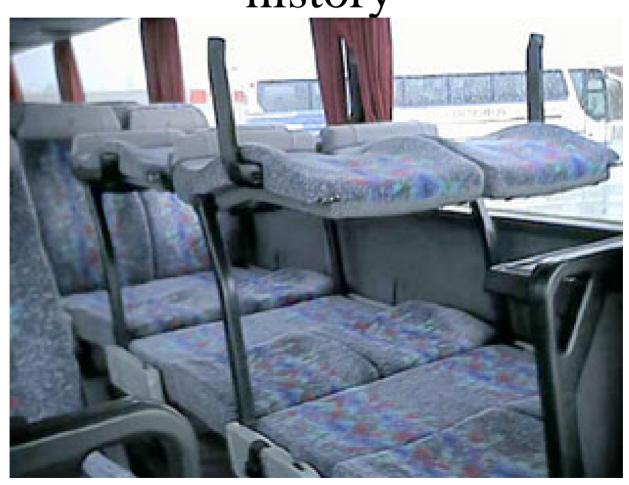


Sleeper coaches



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Sleeper coaches in Denmark: brief history



2 serious accidents in 2004



Tightened requirements





Restraint system for horizontal use



How about a safety bag?



Testing the safety bag



Parachute-type belt



International rules on sleeper coaches

- Upright position (as seat): existing regulations must be complied with (seat, seat belts and anchorages)
- Horizontal position:
 - Comfortable restraint system must be provided.
 - Similar strength requirements to normal seats.
- The restraint system itself: how do we test it? Do we need a special dummy and test procedure?

Thank you for your attention!