

Issued	1995-03
Revised	2003-12
Cancelled	2007-03
Superseding AS7110/6C	

**Nadcap
Requirements for Laser Welding**

RATIONALE

AS7003 at Revision C removed the requirement for AS standards. The Nadcap Weld Task Group have revised their checklists and per AS7003 have not re-written associated standards. The AS standards, therefore, require cancellation.

CANCELLATION NOTICE

This document has been declared "CANCELLED" as of March 2007. By this action, this document will remain listed in the Numerical Section of the Aerospace Standards Index.

SAENORM.COM : Click to view the full PDF of as7110-6d

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2007 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Tel: 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org

SAE WEB ADDRESS:

<http://www.sae.org>

SAENORM.COM : Click to view the full PDF of as7110_6d

AEROSPACE STANDARD

SAE AS7110/6

REV.
D

Issued 1995-03
Revised 2003-12
Cancelled 2007-03

Superseding AS7110/6C

Nadcap Requirements for Laser Welding

1. SCOPE:

This Aerospace Standard (AS) is to be used to supplement AS7110. In addition to the requirements contained in AS7110, the requirements contained herein shall apply to suppliers seeking Nadcap accreditation for laser welding.

2. REFERENCES:

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

AS7110 Nadcap - Requirements for Welding/Brazing

3. REFERENCE REQUIREMENTS:

3.1 Applicable customer specifications shall be available at the facility.

4. MATERIALS/MATERIAL CONTROL:

4.1 The surfaces of parts to be welded shall be free from detrimental films such as heavy oxides, scale, ink, grease, dirt, or other substances or surface conditions detrimental to the welding processes.

5. EQUIPMENT CONTROL:

5.1 Welding equipment shall meet the customer's requirements.

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2007 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER:

Tel: 877-606-7323 (inside USA and Canada)

Tel: 724-776-4970 (outside USA)

Fax: 724-776-0790

Email: CustomerService@sae.org

<http://www.sae.org>

SAE WEB ADDRESS:

SAE AS7110/6 Revision D

6. QUALIFICATION OF OPERATORS/EQUIPMENT/PROCEDURES/SCHEDULES:

- 6.1 Welding procedure qualification records shall be maintained in accordance with applicable customer specifications.
- 6.2 Operators shall be qualified on each type of equipment they operate to customer specification requirements and test records/results shall be available for each operator.
- 6.3 Laser equipment qualification shall be performed to customer requirements.
- 6.4 Qualification records/results shall be available for each laser machine.

7. PROCESS CONTROL:

- 7.1 The supplier shall have a quality plan that defines method and verification for all applicable blueprint requirements.
- 7.2 The router shall list the sequence of operations that document manufacturing, acceptance, and process operations.
- 7.3 There shall be detailed operation sheets per part number with parameter settings (laser schedule).
- 7.4 There shall be a procedure or controls in place to address the following:
 - a. Laser equipment
 - b. Gages
 - c. Dimensional requirements of the process
 - d. Laser safety
 - e. Laser welding procedures
 - f. Laboratory analysis and its frequency to prove continuing conformance to engineering limits.
- 7.5 When laboratory reports are required, they shall be traceable to parameter settings on operation sheets (laser schedule).
- 7.5.1 Laboratory analysis reports shall be documented and held on file for customer review as proof of conformance that welded parts are within engineering limits.