



SURFACE VEHICLE RECOMMENDED PRACTICE

J2597™

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Superseding J2597 JAN2010

Computer Generated Shot Peening Saturation Curves

RATIONALE

J2597 has been reaffirmed to comply with the SAE Five-Year Review policy.

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1. SCOPE

This SAE Recommended Practice defines a procedure for the use of computer generated saturation curves to determine peening intensity. Calculation of intensity within a tolerance band for each data set in Table 1 one is required for compliance with this practice.

1.1 Purpose

Manually constructed saturation curves are difficult to generate and are subjective. The use of computer algorithms will provide a consistent treatment of data and also allow a convenient method to archive the data. This Practice includes examples of computer algorithms. It is the users responsibility to develop a suitable computer algorithm which generates data within the tolerance bands of Table 1.

2. REFERENCES

2.1 Applicable Publications

The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest version of SAE publications shall apply.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

SAE J442 Test Strip, Holder, and Gage for Shot Peening

SAE J443 Procedures for Using Standard Shot Peening Test Strip

3. PROCEDURE

Ten data sets are shown in Table 1. Each data set contains values for exposure times and test strip arc heights and a corresponding intensity answer. The candidate computer program must generate a saturation curve and numerical declaration of intensity which is within the tolerance band for each data set. The algorithm must produce results compliant with SAE J443.

3.1 Caution

Users are cautioned to examine and evaluate the validity of any graph generated or intensity value declared. There may be instances of curve construction from erroneous data that results in invalid intensity values. It is the user's responsibility to validate the data and the results obtained independently of the saturation curve program.