



Standard Test Method for Shock Testing of Structural Insulation of A-Class Divisions Constructed of Steel or Aluminum¹

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^{ε1} NOTE—Editorially corrected the designation to reflect dual units of measurement statement (1.5) in October 2013.

INTRODUCTION

Passive fire protection materials have been required and used on commercial ships for decades. The passive systems include the non-combustible insulation material and its means of attachment to steel or aluminum divisions. The passive system has been evaluated in a standard fire test using a standard steel or aluminum structural core. No impact loading has been required prior to testing for fire resistance.

The United States Navy requires shock testing of passive fire protection prior to fire resistance testing; this test is defined in MIL-STD-3020, Fire Resistance of U.S. Naval Surface Ships, 7 November, 2007. The technology to economically shock test the passive fire protection systems was developed 50 years ago, and equipment in commercial laboratories is available.

After the terrorist attack on September 11, 2001 it is our responsibility that we add a level of shock protection to our passive fire protection systems on commercial ships where appropriate.² Many of the passive fire protection systems used today are mechanically fastened and will perform the intended function after a shock event.

Passive fire protection insulation may have thermal or acoustic treatments added to the insulated division. These treatments add mass to the fire protection system and their effect on shock is not included in this specification.

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1. Scope

1.1 The purpose of the specification is to evaluate insulation installed on steel or aluminum structural division as defined in

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² JOM, 53(12), 2001 pp 8-12 and www.nist.gov/publicaffairs/releases/wtc-briefing-april0505.htm