

## Chapter 7

# Near Miss and Potential Accident Reports

In terms of prevention, near miss and potential accident reports are an effective means of understanding the root causes of accidents before they occur.

### 7-1 Near Miss and Potential Accident Reports

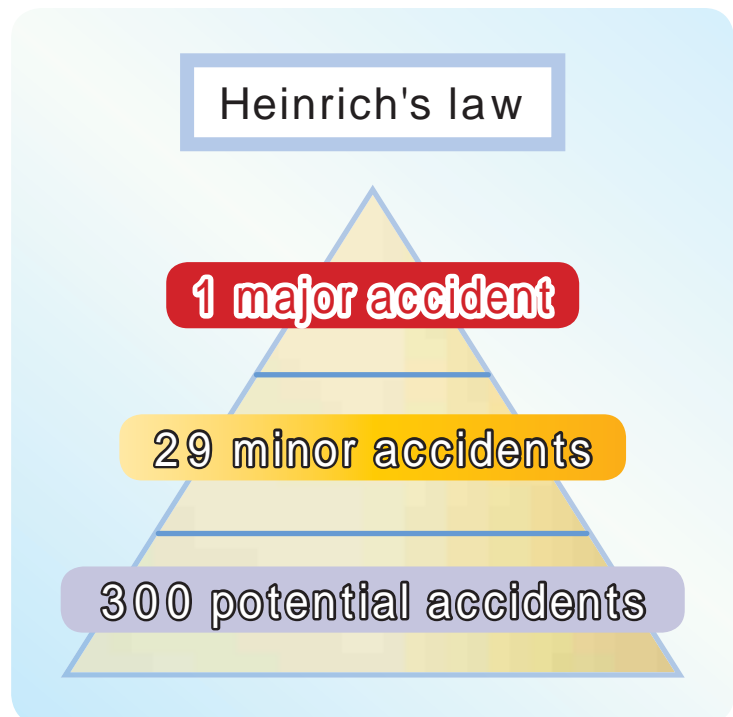
Behind one major accident or disaster is said to lie 29 minor accidents or disasters, and a further 300 potential accidents.

In order to prevent a major accident or disaster it is necessary to deal with problems in the potential accident stage at which they can be predicted.

Heinrich's law

Simulation such as risk prediction training, and providing simulated risk experience in training facilities etc. is considered as an effective method of accident prevention.

Summarized as follows.



Important

- ▶ **Disasters are eliminated if accidents are prevented**
- ▶ **Elimination of unsafe behavior and unsafe situations eliminates accidents and disasters.**

(safety checks and maintenance in the workplace environment, in particular in reference to appropriate employment, training, and monitoring of personnel, and the related responsibility of managers)

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## \* 7-2 Potential Accident Reports in Practice

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A large number of companies have introduced the potential accident report system, however the frequent complaint from managers in the shore-based management division is that 'we can't get the reports'. The following must be considered in order to use potential accident reports effectively.

**1** The basic data for the potential accident report is a report from the site (the vessel and the navigation management division). The report is therefore prepared by personnel on-site, and it is those personnel in which improved awareness is required. The captain and chief engineer, and the company, must take the lead in the awareness program. It is also important that not only 'potential accident items', but also improvement measures etc., are reported.

**2** Making a tabulation and analysis of the potential accident report have to be done periodically. The presented potential accident reports must be classified every 3 - 6 months, and the time zones for occurrence and preventative measures to be summarized.

**3** If measures to prevent reoccurrence, and improvement measures, are proposed for each report and summarized monthly in table format, they can be used as attachments to the analysis results described above. It is important to use the preliminary figures as feedback for the vessel.

**4** It is important that tabulation and analysis results are taken up as topics by the safety conference etc.

The name of the vessel and the name of the person preparing the report must not be disclosed, and care is required to maintain anonymity.

Feedback to the person reporting, and to the vessel in question, must be provided with thanks for the submission of the report, and measures to prevent reoccurrence, and handled confidentially. These measures increase the motivation of the person reporting, and are linked to submission of the next report.

Furthermore, one proposal is to award each person reporting and each site (the vessel and the navigation management division) in accordance with details and number of reports at safety conferences etc.

Conversely, unless these measures are taken, the person reporting is unsure as to how his/her potential accident report has been taken up by the company, and the number of reports will diminish.

In addition to potential accident reports, introduction of an improvement submissions system etc. is linked to raising motivation on-site.

## Chapter 8

# Conclusion

The author is confident that readers have understood that management with BRM and ERM are effective in achieving safety in operation.

However, in comparison with the difference in technical level between aircraft pilots and co-pilots, that of between captains and navigators, or between chief engineers and engineers, is considerable. The question of how to cultivate inexperienced navigators and engineers to the levels expected of captains and chief engineers is a topic for future discussion.

Furthermore, modern vessels are manned by a combination of different nationalities, and BRM and ERM management must also apply to non-Japanese navigators, engineers, and crews. In other words, BRM and ERM management must also be considered with diversity in characteristics, culture, and customs.

In the case of aircraft, landing and takeoff are associated with the most tension being concentrated into a period of approximately 11 minutes, referred to as the 'critical eleven'. For shipping, coastal voyages and passage through narrow channels, arriving and departing the pier, loading and unloading, various vessel inspections, looking after customers, and repairs, makes for continued tension within the context of the increasingly diverse crews employed. This work may justifiably be termed **critical week (month)**.

Under these conditions, using OJT as the means for education of inexperienced navigators and engineers may place too greater burden on the captain and chief engineer.

In this context, the large number of frameworks in the SMS manual and safety management regulations have led to an increase in the volume of reports and document management work which is, without exaggeration, by a factor of anything from a few to a few tens over the former level. Furthermore, such regulations as ballast water management and the use of low sulfur fuel, and vessel inspections such as PSC, have increased.

Approximately 20 years have passed since introduction of the SMS manual. Almost ten years has passed since introduction of safety management regulations for coastal vessels. These may be essential tools for safe operation, however if the same accident occurs again, and we consider that they have not served to eliminate the accident, it may be time to consider revising SMS and safety management regulations documentation control and preparation of reports and reduce the load on site personnel.

## Reference materials

Provided by Maritime Human Resource Institute:

- \* Engine Room Resource Management

- \* Above on DVD

(<http://www.maritime-forum.jp/en/index.php>)

Japan Captains Association:

- \* Educational lectures

No.75 Human Error from the Point of View of Psychology

No.77 BRM

No.80 Safety in a Proud Occupation – Why is BRM necessary?

No.81 Eliminating Accidents Caused by Human Factors

Skills of Individuals Supporting BRM – Improving the Skills of Inexperienced Navigators (DVD)

Nihon VM Centre : Anzen no Komado

(<http://www.maroon.dti.ne.jp/nvmc/komadobkNo.html>)

P&P Network: Meaning and Objectives of OJT

(<http://www.d1.dion.ne.jp/~ppnet/prod06150.htm>)

Seizando Shoten: Bridge Resource Management

Maritime Accident Inquiry Tribunal:

([http://www.mlit.go.jp/jmat/saiketsu/saiketsu\\_kako/04saiketsu.htm](http://www.mlit.go.jp/jmat/saiketsu/saiketsu_kako/04saiketsu.htm))

Transport Safety Board Report

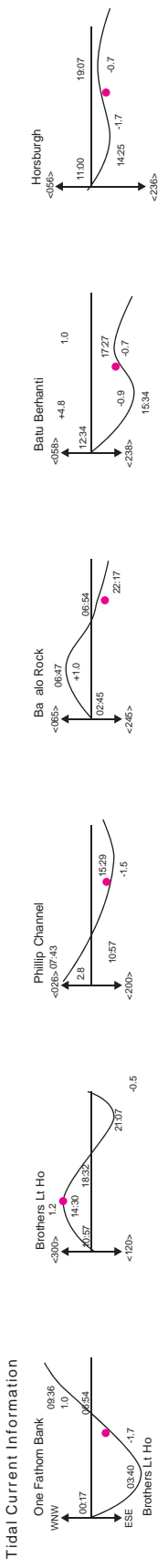
(<http://jtsb.mlit.go.jp/jtsb/ship/>)

**Singapore Straits Passage Plan = BRM Briefing = 1 day before at Bridge**  
**S.S. "XXXX" Passage Plan for Malacca & Singapore Strait (East Bound)**

|  |      |     |     |     |     |      |     |
|--|------|-----|-----|-----|-----|------|-----|
| Briefing Capt<br>26th Aug 08<br>1300 ~ | Capt | C/O | 1/O | 2/O | 3/O | T3/O | C/E |
| De-briefing<br>28th Aug 08<br>1140 ~   | Capt | C/O | 1/O | 2/O | 3/O | T3/O | C/E |



| Point               | Co./Dist   | Time Req. | ETP/Pass | Actual Time | Eng. Melton | Watch Level | Remarks  |
|---------------------|--|-----------|----------|-------------|-------------|-------------|--|
| Call Capt.          | 10.95<br>d F<br>27th Aug 08<br>@sp'd 16.5 (72 RPM) | 17:30     | 17:30    | 17:30       | W/L 2.0     | VTIS Report | Check Navigational equipment   |
| Brothers L't H      | 10.95<br>d F<br>27th Aug 08<br>@sp'd 16.5 (72 RPM) | 19:05     | 19:05    | 19:05       | W/L 2.0     | VTIS Report | Lock Entrances / Light on deck / water injection 19:30 hrs 23:00hrs 27th Aug. Depending on Tra c |
| Brothers L't H      | 10.95<br>d F<br>27th Aug 08<br>@sp'd 16.5 (72 RPM) | 19:20     | 19:20    | 19:20       | W/L 2.0     | VTIS Report | Call Capt. 30' to TSS Ent.   |
| Tg Pelepas          | 10.95<br>d F<br>27th Aug 08<br>@sp'd 16.5 (72 RPM) | 19:30     | 19:30    | 19:30       | W/L 2.0     | VTIS Report | Watch leaving/ entering vessels for anchorage  |
| Pasir Panjang       | 10.95<br>d F<br>27th Aug 08<br>@sp'd 16.5 (72 RPM) | 20:28     | 20:28    | 20:28       | W/L 2.0     | VTIS Report | Watch leaving/ entering vessels for anchorage  |
| Bu alo Rk           | 10.95<br>d F<br>27th Aug 08<br>@sp'd 16.5 (72 RPM) | 20:54     | 20:54    | 20:54       | W/L 2.0     | VTIS Report | Watch leaving/ entering vessels for anchorage  |
| Takong Kechil       | 10.95<br>d F<br>27th Aug 08<br>@sp'd 16.5 (72 RPM) | 21:27     | 21:27    | 21:27       | W/L 2.0     | VTIS Report | Watch leaving/ entering vessels for anchorage  |
| B.Berhanti          | 10.95<br>d F<br>27th Aug 08<br>@sp'd 16.5 (72 RPM) | 21:51     | 21:51    | 21:51       | W/L 2.0     | VTIS Report | Watch leaving/ entering vessels for anchorage  |
| Batu Berhanti L't H | 10.95<br>d F<br>27th Aug 08<br>@sp'd 16.5 (72 RPM) | 21:51     | 21:51    | 21:51       | W/L 2.0     | VTIS Report | Watch leaving/ entering vessels for anchorage  |
| O Singapore         | 10.95<br>d F<br>27th Aug 08<br>@sp'd 16.5 (72 RPM) | 21:51     | 21:51    | 21:51       | W/L 2.0     | VTIS Report | Watch leaving/ entering vessels for anchorage  |
| Horsburgh L't H     | 10.95<br>d F<br>27th Aug 08<br>@sp'd 16.5 (72 RPM) | 23:51     | 23:51    | 23:51       | W/L 2.0     | VTIS Report | Watch leaving/ entering vessels for anchorage  |
| Clear Out SPR St    | 10.95<br>d F<br>27th Aug 08<br>@sp'd 16.5 (72 RPM) | 01:10     | 01:10    | 01:10       | W/L 2.0     | VTIS Report | Watch leaving/ entering vessels for anchorage  |



Master of S.S. XXXX  
 Capt. Takuzo OKADA

xxth XXXXXX, 20XX

## MASTER'S STANDING ORDER

This is master's standing order during the time I command the vessel M.V. "ABC" and I do expect all OOW to maintain safe navigation.

### 1. Be proud of Your Duty

There are many lives on board M.V. "ABC" and the vessel carries an enormous sum of cargoes from many customers.

Value of cargoes are too high and the influences of damage to cargoes or late arrival of cargoes caused by accident are too much to estimate.

This means you have so much important responsibilities with safe lives and cargoes on board the vessel on behalf of Master during you are on navigational watch and you can be proud of your important duty.

### 2. Avoid Any Navigational Accident

Study International COLREG well and other rules of navigation and consult SMS Manual and so on continuously to make use of avoiding any navigational accident.

- 1 When in Ocean, give all other vessels ample room;  
**More than 2.0 miles of CPA and 5 miles clearance in front.**
- 2 When in Coastal cruising, give all other vessels ample room;  
**At least 1 mile of CPA and 2 miles clearance in front.**
- 3 It is highly recommended to alter her course before the distance between the ship becomes less than 6- 8 miles.

### 3. Do Call Me at Anytime and Well Ahead of Time

Call me at anytime and well ahead of time when you encounter situations Mentioned below and instructed by SMS Manual or Master's night order.

- \* Visibility less than 3 miles.
- \* Heavy tra c or group of fishing boats.
- \* Ship's position in doubt.
- \* Remarkable change of weather and sea condition.
- \* Di culties in maneuvering the vessel.

In addition to the above, Call me when you find anything unusual or any sign of Trouble.

### 4. Pay Keen attention to All Aspects to catch any sign of trouble all the time.

### 5. Keep a Sharp Lookout All the Time when on Watch.

Keep good, Sharp and Continuous look out using all available means regardless of weather and other situation. Secure at least one person always who gives exclusive attention to look-out.

### 6. Read this Master's Standing Order before your duty in every time.

C/O .            2/O .            3/O .

M/V "ABC" Capt. Takuzo OKADA

Date : xxth XXXXX, 20XX

From Yokohama to Singapore

G.Co <220> Mg. Co<225>

1. Keep a Sharp Lookout continuously with all available means
2. Give a wide room to all passing vessels and other boats
3. Keep a following CPA and Distance to all passing vessels  
CPA Mor than 2.0 miles  
Distance in front More than 5.0 miles
4. Call me at any time Visibility less than 3 miles  
Observe fishing group in front  
Remarkable change of weather and sea condition
5. Do not hesitate;  
Use a whistle  
Use a Main Engine  
Call Captain
6. Follow the Master's Standing Order and SMS manual strictly (Signiture)  
Have a good watch  
C/Off 2/Off 3/Off  
AB-A AB-B AB-C

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Master of M/V"ABC" Capt. Takuzo OKADA