

NAFLIC

National Association For Leisure Industry Certification

Standards & Related Documents Sub-Committee

TECHNICAL BULLETIN - JULY 1992

019. Octopus Problems

Banwells have reported to the Committee the discovery of a problem relating to an Octopus ride built by Hayes Fabrication in 1960 or thereabouts. This concerns the (non-original?) pins which attach the tie bars to the radial arms. One of these pins was found to be completely fractured at a sharp cornered lubrication groove approximately half way along its length. This is clearly a safety critical component with a design weakness and we draw the problem to the attention of Appointed Persons having responsibility for the examination of rides of this type or any ride having grooved pins. Please let us know if other instances of this problem are detected.

Another Octopus problem was the subject of correspondence initiated by Safety & Plant Services Ltd of Coleraine. This concerns fatigue failure at the bottom of the main tubular centre column. In this instance there is a secondary shaft passing up inside the main tube which can act as a "catcher" device so it is possible that the fatigue failure is not safety critical.

During consideration of these problems the Committee discussed fatigue near the inner end of Octopus radial arms. Several arms are known to have failed in service. Some Octopus rides are fitted with secondary chains to catch the arm in the event of fatigue failure. We advise against a false sense of security in relation to these chains if they have been fitted without careful design calculations - arm failures in which the chains have proved insufficient are known to have occurred.