

Ensuring Safe Operation

The MOL Group has learnt innumerable important lessons from the four serious marine incidents in fiscal 2006. While we have set ensuring safe operation as our primary strategic target, we are working very hard across the Group to promote and execute various measures to prevent serious marine incidents from occurring.



An Unyielding Policy –Safe Operation Is Our Foremost Priority

As a company providing marine transport services, I believe that ensuring safe operation and preventing marine accidents is not only a foundation of corporate management but also our basic mission to fulfill in our role as a member of society.

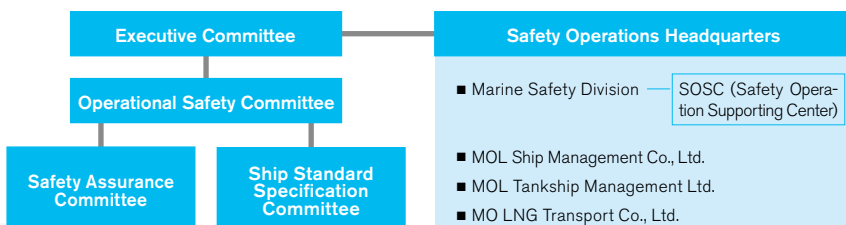
The MOL Group has analyzed the immediate and remote causes of past serious marine incidents from multiple angles. We have adopted numerous individual action plans to eliminate such causes and reinforce safe operation and are striving Group-wide to achieve the goals. Led by the Safety Operations Headquarters, which was formed in April 2007, we rigorously monitor progress with strategies in various fields, including the structure of facilities and equipment, education and training, and management and oversight systems. At the same time, we regularly review the results and make refinements and improvements as necessary. These activities are producing steady results.

The worldwide recession has made the business circumstances surrounding the shipping industry increasingly difficult, prompting us to engage in cost-cutting across the whole Group. During this cost-cutting drive, however, we will adhere to our basic policy which is to always treat the safe operation of our ships as our first priority. We have no intention of making misguided cost cuts that could result in an accident. We have made this policy clear to our seafarers at the frontline and land-based management staff, at the same time as we encourage them to continuously eliminate waste and inefficiencies in operations.



Masaaki Nemoto
Executive Officer

Safe Operation Management Structure



Preventing Past Marine Incidents From Fading With Time and Implementing Safety Education

—ZERO HOUR 2006—



MOL has produced a package of six DVDs called *ZERO HOUR 2006* as part of efforts to ensure that the lessons learnt from the serious marine accidents that occurred in fiscal 2006 never fade with time and to foster a culture of safety within the Group.

The general version of the DVDs summarizing the accidents is shown to our seafarers as well as land-based management and staff worldwide to prompt them to think about what they can do in regards to safety in their workplaces. The detailed version of the DVDs, which looks closely at the circumstances surrounding each accident, the technical problems and countermeasures, is mainly shown to crew aboard ships and at Safety Conferences around the world to spark debate and as part of reenactment-centered training.

OJT Instructor System

It is a fact that seafarer-related problems are one of the major factors in marine accidents or incidents. In order to maintain safe operations and the high quality of our transport services, it is necessary to continuously offer technical guidance and safety education to our seafarers based on MOL's quality standards.

In the past, superintendents in charge carried out vessel inspections of a ship's condition mainly when a ship was berthed. But some things are difficult to detect with these inspections. That's why we introduced the OJT instructor system. Identifying and rectifying danger points related to the operation and maintenance of facilities and equipment as well as unsafe seafarer actions while at sea is extremely effective in preventing accidents. Furthermore, providing safety advice and guidance based on the circumstances of each ship on the spot has considerable benefits in terms of seafarer development.

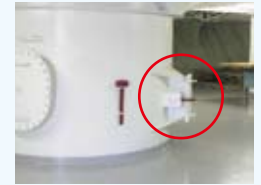
The OJT instructor system was initiated as part of measures to continually enhance safe operation. The trainers are selected from our experienced captains and chief engineers familiar with MOL's safe operation standards, and after undergoing specialized instructor training they are deployed to our operating vessels for a certain period of time to provide technical guidance.

Assessing Onboard Safety Equipment From a Fail-safe Standpoint

—MOL Safety Standards—

MOL's vessels are built and equipped for safety in compliance with international regulations. But we have also established our own MOL safety standards. Since even the most outstanding employees make mistakes and equipment can always break down, we continuously reassess the MOL Safety Standards. This is so that if there is trouble

with one piece of equipment, another is available to take over its operation, or a backup system is in place. With this fail-safe system, human error or equipment failure shouldn't cause major problems with vessel operation.



Quick-release anchor chain system

For example, learning from experience with fires in the engine room, we have increased the number of remote control surveillance cameras so as to enable us to pinpoint the seat of a fire and quickly deal with it. And from past incidents involving the dragging of anchors and groundings, we have installed quick-release anchor chains, so that anchor chains can be cut loose if the anchor cannot be raised for whatever reason.

Safety Operation Supporting Center (SOSC)

External factors that may disrupt safe operation include abnormal weather conditions such as large tropical cyclones that are blamed on global warming, and threats from piracy and terrorism around the world. So that our vessels can obtain the latest information about such situations and events and respond quickly and appropriately, on February 1, 2007 we established the Safety Operation Supporting Center (SOSC) in the Marine Safety Division in the Tokyo Head Office building.

The center is staffed 24 hours a day, 7 days a week, with 2 people always on duty, at least 1 of whom is an experienced captain. Using International Marine Satellite Organization (INMARSAT) technology and equipment, the center constantly monitors the position and movement of around 720 ships on 6 large monitors, as well as world weather information supplied by meteorology companies. If adverse weather, a tsunami or other event poses a risk to safe operation, the center immediately informs affected vessels, and meets with concerned parties on land to discuss a response. In this way, the center supports the decision-making of ships' captains to ensure vessel safety. SOSC also transmits wind and wave forecasts to ships berthed in any of the





approximately 1,100 major harbors worldwide, thereby helping ensure safety while they are docked or loading and unloading. SOSC plans to continue upgrading and enhancing systems and other functions with the aim of being a source of information that underpins the safe operation of MOL's expanding fleet into the future.

BRM Drills Utilize the Lessons Learned From Incidents

—Developing Speedy, Accurate Judgment—

Outstanding seafarers are critical to the safe operation of vessels no matter how good the specifications of ships and land-based support systems. For this reason, we operate MOL Training Centers in six countries (Japan, the Philippines, India, Montenegro, Indonesia and Russia). These centers provide training for both novice and veteran seafarers, with training matched to experience and rank as well as the type of vessel. Training covers a broad range of activities, from classroom lectures on theory to practical training using a bridge simulator and actual engines. The bridge simulator uses computer graphics to render specific sea lanes and harbors on large screens, enabling trainees to practice their navigation skills.

Once a voyage is underway, a ship is in operation every minute of the day and night, with the bridge manned in four-hour watches by an officer and a helmsman. The teamwork of the people on the bridge, and the skills to properly manage and use the various resources at hand (people, information and equipment) are what prevent marine accidents such as collisions and groundings caused by human error.

In order to hone these crucial skills, each training center includes a program on bridge resource management (BRM). With the cooperation of MOL Group company M.O. Marine Consulting, Ltd., we have developed a bridge simulator that enables trainees to experience bridge operations under various conditions. The simulator is capable of reproducing scenarios, including lessons from actual accidents, to enable trainees to learn the correct procedures and identify problems.

Spirit of MOL

MOL recruits seafarers only after rigorous pre-induction selection of graduates of naval academies from around the world. New recruits are given training at MOL training facilities before an onboard assignment. Furthermore, as officer cadets, they undergo on-the-job training onboard vessels operated by MOL. In July 2007, with the aims of meeting increasing demand for seafarers and to improve basic onboard training, we launched the training ship *Spirit of MOL*. Cadets receive four to six months of intensive safety education and basic training aboard the *Spirit of MOL*, where they also gain specialist navigation and marine engineering skills and learn how to conduct themselves as a crew member. What's more, we believe that by experiencing the joys and hardships of training together, these impressionable young cadets who come from many different countries (the Philippines, India, Vietnam, Indonesia, Russia, the Ukraine and Panama) will gain essential multi-cultural understanding, develop strong bonds of cooperation and take pride in becoming MOL seafarers.

Volunteer activities as well as shipboard training have considerable benefits in terms of both cultural education and social contribution. In June 2008, when Iloilo City and surrounding areas in the Philippines were devastated by a typhoon, the *Spirit of MOL* helped deliver relief supplies for the government of the Philippines, and crew members and cadets pitched in with local restoration activities. The government of the Philippines subsequently recognized these activities with an official letter of appreciation.

