



Side Impact Test

1 Introduction

Note: Nothing in this standard supercedes applicable laws and regulations.

Note: In the event of conflict between the English and domestic language, the English language shall take precedence.

1.1 Purpose. This standard describes a test procedure that utilizes a standard lap shear sample to determine the comparative impact strength of adhesive bonds in torsional impact.

1.2 Applicability. This standard can be used in laboratory testing of structural adhesive used for the bonding of metal and/or composite.

1.3 Remarks. Instrumentation and fixturing other than what is described in this standard may be used when approved by the requesting GM Engineer.

2 References

Note: Only the latest approved standards are applicable unless otherwise specified.

2.1 External Standards/Specifications.

ASTM D5868

2.2 GM Standards/Specifications.

None

2.3 Additional References. None.

3 Resources

3.1 Facilities. Facilities used in conjunction with this test procedure shall not impact the results of the testing.

3.1.1 Calibration. The test facilities and equipment shall be in good working order and shall have a valid calibration label.

3.1.2 Alternatives. Alternative test facilities and equipment may also be used. However, all measuring variables as specified in this standard shall be determined correctly with respect to their physical definition.

3.2 Equipment.

3.2.1 Impact Test Fixture, Pendulum Type (see Figure 1). The testing apparatus may be any suitable construction that will provide adequate support and minimum friction for the moving head. The base shall provide a means for securing samples being tested in a position which will cause the impact head to strike at right angles to the bond. It shall be equipped with a joule indicator (see Figure 2).

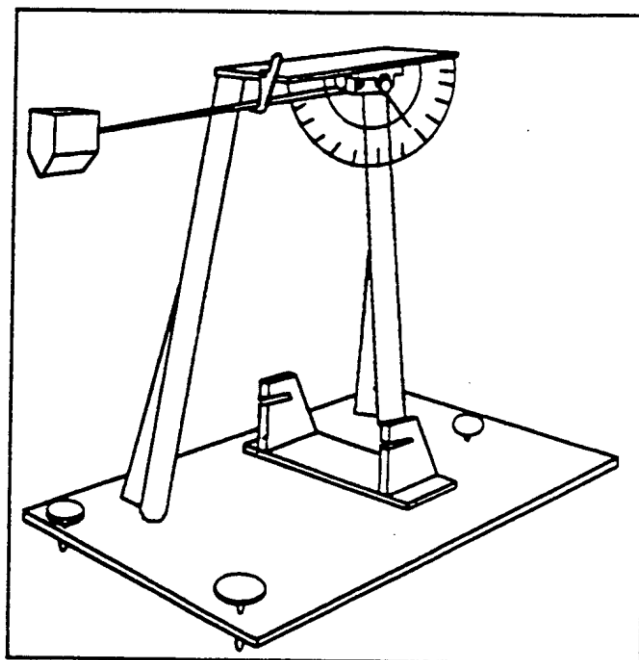


Figure 1: Impact Tester

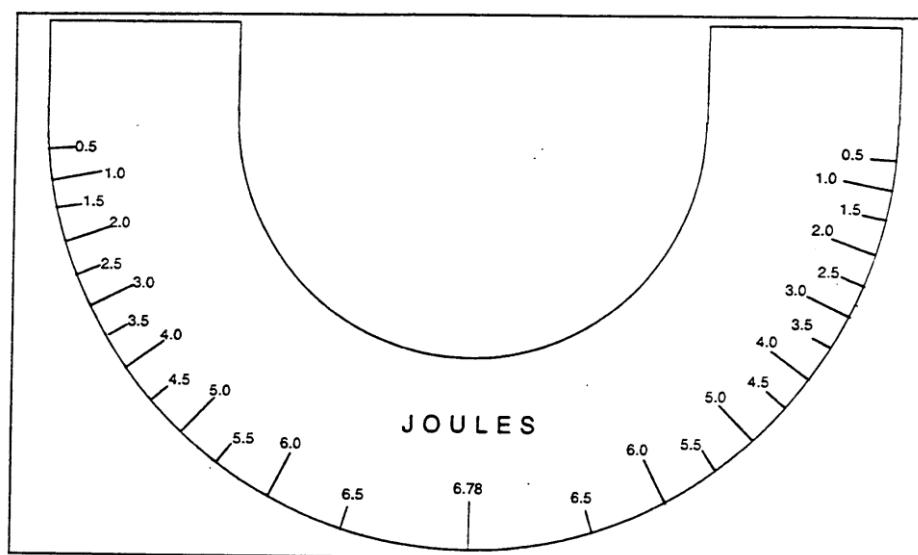


Figure 2: Joules Indicator

3.3 Test Vehicle/Test Piece. Test samples used in this standard are constructed according to ASTM D5868.

3.4 Test Time. The stated test time is based on the assumption of prepared and test ready samples.

Calendar time: 1 d

Test time: 0.25 h

Coordination time: 1 h

3.5 Test Required Information. All required dimensions necessary for the construction of an impact test fixture as shown in Figure 3.