

Rail Vehicle Impact Ramp

A ramp, with tow-car and cable, for releasing rail vehicles at a predetermined speed for impact into a stationary anvil car. Accredited by the Association of American Railways to certify rolling stock and prototypes. Testing of lading and containment systems reduces cargo damage.



Features

- Accredited by Association of American Railways (AAR)
- reproduces impacts for a variety of certification specifications
- unique in Canada
- controlled conditions ensure repeatable, accurate impact testing

Applications and benefits

- assures compliance with AAR, Transport Canada, American Bureau of Shipping, and Bureau Veritas standards
- tests lading containment devices and load securement devices
- verifies design specifications
- capable of performing dynamic (rolling) squeeze tests

Rail vehicle impact ramp specifications

- ramp length: 100' (30 m)
- ramp height: 25' (7.5 m)
- maximum test car speed: >16 mph (25 km/h)
- maximum deceleration: > 4 G

Instrumentation and data acquisition

- 60-channel data logging system
- in-house expertise in strain gauge application
- transducers available include accelerometers, precision velocity sensors, dynamometer couplers, load cells, etc.

Some recent/current uses

- impact and dynamic squeeze tests of freight cars for a variety of railways and railway car manufacturers
- impact tests of ISO tank containers for a variety of manufacturers
- impact tests of military cargo and systems
- certification testing of multimodal container cars and tri-level automobile carriers
- used with finite element modelling and multibody dynamics programs, for mapping of dynamic peak load stress in railway tank cars

Some recent clients

- Brenner Tank
- Bulk Manufacturing
- Clemmer Industries Ltd
- Cryenco Tank
- Custom Containers of America
- Columbiana Texas Corp
- Ministère de la Défense nationale
- National Steel Car
- Procor
- Swecomex
- Thrall Car
- Uneka Entreprises

For further information, please contact:

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