



MIKASA CORPORATION

2025

Company Overview



Over **100 years**, Pioneer of ball products

Company	MIKASA CORPORATION
Established	1917
CEO	Yuji Saeki
Business	Rubber Production -Sporting Goods -Industrial Production
Location	Hiroshima, Japan



Message from CEO

The times are changing at a speed that cannot be compared to the past. By integrating our strengths with change, Mikasa will appropriately strive to create new values.

代表取締役社長 佐伯 祐二

Philosophy

We at Mikasa aim to strengthen our personnel to create value, and continue to grow as a company to create a rich society.

Mission

Make always feel Mikasa close to you,
Creates fun and smiles!



Global Network



Lineup for Stern Tube

Stern Tube Bearing

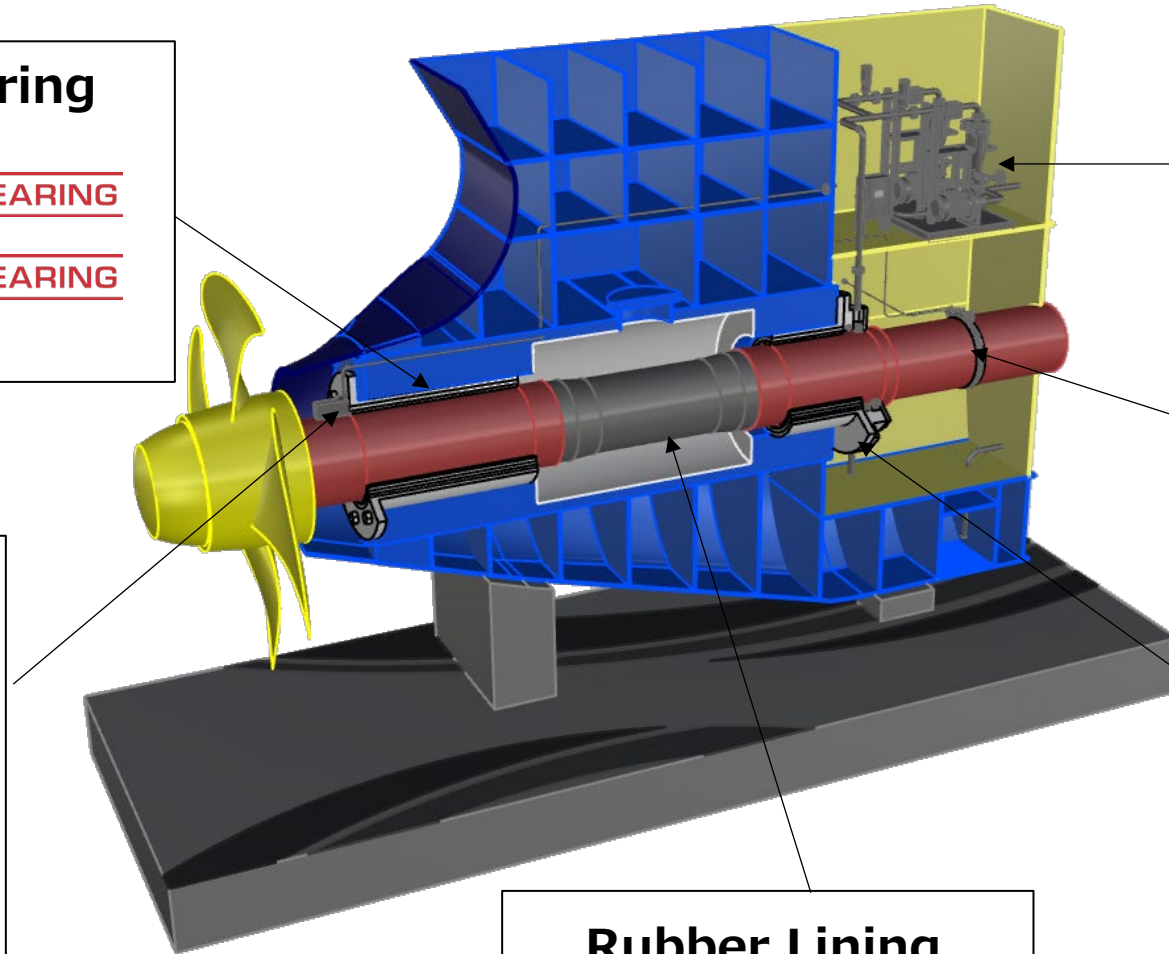


MR BEARING
FF BEARING

Thail Shaft Condition Monitoring System



CONFIDENTIAL



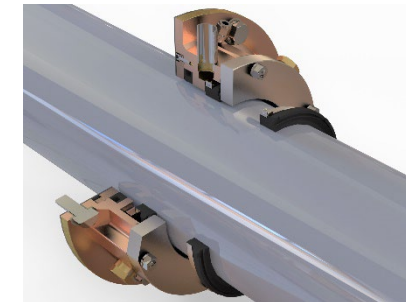
MWS(WQS)



**TRERUS
(Shaft Earthing Device)**



Sealing System



Rubber Lining



Bearing Line-up

- We offer two types of bearings: **MR-Bearing**(Mikasa Rubber Bearing), which consists of rubber and an outer shell, and **FF-Bearing**(Friction Free Bearing), which features a PTFE, rubber, and outer shell structure.

MIKASA Water Lubricated Stern Tube Bearings

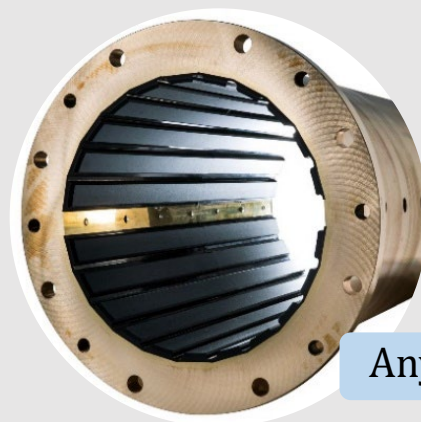
MR-Bearing



Any type of ship

- ✓ Bearing ID $\phi 15$ - $\phi 650$
- ✓ 10-15 years of life time
- ✓ Split type available
- ✓ Competitive price
- ✓ Sandy Water

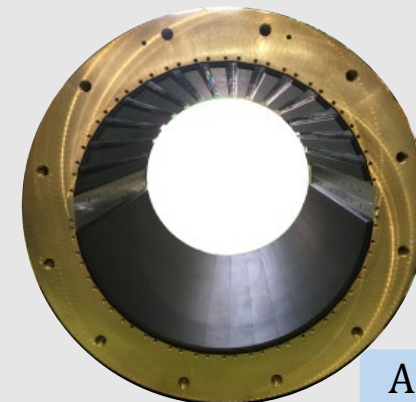
FF-Bearing



Any type of ship

- ✓ Bearing ID $\phi 30$ - $\phi 1000$
- ✓ 20-25 years of life time
- ✓ Split type available
- ✓ 2 L/D
- ✓ Lower friction
- ✓ Lower risk of burnout

FF-Bearing CR

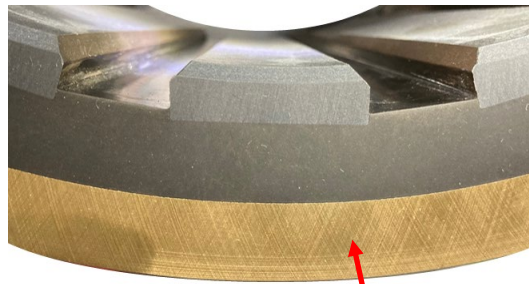


Any type of ship

- ✓ Bearing ID $\phi 30$ - $\phi 1000$
- ✓ 25 + years of life time
- ✓ Split type available
- ✓ 2 L/D
- ✓ Lowest friction
- ✓ Lower risk of burnout
- ✓ Lowest abrasion

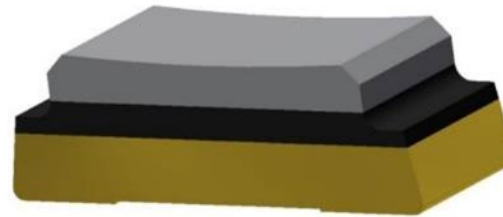
Structure of FF-Bearing

FF-Bearing



Mikasa Original Layers

- Low friction, low wear, low fuel consumption
- Maintenance free to extend the life of the vessel



PTFE

Low friction, low wear, low fuel consumption

Rubber

Dispersion of surface pressure by elasticity



Brass

Corrosion resistance and form stability

Merits of FF-Bearing

① Wear Reduction

Causes of wear: Corrosive wear caused by exposure to abnormal corrosion potentials.
FF-Bearing provides;

↓ Lower Corrosion

↓ Lower Sleeve Wear

by the PTFE on the sliding surface is transferred to the sleeve and electrically shut out



Rubber Bearing,
10years shaft removal

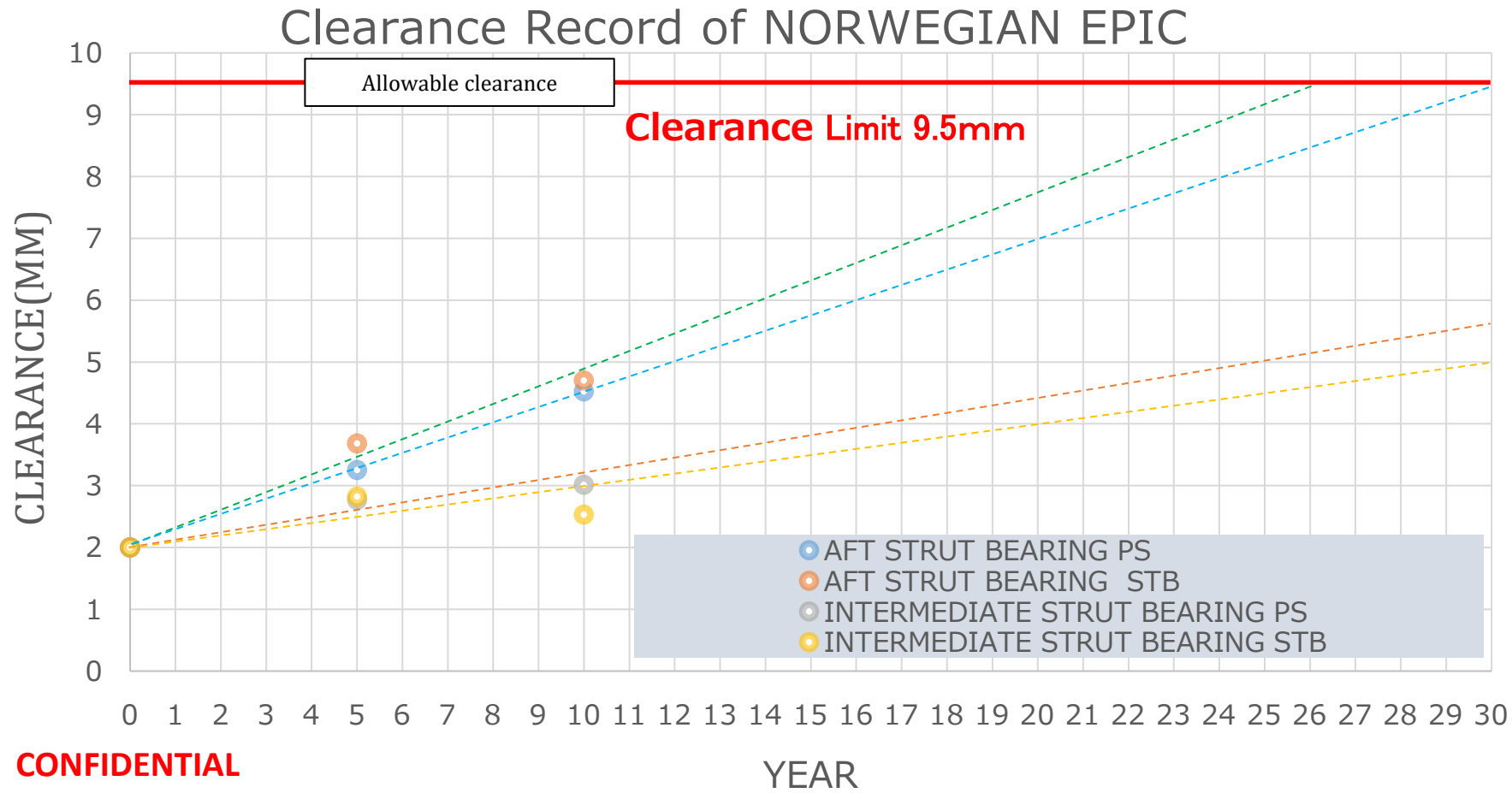


FF-Bearing,
10years shaft removal

Merits of FF-Bearing

② Life Extension of Replacement

If no abnormalities occur, it is approximately 20 to 25 years.
For instance, the NORWEGIAN EPIC, which launched in 2010, is expected to reach the clearance limit of 9.5mm after 26 years.



NORWEGIAN EPIC



ID : φ704

Output :

24,000kW/shaft

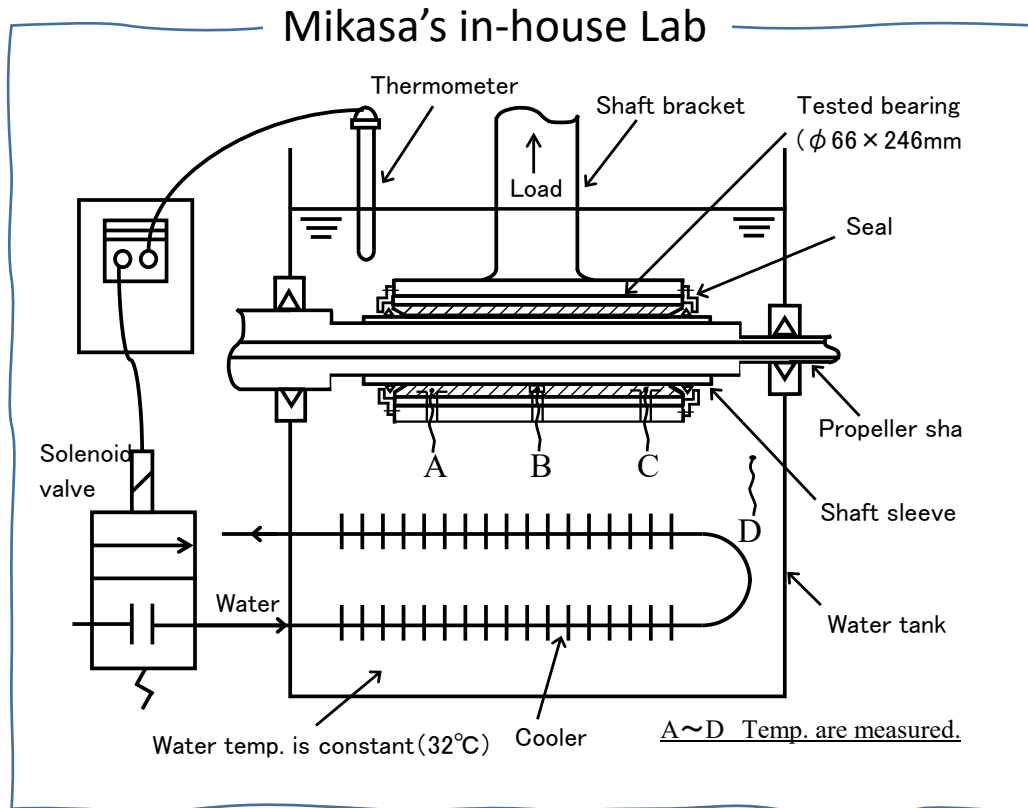
Classification : DNV

Tonnage : 153,000ton

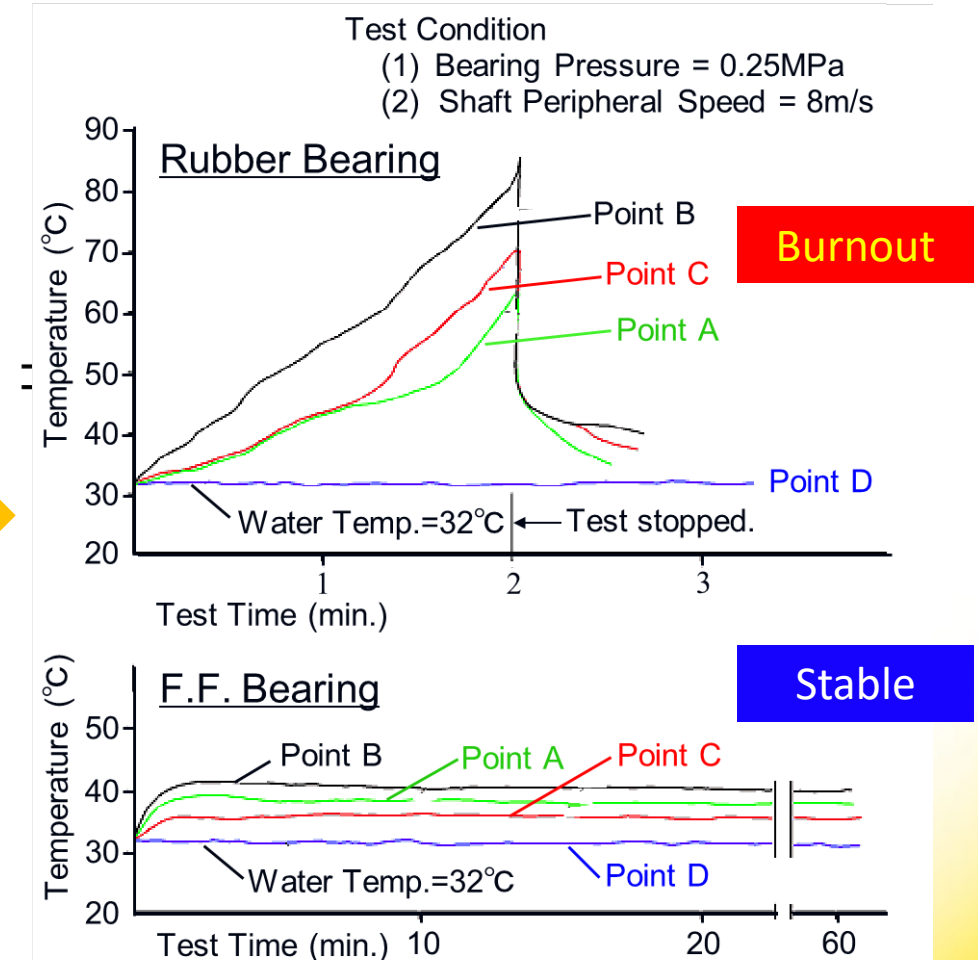
Merits of FF-Bearing

③ Lower the Risk of Burnout

Burnout is occurred by the no supply of cooling water



Stop Supplying Cooling Water
into the Bearing!



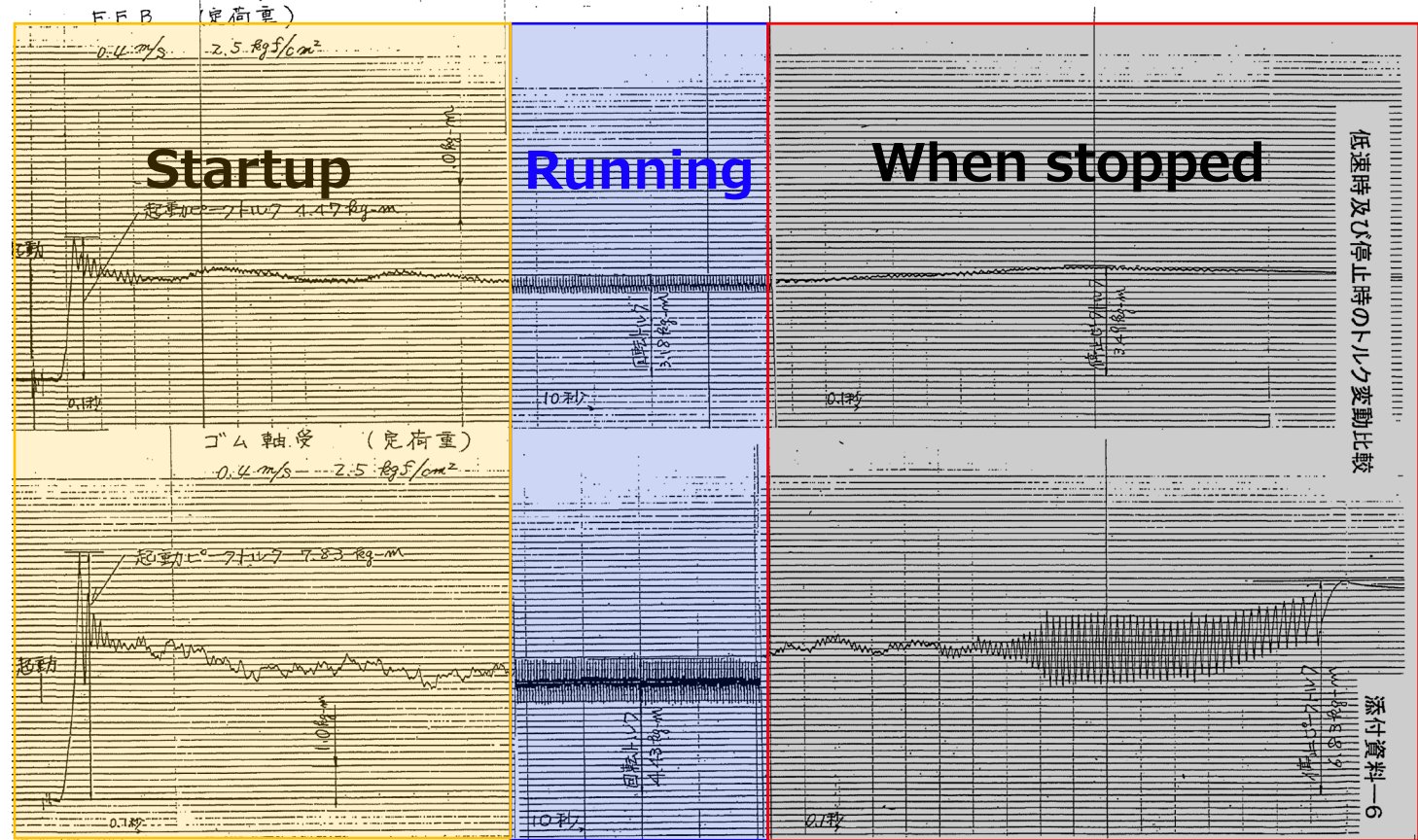
Merits of FF-Bearing

④ Quietness – Torque Fluctuations

Comparison of Rotational Torque Fluctuations

FF BEARING

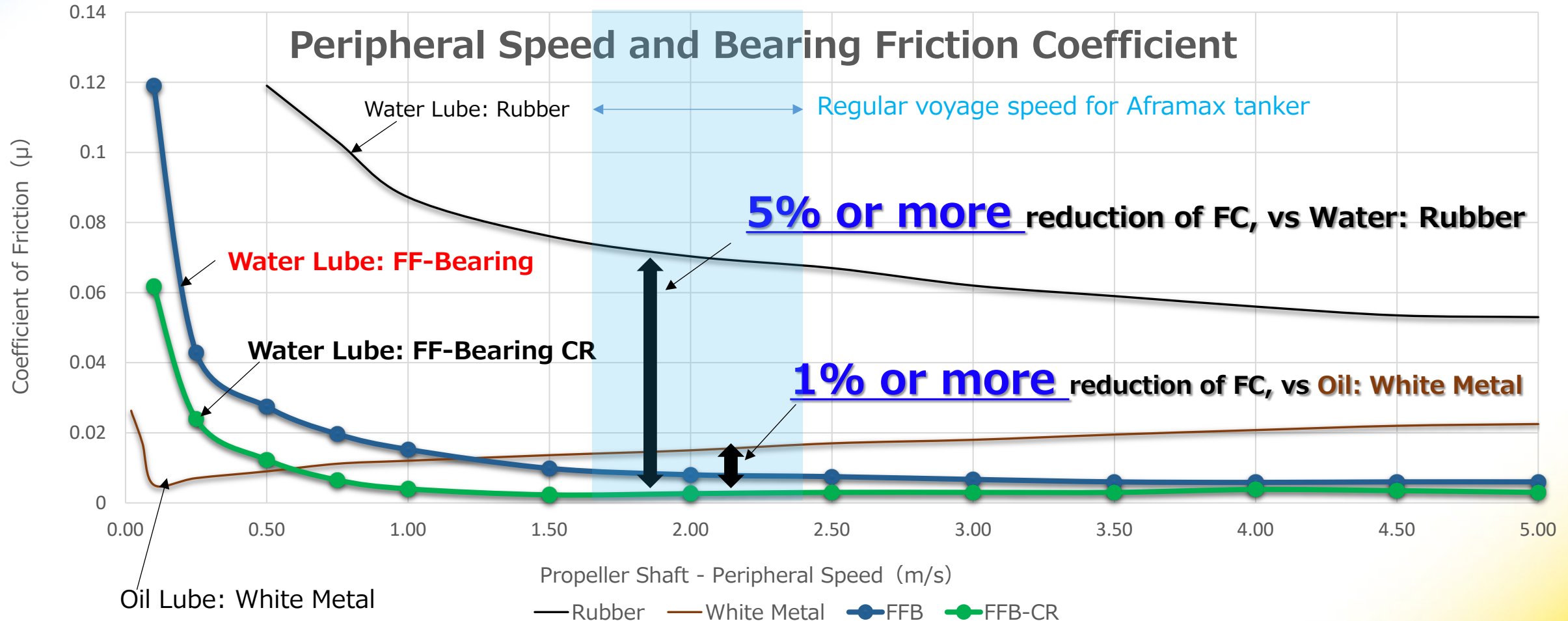
MR BEARING



FF-Bearing reduce abnormal noise, vibration and running noise

Merits of FF-Bearing

⑤ Lower Fuel Consumption



Rubber Bearing → FF-Bearing series Retrofit

Vessel Type	Container Vessel(120TEU)	Oil Tanker (3,000KL)	Ferry Boat (299GT)
Fuel Type	C heavy Oil	C・A heavy Oil	A heavy Oil
Fuel Efficiency Improvement Rate (%)	6.45%	5.72%	3.47%
Annual Distance (Mile/Year)	16,000	29,000	8,500
Fuel Use (KL/Year)	673.8	641.3	192.9
Fuel Reduction (KL/Year)	43.46	36.68	6.69
Fuel Economy Gap (JPY/Year)	-3,501,580	-3,052,889	-645,935
CO2 Reduction (t/Year)	-125.9	-88.5	-18.5

(※1) Fuel Price as per New Electric Power Net Jan-Mar 2023 average

(※2) CO₂ emission coefficient as Maritime Bureau, Environmental Policy Division data March 2020

References of FF-Bearing



SHIRASE (しらせ) , 2008
Icebreaker for Antarctic Research
FF-Bearing ID:φ810

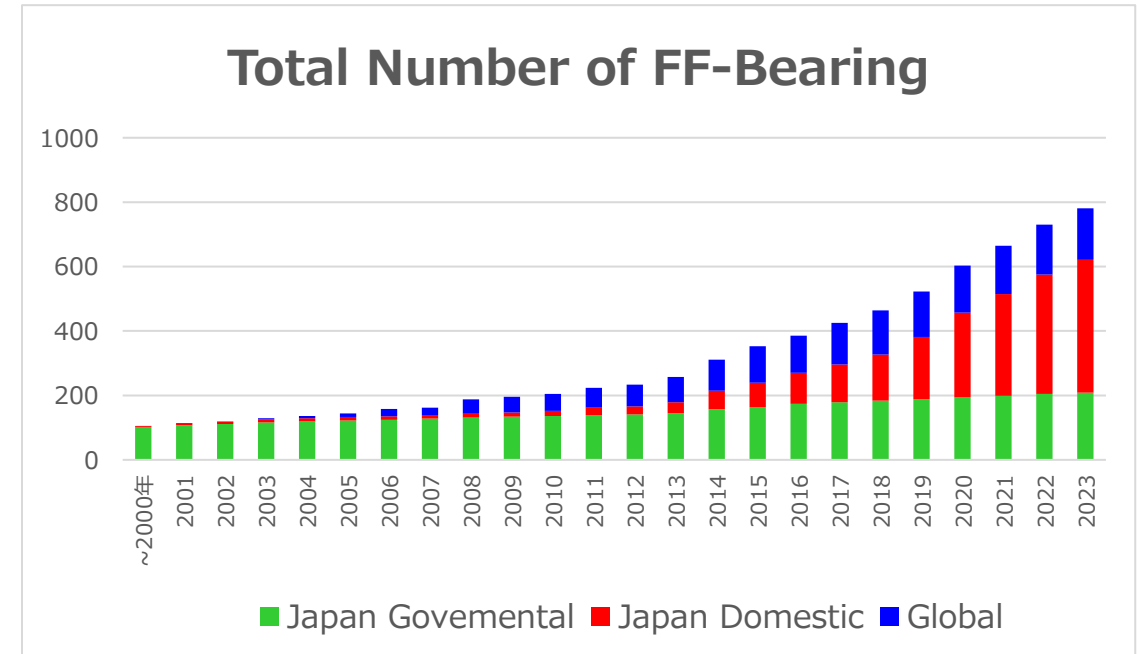


EPIC, 2010
Luxury passenger ship
153,000t, 4,100 person
FF-Bearing ID:φ704



MSC WORLD EUROPA, AMERICA
World's largest luxury passenger ship
205,000t, 6,850 person
FF-Bearing CR ID:φ716
2-ship series

More than **800 vessels**










Delivery of FFB in Korea achievements

HD HYUNDAI MIPO=3vessels

HANJIN HEAVY INDUSTRIES=1vessels

Rules for Maintenance and Type Approved of Bearing and Sensor

CLASS	NK	DNV	BV	ABS	LR	CCS
Open Water Lube Sys.	PSCM 1A (Up to 15Years)	TMON (No specific interval)	MON-SHAFT (Up to 15Years)	TCM (Up to 15Years)	SCM (Up to 18Years)	SCM (Up to 15Years)
Oil Lube Sys.	PSCM (No specific interval)	TMON (No specific interval)	MON-SHAFT (Up to 15Years)	TCM (Up to 15Years)	SCM (Up to 18Years)	SCM (Up to 15Years)
MIKASA FF-Bearing						Planned
MIKASA Tail-shaft Condition Monitoring System			No definition	No definition	No definition	No definition

Thank you for listening



**SUSTAINABLE
DEVELOPMENT GOALS**

MIKASA CORPORATION supports the Sustainable Development Goals