ATIS-0600010.02.2012(R2017)

EQUIPMENT HANDLING, TRANSPORTATION VIBRATION, AND RAIL CAR SHOCK REQUIREMENTS FOR NETWORK COMMUNICATIONS EQUIPMENT

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ATIS-0600010.02.2012, *Equipment Handling, Transportation Vibration, and Rail Car Shock Requirements for Network Communications Equipment*

Is an American National Standard developed by the **Network Physical Protection (NPP) Subcommittee** under the **ATIS Sustainability in Telecom: Energy and Protection (STEP) Committee**.

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American National Standard on

Equipment Handling, Transportation Vibration, and Rail Car Shock Requirements for Network Communications Equipment

Alliance for Telecommunications Industry Solutions

Approved January 17, 2012

Abstract

This standard specifies covers the minimum equipment handling, transportation vibration, and rail car shock criteria for communications equipment.

It is the intent of this standard to utilize the latest versions of ATIS standards that are referenced. It is also the intent to utilize (where appropriate) newer versions of other standards or documents that are referenced provided they do not conflict with the intent of this standard.

Foreword

The information contained in this Foreword is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. As such, this Foreword may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Standard.

The Alliance for Telecommunication Industry Solutions (ATIS) serves the public through improved understanding between carriers, customers, and manufacturers. The Sustainability in Telecom: Energy and Protection (STEP) Committee – formerly the Network Interface, Power, and Protection Committee (NIPP) -- engages industry expertise to develop standards and technical reports for telecommunications equipment and environments in the areas of energy efficiency, environmental impacts, power and protection. The work products of STEP enable vendors, operators and their customers to deploy and operate reliable, environmentally sustainable, energy efficient communications technologies. STEP is committed to proactive engagement with national, regional and international standards development organizations and forums that share its scope of work.

ANSI guidelines specify two categories of requirements: mandatory and recommendation. The mandatory requirements are designated by the word *shall* and recommendations by the word *should*. Where both a mandatory requirement and a recommendation are specified for the same criterion, the recommendation represents a goal currently identifiable as having distinct compatibility or performance advantages.

Suggestions for improvement of this document are welcome. They should be sent to the Alliance for Telecommunications Industry Solutions, STEP, 1200 G Street NW, Suite 500, Washington, DC 20005.

At the time of consensus on this document, STEP, which was responsible for its development, had the following roster:

C. Coyle, STEP Chair (Intertek)
C. Ashton, STEP Vice-Chair (CenturyLink)
R. Ivans, STEP-NPP Chair (Underwriters Laboratories)
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E. Dornes, Technical Editor (Southwest Research Institute)
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The Network Physical Protection (NPP) Subcommittee was responsible for the development of this document.

Table of Contents

Table of Figures

Table of Tables

American National Standard for Telecommunications –

Equipment Handling, Transportation Vibration, and Rail Car Shock Requirements for Network Communications Equipment

1 Scope, Purpose, & Application

1.1 Scope

This standard covers the minimum equipment handling, transportation vibration, and rail car shock criteria for communications equipment.

This standard defines criteria for equipment handling, transportation vibration, and rail car shock environments, after which the equipment must operate and be free from mechanical damage. For vendors that require other industry standards, see Annex A for application of those test methods.

The expectation is that equipment will continue to function properly and without any unexpected degradation of performance once subjected to the identified stresses and criteria.

1.2 Purpose

Currently, the communications industry is using many different standards to verify compliance of equipment. These include but are not limited to Telcordia Generic Requirements, European Telecommunication Standards Institute (ETSI) specifications, and Alliance for Telecommunications Industry Solutions (ATIS) Standards. This standard takes into consideration the environments, as well as the various standards and documents mentioned in Table 1 and develops a sequence of tests. This methodology will provide end-users a way of validating compliance in a more efficient and comprehensive manner.

The purpose of this standard is to provide the service providers, end-users, manufacturers, test labs, etc., a means of testing communications equipment and its shipping containers/packaging to the minimum equipment handling, transportation vibration, and rail car shock stresses encountered in normal deployment. This standard also provides the test methodologies and test report criteria necessary for proper evaluation by interested parties and those intending to deploy equipment.

1.3 Application

This standard applies to communications equipment intended to be installed and utilized by service providers, end-users, manufacturers, etc.

This standard applies to equipment deployed in communication networks that is expected to meet currently established baseline criteria (see Section 3). The criteria within the normative section of this standard is a combination of existing criteria defined in various specifications brought together to harmonize, where possible, and minimize repetitive testing. These are the baseline requirements for all communications equipment.

The criteria within Annex A is a combination of existing criteria defined in various international and generic shipping specifications brought together to harmonize, where possible, and minimize repetitive testing. These criteria, when compared to the criteria in the normative portion of this standard are hierarchical in nature whereby equipment tested to Annex A, by default is considered compliant to the criteria in the normative portion of the standard. Annex A may apply to equipment deployed in communication networks that may be exposed to shipping environments that require more comprehensive criteria (see Section 3 and Annex A).