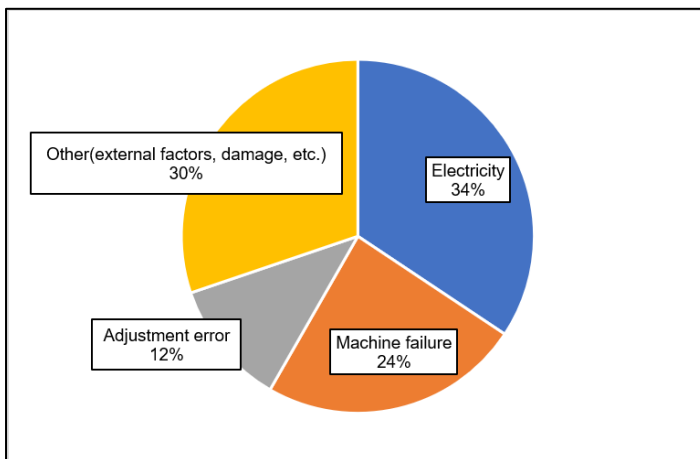


Optimization of Preventive Maintenance through Scheduled Replacement of Electrical Components

To ensure continued safe operation, it is important to shift from reactive maintenance, which responds after failures occur, to preventive maintenance that prevents troubles in advance. In particular, the service time and deterioration of electrical components are difficult to determine through visual inspection, and unexpected failures may result in serious disruptions, including equipment shutdown.

■ Types and cause of boiler trouble (Based on cases of our supplied boilers)



Electrical system failures account for the largest share of boiler troubles at 34%, exceeding machine failures (24%) by 10 percentage points and making up about one-third of the total. It not only accounts for a high number of cases but also often triggers failures in other systems, that is a priority area that requires targeted measures for reducing overall troubles.

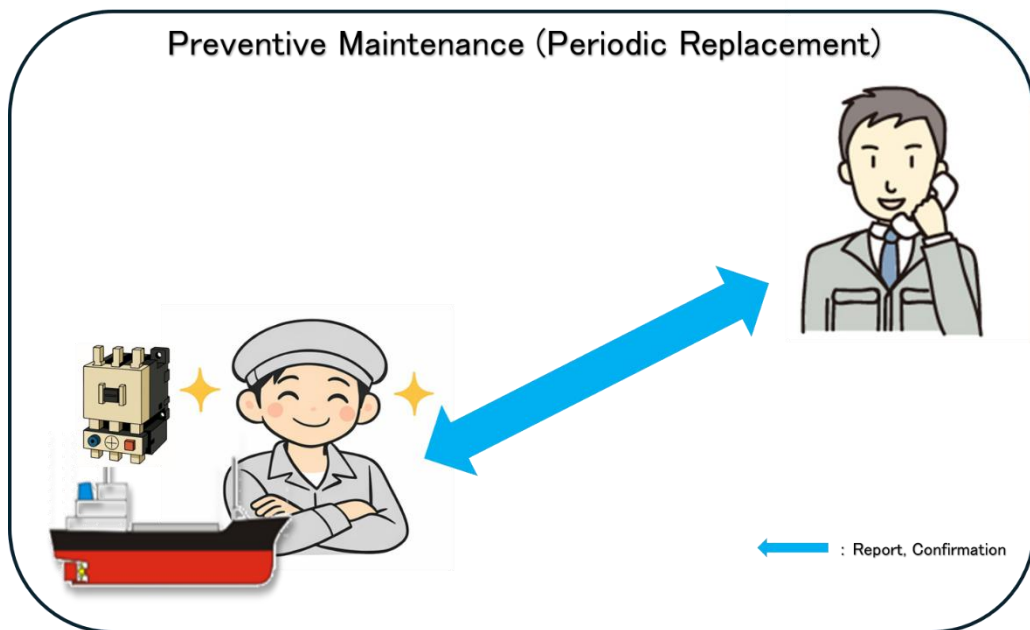
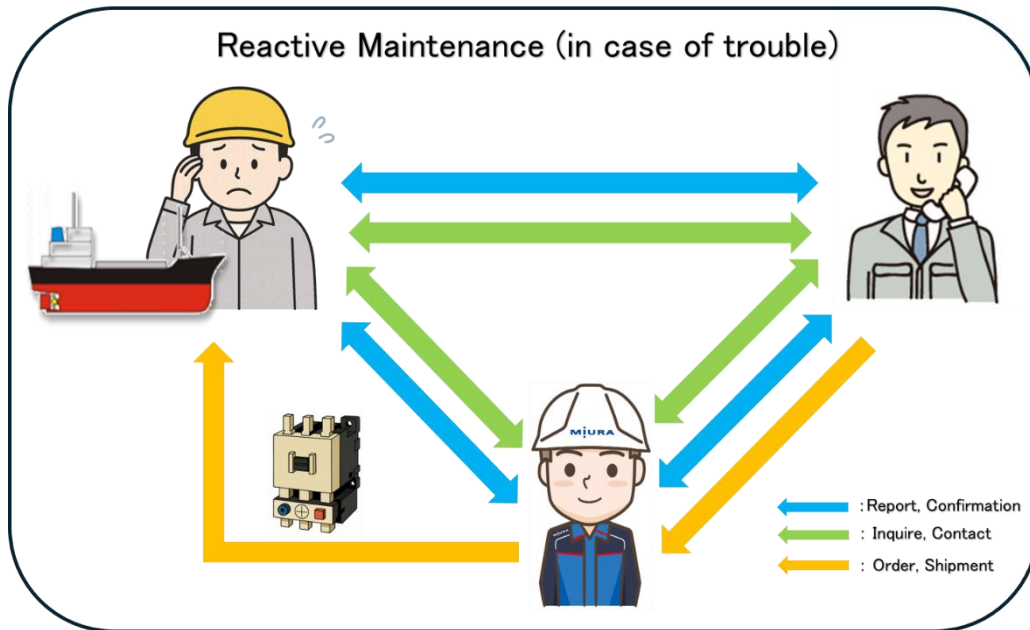
■ Effects of electrical system failures

Aspect	Effects of electrical system failures
Operation	The equipment stops, affecting cargo handling and operation. Requiring additional time for safety confirmation.
Cost	Unexpected responses tend to increase costs. Schedule delays result in significant effect.
Effort	It is difficult to identify the cause and taking time. Workload tends to become concentrated.
Repair	It is often difficult to carry out on-site recovery. Parts replacement is required.

■ Benefits of periodic replacement (preventive maintenance)

Benefit
Reduction of unexpected downtime
Ensuring stable operation
Repair costs can be reduced by 40–60% compared to reactive maintenance
Minimizing equipment recovery time
Improving safety

■ Comparison of recovery time for equipment



To reduce such risks and achieve planned and stable equipment operation, it is necessary to establish replacement intervals in advance (every 7.5 to 10 years), taking into account service life and operating environment. In addition, it is effective to implement preventive maintenance by regularly replacing electrical components.

Our Service Network can be found at URL or QR code below.
<https://www.miuraz.co.jp/product/marine/maintenance/service.html>

○ If you have any questions, please contact your nearest one of the service offices.

We look forward to hearing from you.

Email (After-sales service): hakuyo_mka@miuraz.co.jp

