

Strain-Life Fatigue Data Exchange File Format

- 1. Scope**—SAE format for a SIMPLE Strain-Life Fatigue Data Exchange File Format. The object of this SAE Standard is to provide a simple common way to exchange strain-life fatigue data collected from ASTM E 606 axial fatigue test data.
- 2. References**
 - 2.1 Applicable Publication**—The following publication forms a part of the specification to the extent specified herein. Unless otherwise indicated, the latest revision of SAE publications shall apply.
 - 2.1.1 ASTM PUBLICATION**—Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM E 606—Recommended Practice for Constant-Amplitude Low-Cycle Fatigue Testing
- 3.** A sample file that also describes the format of the contents is depicted on the following page.

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.

TO PLACE A DOCUMENT ORDER; (724) 776-4970 FAX: (724) 776-0790
SAE WEB ADDRESS <http://www.sae.org>

Sample File:

Any line that begins with a # sign is a comment line, or an identifier
#line. Blank lines can also be inserted anywhere.

#-----

Certain lines that begin with a #SYMBOL= VALUE have special meanings
that can be decoded by the receiving program, e.g.:

#NAME= SAE1045
#NAME= SAE350X
#NAME= SAE050X

#UNITS= KSI

#Su= 89.

#Sy= 50.

#E= 30000.

#%RA= 85.

#BHN= 325

#-----

Other comments can be anything in ASCII text

#Tempered Martensite structure

Brine Q & T @ 360F/1hr

LONGITUDINAL to the direction of rolling

Here is an example of a data point set. Note that a comment field
#can also be appended to the data field, or in between the data lines.
#A data line is assumed to be any line that is not a blank or a comment
#line. The data should contain one fatigue test per line, and on each
#line the fields are separated by one or more blanks.

#	# Total Strain		Stress Amp.	Mean Stress	Plastic Strain	Initial Elastic	
#	Amp	2NF	(ksi)	(ksi)	Amp.	Modulus (ksi)	
	0.0125	180	279.	0.	0.0030	29121.	# specimen comment
	0.0095	490	253.	0.	0.0011	28685.	
	0.0090	950	229.	0.	0.0007	28974.	
	0.0075	2260	220.	0.	0.0002	29272.	
	0.0050	38000	149.	0.	0.	29483.	
	0.0040	770000	119.	0.	0.	29779.	
# buckled?:							
	0.022	10	320.	0.	0.0102	26717	
#							
#							

PREPARED BY THE SAE FATIGUE, DESIGN, AND EVALUATION COMMITTEE