

NAFLIC

National Association For Leisure Industry Certification

Standards & Related Documents Committee

TECHNICAL BULLETIN - SEPTEMBER 1999

188. Fabricon Carousel Chimney Failure

We have been informed, by NAFLIC member DMG Technical Services, of a recent incident in Dubai involving a Carousel manufactured in the USA by Fabricon of Brooklyn, N.Y. The carousel is 4-5 years old and one of the smaller sizes, being 28 feet (8.5 metres) in diameter.

The centre pole (sometimes known as the centre column or chimney) was cracked below the A-frame around the complete circumference. Further examination found other large cracks above the A-frame but below the top bearing. It is thought that the centre pole is approximately 8 inch (200 mm) outside diameter. The construction, unlike traditional vintage carousels, involves a number of stress raisers associated with welded connections and attachments, a fact that implies lower fatigue strength resulting from the welds and heat affected zones.

It is not known whether fatigue life calculations had been checked, since this would appear to be a design limitation possibly made worse by poor weld quality.

There are thought to be approximately 55 of these units manufactured by Fabricon. The manufacturer has apparently contacted all his known customers. To his knowledge none of these units are in the UK but 4 mobile units were shipped to Europe and Switzerland and, in early September 1999, had not yet been traced.

[NOTE: We reported on a Chair-o-Plane centre column failure in TB 062 (October 1993). In that instance, fatigue strength had been reduced not by a weld but by the introduction of a hole for the passage of cables into the column centre.]

Committee Members :- Dr Garry Fawcett (Chairman), Mr Richard Barnes, Mr Bob Nicholls, Mr Robert Casey,
Mr Peter Smith and representatives of Plant Safety Ltd, and Banwell & Associates Ltd

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