

# NAFLIC

*National Association For Leisure Industry Certification*

## Standards & Related Documents Committee

### TECHNICAL BULLETIN - MARCH 2002

#### 213. KT Enterprises Twist Accident

Further to the Incident Bulletin 0300/01 issued in March 2000, some extra details of the accident are now available.

Although the findings of the Health and Safety Executive investigation have not been communicated to us, it is certainly the case that two stainless steel members in the passenger restraint on the Twist ride bent far enough for the passengers to be ejected. The 2 girls were seriously injured but, thankfully, subsequently recovered well. The least injured passenger was thrown outwards striking the barrier fencing with sufficient force to fall clear of the ride. The most serious injuries occurred to the girl who landed on the ride platform - she was dragged round by one of the radial arms and was on the critical list for a while.

The passenger restraint has since been re-analysed, a modification designed by ASP Consulting (Melbourne) Ltd and incorporated by the manufacturer. An ADIPS report of Design Review for this particular modification was issued by Wilson Consultants.

One general observation arose in discussion of this accident by the NAFLIC Standards Committee. Passenger restraints are often safety critical but it is also quite common for them to be not properly covered in the design risk assessment and associated calculations. Where they are not, it is important that Inspection Bodies carrying out design review should ensure that the designer / importer carries out appropriate remedial assessment / calculation.

It is hoped that, later this year, the advice for design that we have been working on in conjunction with the Technical Working Group of the HSE's Fairgrounds & Amusement Parks Joint Advisory Committee will be published. This publication includes some additional guidance on design of passenger restraints and other containment issues.

It is our view that controllers, inspection bodies, etc. should be very wary of cursory visual assessments that suggest that, because a restraint looks similar to a traditional design, it must have adequate strength. We know of examples in which changes in locking device or hinge line positioning, for instance, have had very significant effect on member stresses.

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