

# ADIS

Amusement Device Inspectors Support  
Group



## Safety Report No 5

14.8.17

### **Failure of a Miami Counterweight Weld Connection.**

We have been advised of a recent incident involving a Miami Trip

The device affected was manufactured in 2004 by Nottingham UK and fortunately no-one was injured

The weld, attaching the RHS (box section) that supports the counterbalance to the bolted connection plate between the fish plates, appears to have failed.

The weld had been subject to NDT less than 3 months ago using MT

In the photograph below the bolted connection plate is still attached the fish plates and the area where the RHS member abutted the plate is clearly visible



Above is the fractured end of the RHS member and it is questionable whether the end was prepared correctly prior to welding and it appears the manufacturers attachment weld may never have penetrated adequately.

From our investigation, it is clear the NDT was carried out with the counterweight in the attached or assembled condition.

The bolts and plates either side of the counterweight makes NDT of several areas of this weld very difficult in its assembled state. It may not be possible to clearly see the weld and there may be difficulty in getting the magnet or the yoke in position where it will develop sufficient flux. We believe that in order to carry out the NDT effectively the counterbalance must be unbolted.

#### **NDT Schedules**

The NDT **must** be carried out in line with the schedule, and we recommend you always follow the schedule even if you have doubts that it is correct or adequate. **Do not** change the NDT Schedule unless you are competent to do so. If you change the schedule you accept responsibility for it. But remember the thorough examiner can legitimately require additional NDT, not specified on the schedule, using different techniques or different states of assembly, in addition to schedule NDT in order verify the adequacy the structural components or fabrications.

We invite your response to any of the reports preferably by email  
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