



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE

Certificate No. TA10518M

This is to certify that the undernoted products have been approved in accordance with the relevant requirements of “Rules for the Survey and Construction of Steel Ships” and “Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use”.

This certificate is issued to

| | |
|---------------------|------------------------------------|
| Manufacturer: | MIKASA CORPORATION |
| Product description | Friction Free Bearing (FFB) |
| Type designation: | Type F, T and S |

| | |
|---------------|-----------------------|
| Approval No.: | 96FF003B |
| Valid until: | 4 January 2016 |

This certificate is subject to the conditions specified in the attached sheet.

Issued at Tokyo on 22 September 2010

T. Narisawa
General Manager
Machinery Department

This approval is conditional upon the followings:

1. The propeller shaft diameter at the bearing part is not to be more than 1000 mm.
2. The aftmost bearing length is not to be less than 2 times the actual diameter of the propeller shaft at the bearing part.
3. The average bearing surface pressure is not to exceed 0.6 N/mm^2 .
4. The local bearing surface pressure is not to exceed 2.0 N/mm^2 .
5. The bearings are to be fitted in accordance with the manufacture's recommendations in compliance with all applicable Rules of the Society.

-The end-