

Latest Trends On Vehicles and Testing of Gondola Cabins

Rico Wehrli

CWA Constructions SA/Corp

Born 1957 in Olten, Switzerland

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- Fire tests
- Crash tests
- Wind Tunnel tests
- Window forces

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Development of passenger cabins in various categories has continued to advance. We will look at developments in the following areas:

- design
- level walk in
- ski racks
- seating comfort
- VIP*****/VIP*****
- restaurant
- MP3 player
- rotating monocable cabin
- heating
- sauna
- aircondition

CWA conducts tests according to codes

- static tests
- dynamic tests
- finite elements calculation

Additional CWA tests on our own

- water
- wind tunnel
- windows push out
- fire (film)



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- crash (film)



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development of passenger cabins

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development of passenger cabins

tests according to codes

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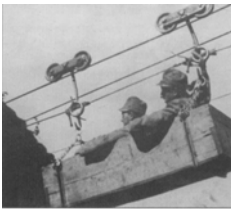
tests on our own

- water
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development of passenger cabins



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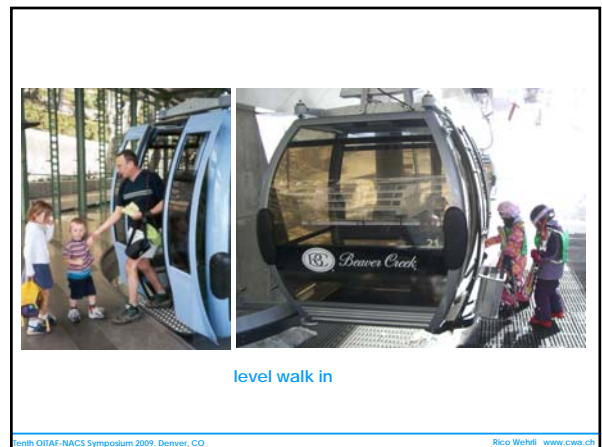
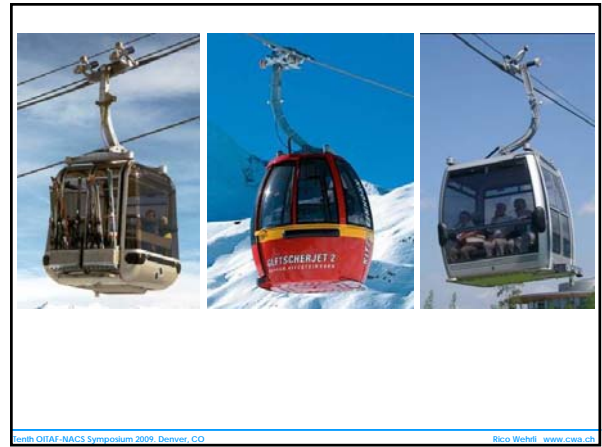
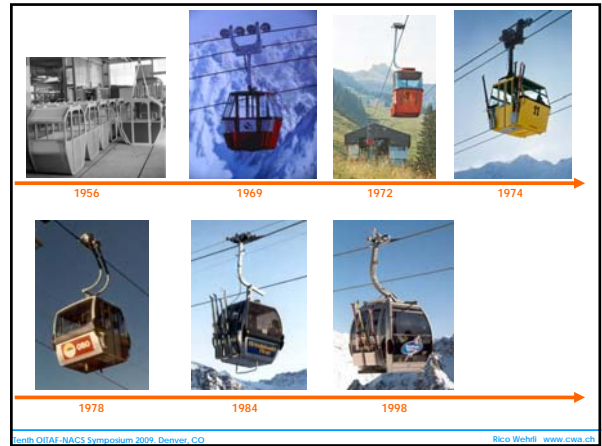
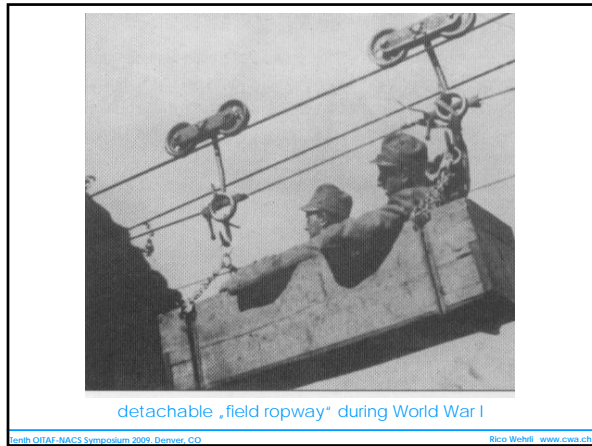
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development of passenger cabins

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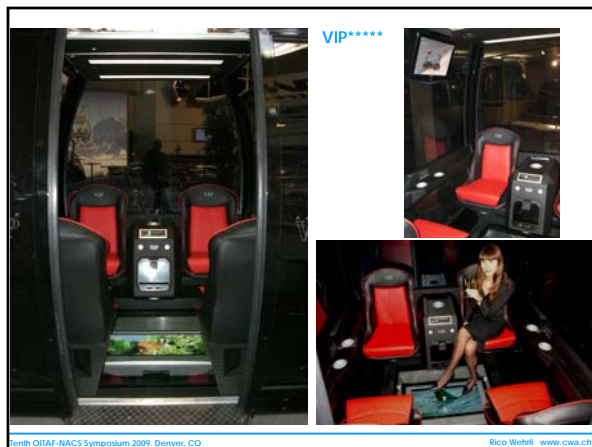
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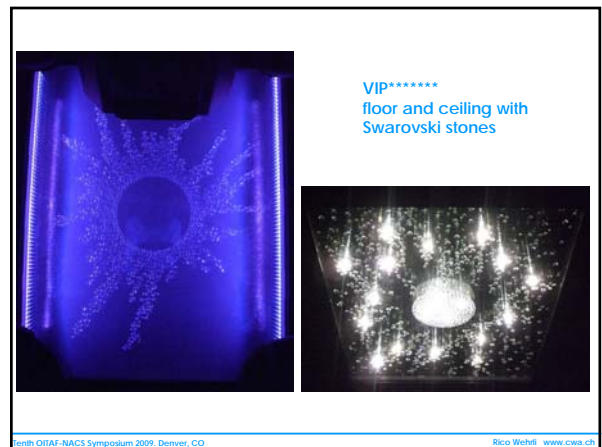
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GENUSSGONDEL, FISS.
10 TISCHEN IM WIRTSCHAFTSRESTAURANT DER WELT.

arguably the world
smallest restaurant

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MP3 player

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MP3 player
with GPS

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rotating
monocable cabin

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cabins with seat heating

Zell am See, Trassexpress
Hochgurgl, Top Schermer 3000
Ischgl, Fimbabahn 1+2

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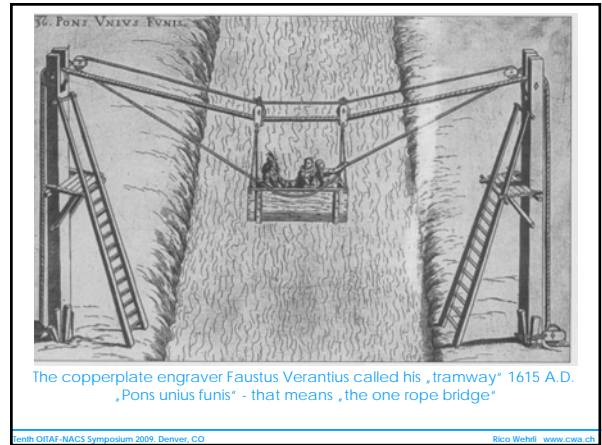
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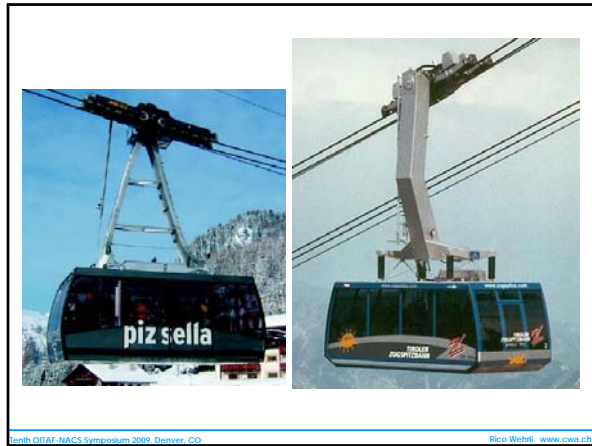
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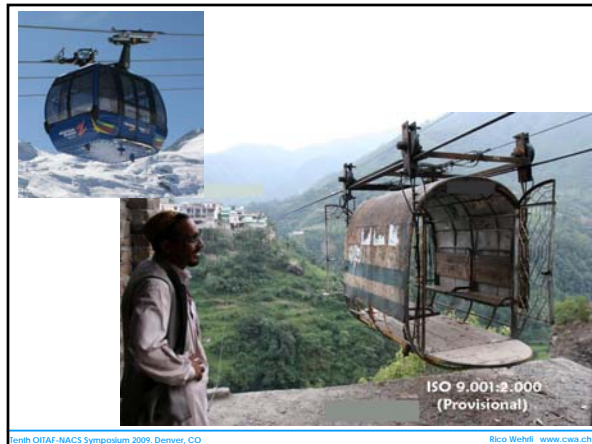
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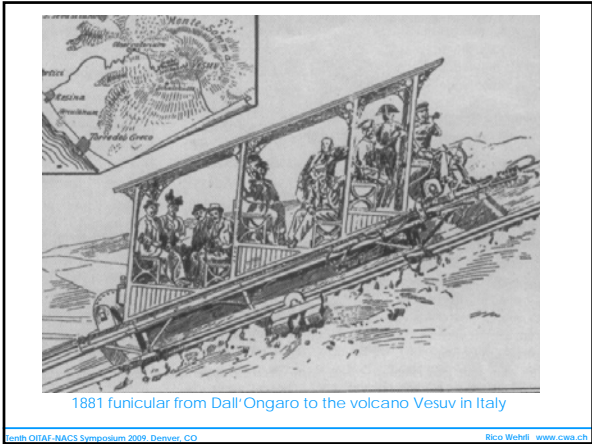
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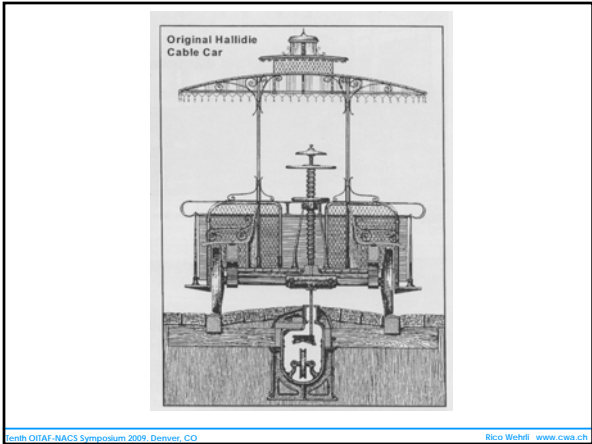
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tests according to codes

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tests on our own

- water
- wind tunnel
- windows push out
- fire
- crash

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water test



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wind tunnel test



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windows push out

laminated safety glass
 interior glass: 2.1 mm Float
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 outer glass: 2.1 mm Float
 total: 4.96 mm



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windows push out



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breaking of outer glass approx. 1000 kg

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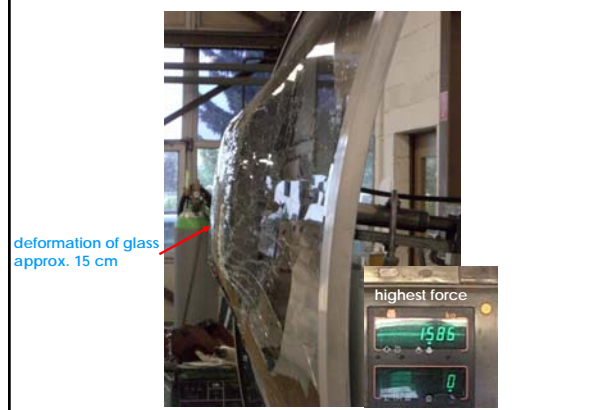
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breaking of interior glass approx. 1300 kg

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deformation of glass approx. 15 cm

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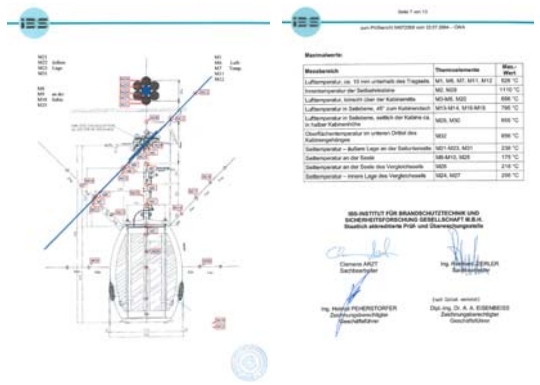
fire test



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fire test



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crash test



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windows
safety mechanism



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development of passenger cabins

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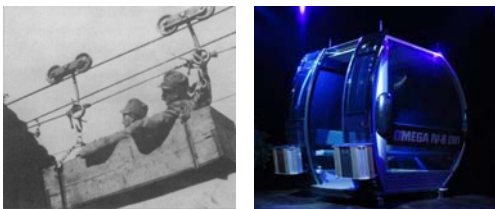
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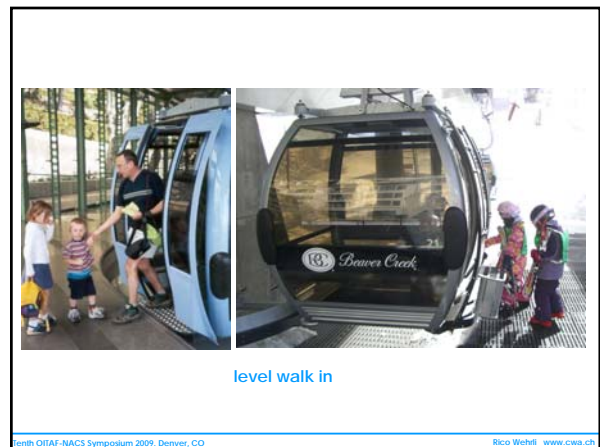
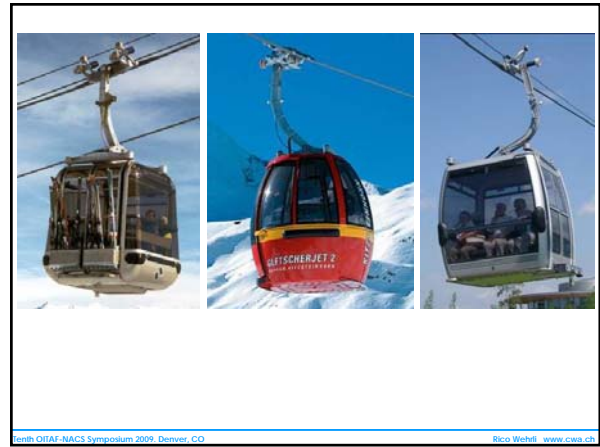
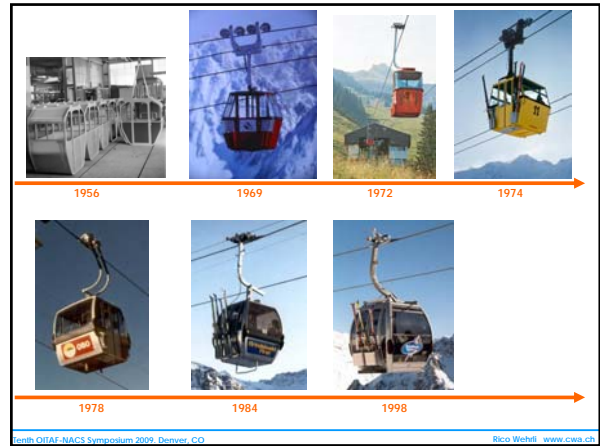
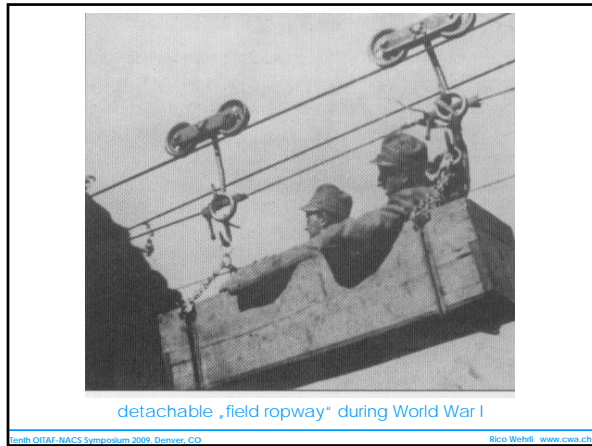
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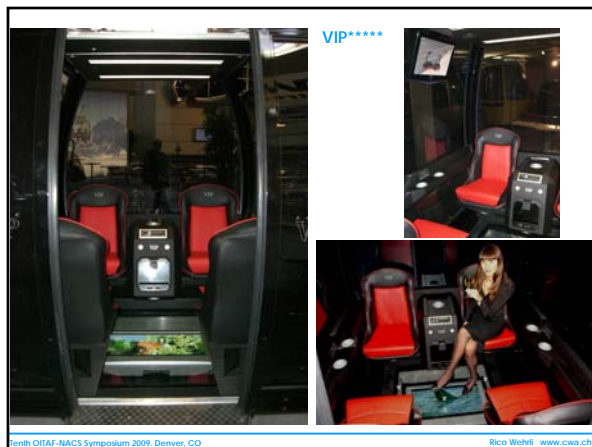
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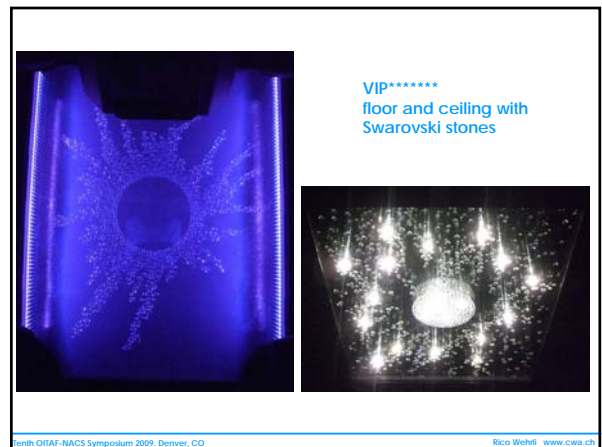
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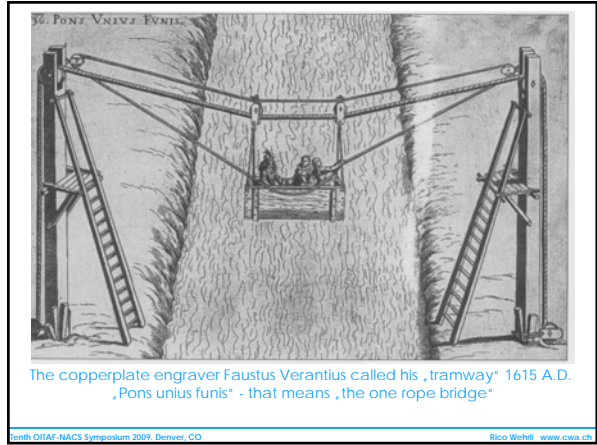
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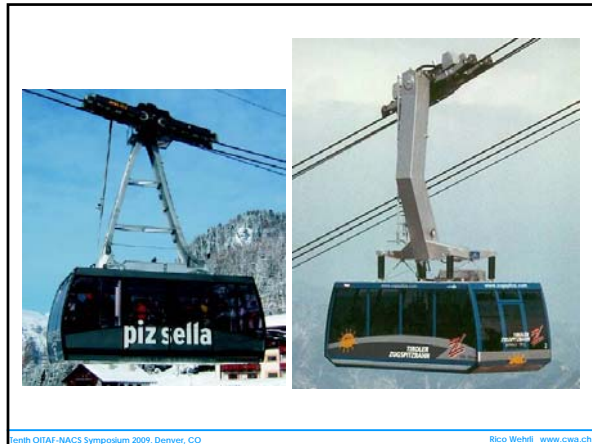
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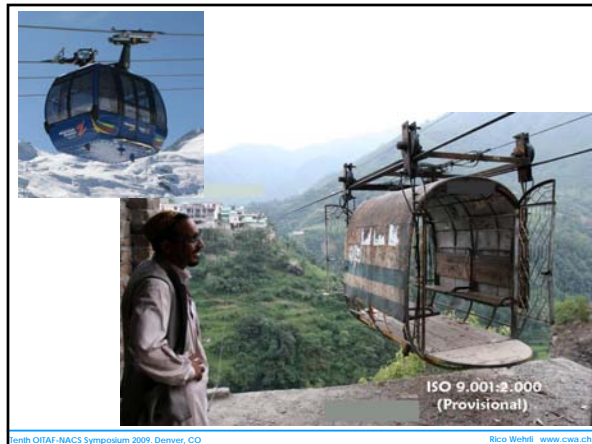
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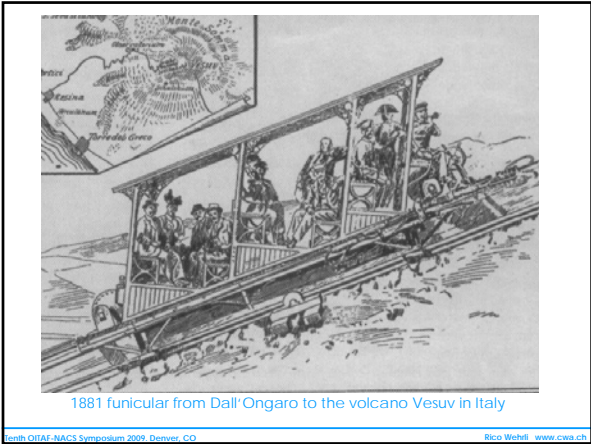
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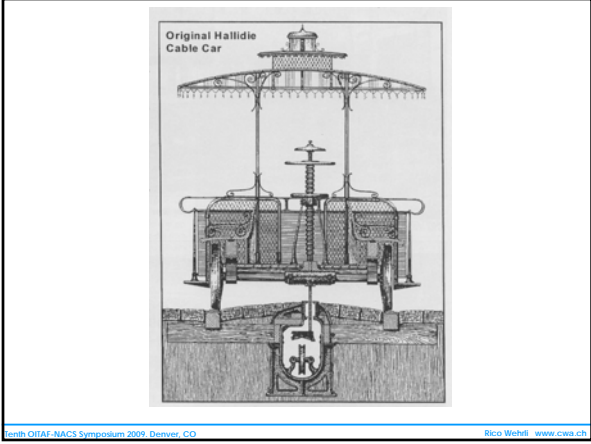
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tests on our own

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- crash

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water test



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wind tunnel test



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windows push out

laminated safety glass
 interior glass: 2.1 mm Float
 foil: 0.76 mm PVB
 outer glass: 2.1 mm Float
 total: 4.96 mm



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crash test



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windows
safety mechanism



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