NAFLIC

National Association For Leisure Industry Certification

Standards & Related Documents Committee

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032. Swinging Gyms

We received the following suggestions for guidance on Swinging Gyms from SE Ward & Sons (Engineers) Ltd who have manufactured many such rides over the years. Swinging Gyms have a record of accidents ranging from bruising and other impact-created injuries to deaths. There is a danger that, since the ride is non-powered, it may be treated with some complacency by riders, operators and examiners. Four specific areas are identified for checking :-

a) Deaths have occurred when people have been squashed between the cage and the chassis. Operatives, after having secured passengers into their cage should then pull the cage towards them and release it to start it swinging. Often they do not release the cage after the initial pull and continue to push across the chassis maintaining a hold for several swings. This is a potentially dangerous practice since if the attendant trips and falls on to the chassis he is likely to be crushed by the cage on its return swing.

b) A death occurred one evening after a fair had closed when some members of the public released the locks securing the cages and started to use the ride for their own, free, amusement. It is important that the cages be locked immobile when the ride is not in operation. It is necessary to ensure that the locking mechanism for the cage will prevent release while the ride is unattended. Padlocks or equivalent are recommended rather than simple nuts and bolts.

c) Riders within the cages have suffered impact injuries to the extent of broken jaws, broken limbs, facial injuries, cuts etc. Building up the swing motion is physically exhausting and can result in riders relaxing their grip on the hand rails. There is then every chance that they will be thrown from front to back of the cage. The manufacturer recommends three definite steps to reduce the number and severity of such occurrences.

Firstly, riders should be verbally warned. "Hold tight and don't let go" is typical. Such an instruction should be included in the Operating Manual and signs to this effect are also advisable. Secondly, it is noted that hand rails that are free to rotate are thought to be preferable since they are less likely to result in hand soreness. And thirdly, the provision of padded cushioning on the back of the door and the inside back wall of the cage can

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dramatically reduce the severity of any impacts. Padding should be large enough to cover all likely areas of impact other than the hand rails. However, padding does cause wind drag making the cage more difficult to swing over the top, so it is desirable to keep the padded area no larger than necessary. Heart shaped cushions may be a good solution.

One incident involved a rider getting an arm entangled with a cage suspension arm. More recent models of the Swinging Gyms have an extension to the side walls to reduce this risk. The manufacturer offers a modification to accomplish this on older models.

d) Railings round the ride should be substantial, sufficient and located to prevent members of the public becoming entangled with the mechanism. The clearance underneath railings should be small enough to prevent small children and pets gaining access. (The manufacturer has seen a dog killed in this way). Railings should also be in place between the rails of the separating stabiliser frames between passenger entrance ways. This is to prevent exhausted customers, on leaving the ride, from leaning over and being struck by another cage.