

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