

# NAFLIC

*National Association For Leisure Industry Certification*

Standards & Related Documents Committee

TECHNICAL BULLETIN — DECEMBER 2007

## 328. KMG Afterburner

The committee has received the following technical bulletin; reference number FRB-SB006, from KMG, regarding fatigue cracks on their Afterburner rides.

Committee Members:- Mr. R Nichols(Chairman), Mr. P Smith,  
Mr. J Green, Mr. P Mitchell, Mr. R Dale, Mr. M Wolstenholme, Mr. G Dockerty & Mr. D Inman

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To all KMG Afterburner owners

(FRB-24-XX)

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Chamber of commerce: 08073397

BIC / SWIFT: ABNANL2A  
IBAN: NL62ABNA0561502374

For your information       Urgent

Neede, 8 August 2007

From : Engineering department  
Subject : Service Bulletin  
Order no. : Ride serial FRB-24-XX  
Our reference : Afterburner Ride Service Bulletin

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Bulletin No.: FRB-SB006  
Ride: Afterburner by KMG International BV  
Relative Rides: All Models

Date of Issue: August 8th 2007  
Date of compliance: As soon as possible

Regarding: NDT testing of swing arm weld area

### **Description**

On recent investigation on one of the Afterburner rides, it was discovered that structural fatigue cracking of the swing arm was developing on Afterburner rides supplied by KMG. Applied area is the weld which connects the 12-sided tube to the bottom bearing flange.

### **Application**

Cracks were found in the area of the corners of the 12-sided tube, just above the weld to the bearing flange plate, perpendicular to the swing direction of the swing arm. Attached is a situation drawing of the affected area.

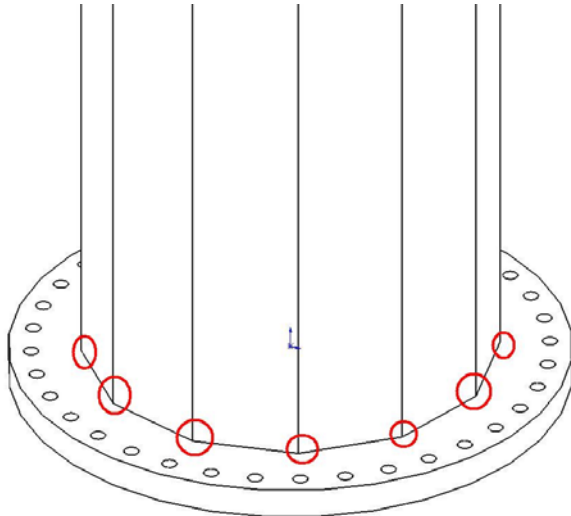
### **Procedure**

All Afterburner rides need to be tested for cracks by a certified NDT company by using visual and magnetic testing. For these tests, the paint must be removed from the steel tube and weld. The results need to be reported to KMG. In case cracks are discovered, the cracks need to be grinded out and to be repaired by a certified welding company.

All rides need to have the affected area to be reinforced with gusset plates according to attached dimensions, material specifications and welding instructions.

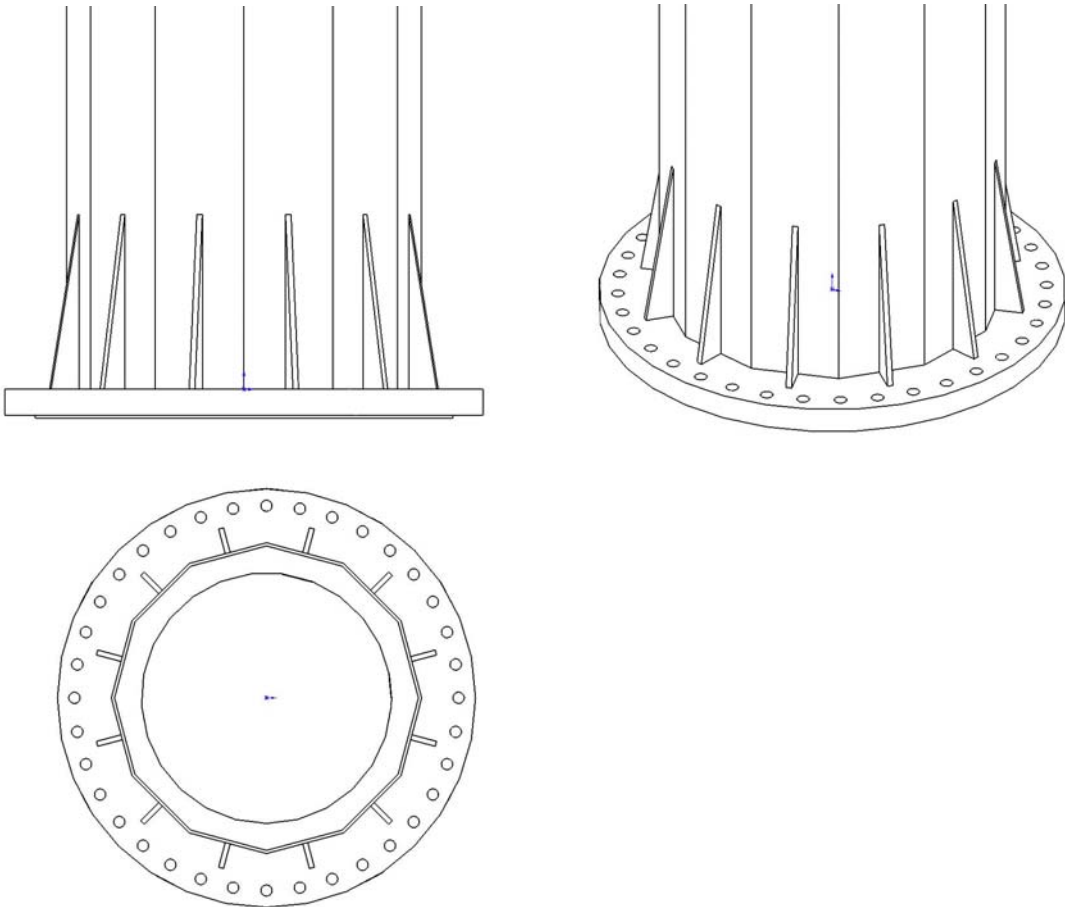
**Situation**

Affected areas next to the weld of the bearing flange are shown in the sketch below.



**Reinforcements**

Reinforcements are made by welding 12 gusset plates in a circular patten around the tube, on the center of each side of the tube's sides.



Dimensions of the gusset plates are 300mm long, 50mm wide and with a thickness of 10mm. Material is St.52-3 or S355.

**Welding**

In order to weld, the gondola bearing must be completely removed. After cleaning the weld area from paint and dirt the gusset plates should be fully welded. The ends of the welds should be smooth finished by grinding. The 50mm flange should be pre-heated to at least 150°C. Welding details are attached on the end of this document.

**Additional information**

If more information is needed contact details for KMG are:

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