

Freight Car Safety Appliance Standards

Mechanical Association Railcar Technical Services
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Introduction

- Equipment Engineering Committee (EEC) opened docket in February 2002
 - ◆ Objective is to reduce uncertainties in obtaining Federal Railroad Administration (FRA) safety appliance approvals
- FRA representative mentioned at March 2002 EEC meeting that the FRA was forming internal committee to review safety appliance applications.
- Given the above parallel efforts, and with American Railway Car Institute (ARCI) participation, the EEC established the Safety Appliance Task Force in March 2002.

Introduction

- Original Task Force Members included
 - ◆ AAR EEC Members
 - ◆ ARCI Members
- FRA participation

Introduction

- Task Force Meetings began in June 2002
- Task Force decided to pursue development of AAR safety appliance standard rather than proposing revisions to FRA Regulations
- AAR standards have greater flexibility for revision as new car types come into existence or technology affecting safety appliances changes
- Transport Canada (TC) participation was added.
 - ◆ With FRA and Transport Canada (TC) participation on the Task Force, intent is to seek acceptance of cars built to the AAR standard as being compliant with FRA and TC regulations

Current Safety Appliance Task Force

- EEC, ARCI, FRA, TC, TWU, UTU
 - ◆ Rail labor members added in order to include all stakeholders
- Current members and/or participants
 - ◆ EEC – Dick Dawson (chairman), Tom Glasscock (vice chairman), Keith Kieres, Homer Taber, Fran Chinnici, Ron Sellberg
 - ◆ ARCI – Brant McGhee, Jim Hart, John Coulborn
 - ◆ FRA – Steve Carullo
 - ◆ TC – Randy Gnam
 - ◆ TWU – Fred Fink
 - ◆ UTU – James Stem

Background

- Current CFR 231 requirements originate from the early 1900's with an update in 1966 for just two car types.
 - ◆ Safety appliances are referenced to parts of a freight car, such as the side or end of the car
 - ◆ Freight cars currently being built do not always fit these early definitions
 - ◆ Therefore, problems with interpretations have resulted

Background

- Interpretation issues concerning the location of safety appliances have made it difficult to design freight cars with confidence that they comply with regulatory requirements.
- Interpretation issues have led to regulatory exceptions being taken to freight cars after they have entered service.

Purpose of Task Force

- Eliminate problems of interpretation
 - ◆ Development of new AAR standard for safety appliances
 - ◆ Agreement from FRA and TC with new AAR standards
 - ◆ Agreement from rail labor with new AAR standards
 - ◆ Identification of the few areas where differences exist between CFR 231 and new AAR standard
 - ◆ Handle differences with FRA and TC

Approach

- Base Standard, S-2044, has been developed that applies to all freight car types
 - ◆ Definition of terms
 - ◆ Multiple hand brake identification
 - ◆ Elective safety appliances
 - ◆ Multi-unit cars
- Appendices to be developed for specific freight car types, the first two being:
 - ◆ Box and Other House Cars without Roof Hatches
 - ◆ Covered Hopper and Other House Cars with Roof Hatches

Approach

- 18 different car types tentatively identified by the Task Force for inclusion in appendices
 - ◆ Box and other house cars without roof hatches
 - ◆ Covered hopper and other house cars with roof hatches
 - ◆ Flat cars with low side-mounted lever hand brakes
 - ◆ Flat cars with high side-mounted hand brakes
 - ◆ Flat cars with end-mounted hand brakes
 - ◆ Bulkhead flat cars
 - ◆ Coil steel cars
 - ◆ Removable coil steel car covers

Approach

- Appendices for 18 different car types (con't)
 - ◆ Open-top hopper and high-side gondola cars
 - ◆ Low-side gondola cars
 - ◆ Drop-end gondola cars
 - ◆ Side-dump gondola cars
 - ◆ Enclosed vehicle-carrying cars
 - ◆ Tank cars with side ladders and stub center sills
 - ◆ Tank cars with side ladders and continuous center sills
 - ◆ Tank cars with end ladders
 - ◆ Rail-compatible vehicles
 - ◆ Shoving platforms

Approach

- Wherever possible safety appliances are located relative to each other rather than to parts of the car body
 - ◆ Eliminates interpretation problems
 - ◆ Locates safety appliances based on how they are used

Status of Effort

- At March 2004 EEC meeting the Task Force presented Base Standard S-2044 and first two appendices
 - ◆ EEC approved proposed base standard and appendices
- Proposed base standard and two appendices sent out for 30 day public comment period in AAR Circular Letter (c-9864) on June 9, 2004
- Task Force meeting held on July 17, 2004 to handle comments and revise S-2044
- EEC approved revised S-2044 on September 15, 2004

Future Effort

■ Present to FRA

- ◆ Handle specific differences between S-2044 and CFR 231
- ◆ Submit complete standard
- ◆ Submit S-2044 vs. 49 CFR 231 deviation table

■ Present to Transport Canada

- ◆ Submission made through Railway Association of Canada
- ## ■ Existing processes will remain to handle individual car deviations on a case by case basis

Future Effort

- After acceptance by FRA and TC, base standard and first two appendices will be incorporated in MSRP and Rule 88.
 - ◆ Mandatory for new cars built on or after January 1, 2007
- Appendices for remaining car types will be added as completed

Benefits

- Improves safety of freight cars
- Reduces FRA and TC exceptions to safety appliance arrangements
- Leads to uniform interpretation between carbuilders, car owners, AAR, and FRA/TC
- Provides standards for car types not presently covered by FRA and TC regulations
- Reduces recalls of cars for noncompliance

Base Standard Definitions

- Securely Fastened
- Mechanically Fastened
- Clear Length
- Clearance Points
- Useable Length
- Clear Depth
- Clear Width
- Useable Length

Base Standard Summary

- Clear length and clearance points (insert Figure 1)
- Foot guards (insert Figure 2)
- Useable length, clear depth, clear width (insert Figure 3)
- Length and width for brake steps, end platforms, and running boards (insert Figure 4)

Appendix A Summary

- Box and Other House Cars without Roof Hatches (Figure A1)

Appendix B Summary

- Covered Hopper and Other House Cars with Roof Hatches (Figure B1)