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Development of security measures on board ships : guidelines for Egyptian seafarers

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WORLD MARITIME UNIVERSITY
Malmö, Sweden

DEVELOPMENT OF SECURITY MEASURES ON BOARD SHIPS:

Guidelines for Egyptian Seafarers.

By

ESSAM EL SAYED AHMED BADAWI
Egypt

A dissertation to the World Maritime University in partial fulfillment of the
Requirements for the award of the degree of

MASTER OF SCIENCE

In

MARITIME SAFETY AND ENVIRONMENTAL PROTECTION

1999

DECLARTION

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

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ABSTRACT

Title of Dissertation:

Development of Security Measures on Board Ships:
Guidelines for Egyptian Seafarers.

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A comprehensive assessment of the potential risks that the merchant vessels face from piracy, stowaway and maritime terrorism need to be addressed. To the extent that the administrations begins a serious effort to tighten security on board their ships, the long-term interests of sea travel will be better served. Without the will to make preventive measures against attack, ships everywhere will remain at the mercy of these maritime threats.

Piracy has always been an ocean hazard. Over the years the use of firearms has increased. With the aid of modern technology and the involvement of organized syndicates, piracy has become even more violent. It has become evident, that the targets are carefully chosen and that the pirates are well-informed about the nature of the cargo carried and the level of security to expect.

Stowaways present an immense problem that encompasses the entire globe. Fear of political discrimination, civil war or natural disasters or a simple wish to have a better standard of living are reasons for more and more people using ships as an illegal means to enter a foreign country which costs the shipping industry million of dollars a year.

Maritime terrorism is the most serious threat facing any vessel and crew today. The threat against passenger ships is increased by the displacement of terrorist attacks from the aviation system where preventive security has reduced their opportunity for success. It consists of any act which maliciously damages or destroys property, frightens or kills innocent crew or passengers. It is included as part of the basic doctrine of most revolutionary groups throughout the world risking their lives usually for political reasons.

It can be emphasized that the most valuable factor in the protection of the ship is the willing, knowledgeable and cooperative attitude of the crew. To gain this valuable target however does take an effort and there needs to be a security measures guideline. This dissertation provides reasonable and pragmatic steps aimed at achieving this goal.

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LIST OF ABBREVIATIONS

AAST & MT	Arab Academy for Science and Technology & Maritime Transport
BIMCO	The Baltic and International Maritime Council
CCTV	Closed Circuit Television System
DETR	UK Department of the Environment, Transport and the Regions
DSC	Digital Selective Calling
FERIT	Far East Regional Investigation Team
GMDSS	Global Maritime Distress and Safety System
ICC	International Chamber of Commerce
IMB	International Maritime Bureau
IMO	International Maritime Organization
INMARSAT	International Maritime Satellite Organization
ISF	International Shipping Federation
ISM	International Safety Management
MSC	Maritime Safety Committee
NUC	Not Under Command
NUMAST	Nation Union of Marine Aviation and Shipping Transport
OOW	Officer On Watch
P&I Club	Protection and Indemnity Association
RCC	Rescue Co-ordination Center
RO-RO	Roll on Roll off
SMS	Safety Management System
SOLAS	Safety of Life at Sea
SOP	Standard Operation Procedures
STASCO	Shell International Trading & Shipping company
UNCLOS	United Nation Convention on the Law Of the Sea
USCG	United State Coast Guard

CHAPTER 1

Introduction

1.1 Background to the study

In these days, lamentably, merchant vessels represent convenient means of transport to the stowaway and easy prey for pirates and terrorists. It is astonishing that in an era of sophisticated technology and multi-media communication, problems like piracy, stowing away and terrorism are more than nuisances to the maritime industry, but represent strategic threats to it.

Anyone who reads any maritime journal will realize that *piracy* is not a historic or romantic fiction. Over the years the use of firearms has increased, organized syndicates have taken over and the severity of the attacks increased. Today's ships, with their high-value cargo and small crews to man the ships that carry them, are vulnerable to criminal predators in high speed boats, communications equipment and weaponry, and operating in sea lanes that international carriers must traverse. From the report of the 71st session of the Maritime Safety Committee (MSC) (1999/5), the total number of incidents reported to the International Maritime Organization (IMO), since it started compiling statistics on these unlawful acts in 1984, had amounted to 1455 by the end of April 1999 and, although their number had dropped in 1998 by 17% compared with that for 1997, it noted with particular concern that, during the

period under review, 51 crew members had reportedly been killed and another 31 had been wounded. The plague seems to be largely unchecked with no punishment despite the efforts of IMO and other organizations such as IMB (International Maritime Bureau) and BIMCO (The Baltic and International Maritime Council). Perhaps more disturbing are instances of possible state sponsorship.

It has become evident that the targets are carefully chosen and that the pirates are well informed about the nature of cargo carried and the level of security to expect. There are cases of whole cargo being unloaded at sea. Occasionally, crew have been killed, ships have been renamed and spirited away, to become what is known as "Phantom Ships". Another evil face of the coin is that piracy affects maritime traffic in vital shipping lanes, such as the Malacca Strait which is one of the heaviest traffic lanes of the world used by up to 200 ships daily; attacks on oil supertankers increase the potential of igniting environmental disasters (as vessels are left unmanned during the attacks in those narrow waterways).

In the days of sail, *stowaways* were sometimes a welcome supplement to the crew, particularly on the homebound voyage when some seamen had fallen sick, died or stayed behind for other reasons. When the shortage became acute, the master sent out specialists to "shanghai" men, that is to make them drunk and bring them on board and, when sober they found themselves at high seas. Today there is no need to shanghai people, to make them drunk and press them to work on a ship. Today they come voluntarily and in numbers as stowaways, refugees or asylum seekers. They need not to be paid because they are on board for one purpose only, to travel to a country of their choice. For this some of them have even paid money to organized gangs.

It seems a romantic notion and harmless to stow away and to travel between continents free and easy. In reality it involves a grave risk to the stowaway himself, in addition to a danger to the crew, the cargo and at times the ship - starting from,

accidentally starting a fire due to a lighted cigarette dropped in the cab of a truck, to causing major delays to ships because of repatriation procedures. In the past two years, stowaways have cost the Protection & Indemnity Association (P&I club) US $ 1.8 million. Time wasted is greater if a stowaway claims that he was mistreated on board or has been robbed. Investigation in those cases is extremely lengthy. Many stowaways are thieves, looking to steal cargo and 'jump' ship at the next port. Stowaways are not harmless as some think, they are often violent, desperate and can be a great threat to the crew, as they may carry guns or even drugs as their passport to a 'new life' elsewhere. Oftentimes they may also carry drugs as 'tickets' they pay to organized drug smuggling syndicates for making them travel.

Maritime terrorism is not a new phenomenon and arguably not a dramatically growing one. It has been adjunct to political and quasi – military campaign for more than a century, (like the case which occurred at the very outset of the rise of contemporary terrorism in January 1968, where the *Pueblo*, a US Navy intelligence ship was captured off the North Korean coast by a North Korean patrol boat.). Afterwards, the number of reported incidents demonstrate some growth from decade to decade. Today, maritime terrorism precisely mirrors other forms of terrorism in that about 85% of incidents involved bombs or other explosives. It also craves media attention, and the seizure of the *Achillee Lauro* in October 1985 – an Italian vessel wherein 800 passengers and 300 crew members were captured and an American passenger was killed – provided the world with a graphic picture of maritime terrorism. Today terrorists are trained in physical conditioning, weaponry, electronics, communication, explosives, camouflage, first aid, document forgery, martial arts, and military tactics.

Maritime terrorism represents a great harm not only to the industry or tourism, it can even damage a nation's economy. The official Greek Government figures following the single murder of the *Achillee Lauro* revealed a direct loss of $ US 300 million; $200 million from tourism and $ 100 million from cancelled cruise ship bookings.

Criminal activity in the form of piracy, stowaway or terrorism is quickly becoming one of the greatest threats to the maritime industry and it simply cannot be underestimated. This makes for an incontrovertible case that ship managers and masters should take measures to improve the standards of security on their ships.

1.2 The need of improving the security measures of Egyptian seafarers

As in other matters, there is a great deal of difference between states concerning the implementation of security measures on board their ships. Indeed, within the country itself, one can find variance in the way different shipping companies apply security standards aboard their ships. As a matter of fact, such security standards are practically set in most part by the ship's **crew**. That is why seafarers constitute a dynamic element in security measures on board ships. Seafarers represent a fundamental factor in ensuring security aboard ships in the Egyptian fleet where, in accordance to national legislation, at least 90% of the crew must be Egyptian.

The primary goal of this dissertation is to provide Egyptian seafarers with useful insights on the preventive measures which can be implemented on board Egyptian vessels as well as guidelines on actions to be taken when those threats become a reality on board. This author believes that there is an urgent need to improve security measures on board Egyptian ships for the following reasons:

1- Even though Egypt is moving towards the improvement of maritime matters in all perspectives, the "Egyptian MARAD" needs adequate security measures guidelines to be implemented on board Egyptian ships (*Maritime Administration in Egypt is the responsibility of five maritime transport agencies under the Ministry of Transport. For purposes of this dissertation, it will suffice to use the label "Egyptian MARAD" when referring to the whole system or network of maritime administration in Egypt).* This dissertation hopes to fill in some of the gaps that may be found in the Egyptian MARAD's policies on maritime security.

2- Security measures always make sense, regardless of a sea area's reputation of being pirate-infested or not. Egypt, for instance, is not considered a piracy-prone area. In fact, only a single accident was reported last year (1998), where the crew of an Egyptian fishing vessel attacked a Cyprus fishing vessel while fishing some 25 nautical miles (n.m) off the coast of Egypt, in international waters. In that particular case, no murder was committed and the financial damage was estimated to be minimal. The incident certainly cannot be considered as the beginnings of a new phenomenon. Precautions, nevertheless, must be taken. It is meaningless to wait for the problem to dominate before resolving it. Another reason for adopting preventive measures is indeed because Egyptian vessels are not anchored permanently in Egyptian waters. They are underway in the high seas, passing through dangerous hot spots of piracy.

3- In spite of the fact that Egypt is not considered a place where illegal boarding is a major problem, preventive measures should be taken seriously especially since costs associated with stowaways can be very high. The total cost for 5 days of hiring a security agency following the discovery of a stowaway on board an American vessel can be in excess of $ 13,400. The invoice details vary depending on security on board, removal of stowaway to hotel, security at the hotel, to hotel expenses, food and beverages and travel expense per mile (BIMCO Bulletin, 98, p56). While such invoices could hurt a shipping company in a country like the United States, it could be an economic disaster for a shipping company in a developing country like Egypt. The threat from stowaways is not only the expenses but also the potentially grievous consequences of their presence. Fines, delays, emotional stress, and even criminal charges against the crew for mistreating stowaways face owners and masters who do not implement an effective plan to prevent stowaways from coming on board and to care for the ones that do.

4- While there are no cases of maritime terrorism on record in Egypt, there are numerous incidents of terrorism recorded on land. One of the most recent ones

occurred in November 1997 when Egyptian terrorists shot and stabbed to death 58 tourists on a harmless visit to Queen Hatshepsut's temple at Luxor (the Luxor massacre may have been a last, savage attack by an illdisciplined group in decline, although in the previous year 18 Greek tourists were also gunned down in Cairo). Fortunately, no major terrorist incidents have occurred since then. This can be partially attributed to the fact that Egyptians now provide top security for tourists. Nonetheless, vigilance, training and all preventive measures should always be kept at the highest levels in both maritime and shore-based industries basically for two reasons. Firstly, it cannot be denied that tourism is one of the sectors first affected by terrorism. With tourism being one of Egypt's top foreign currency earners, bringing in $ 3 to 4 billion a year (The Economist, March 1999, p6), it is evident that disruption due to terrorism would cause serious problems. One in seven Egyptians is said to depend in one way or another on the industry tourist. Accordingly, when tourism crashes, the consequences are dire. Secondly, dues from ships passing through the Suez Canal bring $ 2 to 3 billion a year. If a major maritime terrorism incident were to occur in Egypt, the consequent desertion by tourists coming to see Egypt's sites and vessels planning to transit the Suez Canal, could cause a developing country like Egypt foreign currency losses of that up to $ 5 to 7 billion a year. The consequences could be economically disastrous.

1.3 Methodology

This dissertation's main objectives are to dissect three of the most violent threats to security at sea – piracy, stowaways, and terrorism – and recommend measures to prevent and control these threats aboard Egyptian vessels. The methodology adopted by this dissertation is to assign each threat a chapter of its own, with each chapter beginning with a detailed examination of the threat and concluding with corresponding recommended security measures. Preceding the chapters on the three threats, however, is a chapter (Chapter 2) on the general principles of maritime security.

Chapter 2 will demonstrate the principles and objectives of maritime security. In this chapter, discussions will be included on how the security planner can accomplish a security survey as well as develop and maintain an appropriate ship security plan. Different factors that affect the security plan shall also be analyzed. Chapter 2 is designed to provide the reader the necessary foundation on the general principles of maritime security and security planning. This prepares the reader for the more detailed recommendations contained in the chapters on the three maritime security threats.

Chapter 3 will be on piracy. It gives a general idea of the worldwide piracy threat as well as the different tactics employed by pirates. Hot piracy spots are reviewed as well as the location of the vessel during the attacks. A comparison is then made between different kinds of seizures according to their duration. This chapter also investigates the numerous countermeasures available to the shipping community by way of general precautions and different antiattack plans when a vessel is in port, underway or in high-risk areas. Guidelines on what could be done if attackers are detected or worse if they gain access and control, are also offered. Chapter 3 ends by providing procedures to be taken by officers and crew after an attack.

Chapter 4 deals on the issue of stowing away by first looking at how it is defined in the maritime community. The chapter then examines behavioral patterns exhibited by stowaways and offers suggestions on how to treat these "uninvited guests" once they are discovered aboard ship. The chapter ends by proposing measures aimed at providing ships with their first line of defense against the problem of stowaways, that is, by preventing illegal boarding from taking place.

Chapter 5 is about terrorism at sea. It begins with a discussion on terrorism in general, then focuses on maritime terrorism, its history, definition, and reasons why terrorists might prefer the maritime environment as a venue for their activities. Afterward, a scope on maritime terrorists, who they are, how they act, and their aims

are shown. Finally, preventive measures are established with an assessment of suspicious passengers and proposed actions to be taken by the crew if terrorists gain entry to the ship.

The sixth chapter will be the conclusion, where the major themes of the dissertation are reviewed and recommendations provided for formulating national policies against threats to maritime security on board Egyptian vessels are put forward.

CHAPTER 2

Development of Security Measures on board ships

2.1 Security aims and principles

Merchant Shipping is an international industry. It provides an invaluable service to society transporting goods and commodities across the world. Unfortunately, however, merchant vessels also present a convenient means of transport for the stowaway or drug smuggler and easy prey for the contemporary pirate and maritime terrorist equipped with modern communications, equipment, and weaponry.

Although no vessel is capable of completely eliminating these risks, careful planning can substantially reduce a vessel's exposure. B.A.H. Parritt in his book *Security at Sea* highlights one of the major problems in security planning:

> whereas there are a multitude of SOLAS (Safety of Life at Sea) regulations concerning safety, there are no …international laws… dealing with security. All shipmasters well understand that, in order to fulfil their safety obligations, they have to meet clearly defined and well-known safety standards and this they do an internationally recognized standard. But when trying to fulfil their security obligations, in the absence of clearly defined and internationally agreed…laws of the sea, there has been a great deal of divergence and many different standards.

Maritime security can be defined as those measures employed by owners, masters and administrators of ships to protect against different kinds of threats. Proper maritime security creates a condition, which establishes and maintains certain protective measures. These measures must be capable in all instances of performing two absolutely imperative tasks. They must provide timely and accurate warning of an impending threat and they must be capable of removing or neutralizing that threat.

2.1.1 The security objectives

The two objectives of maritime security are, therefore, adequate warning and timely reaction. Adequate warning is essential to timely reaction. Without such warning, a threat potentially becomes an attack and the ship's ability to successfully repel that attack is substantially reduced. On the other hand, the ability to react in a timely manner to a security threat is just as important as the ability to provide adequate warning. Neither is more important than the other, and both of them can only be achieved through proper security indoctrination and training of personnel.

2.1.1.1 Adequate warning

This objective is governed by two security principle awareness and planning Awareness means that each crewmember must *care* about the safety and security of the ship. CARE stands for:

C concentrate A always R remember E enemies

By caring, by concentrating, by remembering at all times that the ship is potentially at risk, crew increase their awareness of security and their ability to give adequate warning of any suspicious activity or circumstances. Planning means that each ship must have a security plan that has been carefully and thoroughly prepared and analyzed. This plan include the security standard operation procedures (SOPs),

contingency plans, and personal assignments that are act designed to meet the security threat applicable to that particular entity.

Awareness and knowledge can only be gained through proper indoctrination and training such as security drills.

2.1.1.2 Timely reaction

To achieve this goal preparedness and action policy must be studied. A ship's ability to react in a timely manner to any security threat is determined by its level of preparedness. Preparedness is a function of awareness and planning. It is the result of proper training and indoctrination of personnel. Action is always governed by the means of company and ship policy which is prepared to make a ship take action against threats or react in such a way as to prevent the boarding of these threats.

2.1.1.3 Security in depth

The purpose of maritime security is to make access to the ship so difficult as to discourage the attempt and, if the attempt is made, to minimize damage and ensure the attempt remains an attempt. One way of doing this is to ensure that the security should be in depth. In depth security establishes multiple security perimeters or line of defense through which an attack must penetrate.

For a merchant ship berthed in port, the first security perimeter would be the harbor gate. The second line of defense would be the area between the harbor gate and the ship where port security people may be located. The third security perimeter is the ship's hull and gangway. For a ship under way or at anchor, the ship's hull is the only line of defense before an attack.

The two objectives of maritime security combined with the axiom that the security should be in depth form a plan for security which can be diagrammed as shown in figure 2.1.

Figure 2.1 Plan of maritime security
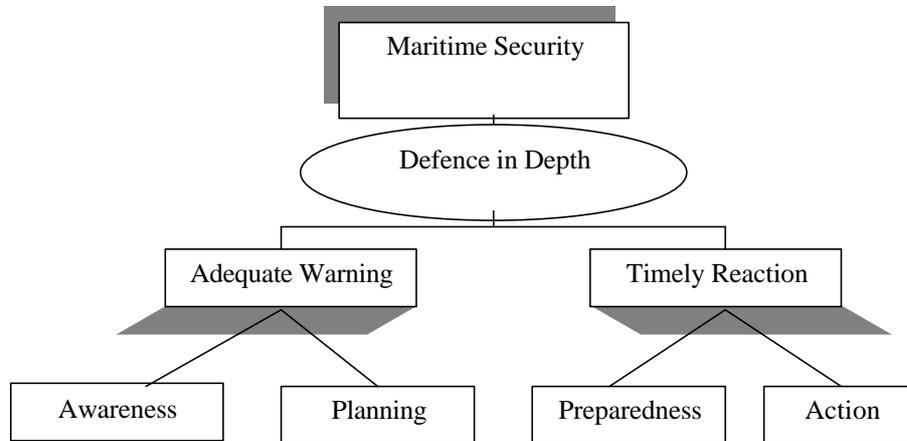
2.2 Security risk

In the book 'Ports at Risk'(1993), Eric Ellen, director of International Chamber of Commerce (ICC) –(IMB), states that "*Security* and *risk* are much used and abused terms with the result that their variable meanings can become instilled in the mind of the individual and yet not be totally correct in any given context." Ellen declares that risk is a term which implies a negative effect and can be defined as "Any potential condition, which, if it were to become a fact, would adversely affect efficiency." From this definition it can be seen that there is an element of change in that the potential may not come to pass even if no steps are taken to prevent it and the parallel change that any preventive measures may not be effective.

On the other hand, Ellen defines security as "pertaining to crime or other deviant behavior." Those two definitions combine to give us a description of *security risk* as being: "Any potential condition, having its basis in crime or other deviant behavior which, if it were to become a fact, would adversely affect efficiency."

2.3 Security Planning

The aim of security planning is to develop valid and flexible plans. These plans must be updated frequently to reflect the real shipping conditions that currently exist. A plan that supposes things which are not reasonable or probable is flawed from its inception. A plan must be usable today. The component concepts of security planning are risk assessment, risk management, and application.

2.3.1 Risk assessment

A risk assessment is a rational and orderly approach and a comprehensive solution to problem identification and probability determination. For security purposes on board ship, the risk assessment process is used to establish whether any vessel is subject to a higher level of risk due to specific circumstances. Information gathering and monitoring is a vital part of this assessment process. Government and industry bodies, together with local specialized groups, such as terminal operators and agents, can provide a useful substantial source of information. Capt. John Evan in his article "Repelling the Boarders" (1998) added that the Internet is another resource providing information that involved attacks against ships and can, when appropriate, be passed on to the master. Those factors to be taken into account in the risk assessment process include the reported frequency and type of criminal activity prevalent in the area the vessel is transiting or trading in or the freeboard, tonnage and speed of the vessel; the nature of the cargo on board; and whether the vessel is required to anchor.

2.3.2 Risk management

Risk management is the anticipation, the recognition, and the appraisal of a risk and the initiation of some action to remove or reduce that risk or to reduce potential loss from that risk to an acceptable level. Effective planning against maritime security

threats requires threat awareness, focused response and well developed contingency plans. This also includes the proper training and equipment.

2.3.3 Application

The security plan can be prepared by a designated security officer or an independent security consultant who for purposes of the plan is referred to as the security planner. In the process of developing a security plan, a number of criteria should be carefully considered, putting into account that these criteria vary from one instance to another. Consequently, security plans will vary from one instance to another. The variables rarely remain constant. Policy changes occur, capabilities change, risks fluctuate. A vessel's shipping route, ports of call, and security evaluation vary. Her new owners will probably not agree with her old owners. The following includes a number of criteria to be considered when developing a security plan:

1- Vulnerability to potential hazards
The security planner has to determine his ship's potential vulnerability to various security threats. To some extent a few of these hazards may be affected by the geographical location of the ship. The stowaway threat certainly is. Piracy, too, is fairly well confined to certain areas of the world at the present time. On the other hand, sabotage and hijacking or terrorism can occur anywhere and may not be significantly affected by the vessel's location.

2- Effect of security measures on business
The operational budget is critical to any business enterprise, and the maritime industry is no exception. The goal of all owners is to man their ships at a safe and efficient level without having to incur "extraneous" expenses. Proper security requires manning levels that in most cases will be higher than otherwise. If a ship is operating with as few watch standards as possible, and as few watch rotations as possible, no one will be available for security watches. Consequently, if the security

needs of the ship are going to be met, the security planner must decide what security measures to be adopted. In this regard he has three choices: he can try to utilize the existing manning level and assign extra security duties to all crew members; he can increase the manning level slightly and assign extra security duties to only some of the crew; or he can increase the manning level substantially by employing security personnel in addition to regular crew members.

3- Practical limitations imposed by the physical characteristics of the ship

The ship's configuration will determine to a large extent the methods needed to keep it secure.

4- Availability of Funds

The availability of funds is an important consideration when planning any security program. Aboard ship, manpower cost and utilization is probably of the greatest concern. Other factors include communications equipment, lights, weapons, alarms, electronic surveillance equipment, and modification to the vessels.

5- Risk

The risk factor comes into play in two ways. First, a realistic assessment of the risk faced by the ship must be made with regard to the various security threats. The second way risk plays an important role in security planning is the degree to which the vessel or its crew is placed at risk as a result of the security procedure employed. One of the primary objections raised by owners against arming their ships is that this will result in putting the crew at even greater risk. For instance, no owner considers it acceptable to ask his ship's crew to defend themselves against highly-organized and powerfully-armed hijackers.

6- Alternative measures available

There are almost always alternative measures or procedures to any course of action, and the security planner should consider all of them. He has to determine which

alternative procedures are desirable, if any, and whether they are more desirable than the primary measures. For example, close circuit television (CCTV) systems can be an alternative to manned security watches. Hoses can serve as an alternative to firearms. Whether they are more desirable or not is the security planner's decision.

7- Evaluation of the security capabilities of all available external resources

Certainly, the ship should be secure unto itself and be capable of providing for its own security unassisted, but advantage can sometimes be taken of other available resources. A shore-side facility may have its own security, which can assist in securing the ships berth and respond to a security emergency. In some ports local police and military may be willing to render security assistance. Customs and Immigration officials may also provide information useful to the ship's security.

2.4 The ship security plan

The main purpose of the ship security plan is to prevent unauthorized access to the ship and its restricted areas. At its 53rd session in September 1986, shortly after the hijacking of the ACHILLE LAURO, IMO's Maritime Safety Committee (MSC) approved "Measures to prevent unlawful act against passengers and crew on board ships" (IMO Doc. MSC 53/24 Annex 14) which applies mainly to passenger ships engaged in international voyages of 24 hours or more and the facilities which serve them. They also provide guidance on measures that could be applicable to all ports and ships operations. Among others, the document contains recommendations concerning the establishment of a ship security plan which shall provide for measures and equipment as necessary to prevent the introduction of weapons on board ship. Moreover, the measures also provide for the appointment of a ship security officer responsible for the preparation and implementation of the appropriate security plan.

2.4.1 Consideration

The ship security plan must fulfil many functions. It is primarily designed to inform all concerned of the details of the company's corporate security policy and then blend this company policy with the individual requirements of a particular ship. It must also cover all the requirements of the IMO and relevant legislation. The security plans also fulfil an important function in case of a terrorist or other violent incident, when the plan may have to be presented before a board of inquiry. It is therefore a document which has to be constantly amended and must accurately reflect the actual security measures in force.

The ship security plan is a combination of the ship's security SOPs and her security bill. The security SOPs and security bill are developed on the basis of policy decisions influenced to protect against the security threats faced by the vessel.

2.4.2 Factors affecting the degree of security required

The ship security plan should consider the factors affecting the degree and type of security required by any ship. These factors include the ship's size, the nature and sensitivity of her cargo, the mission or types of services provided, the vulnerability of equipment, the economic and political situations of the area involved, the proximity of external support and the nature of that support, the capabilities of potential attackers, and all shipboard activities in all geographical locations in which the ship may find itself. The ship security plan should be of sufficient flexibility to allow for different levels of security in the various ports of call, and it should establish preventive measures for unlawful acts against the ship.

2.4.3 Ship Security Plan Functions

IMO has established guidelines which spells out precise details of the ship security plan, ship security officer, and security measures and procedures (Res.A.584(14) paragraph 5 and Annex B paragraph 3). According to the IMO document, the ship security plan should cover, among others, the followings:

- function and responsibilities of the ship's security officer
- security bill and the duties assigned to the crewmembers
- procedures of security standing operation procedures (SOPs) during all ship board activities
- maintaining and stowage of security equipment (for example, the locking of ship firearms, the regular inspection of security lighting, and the maintenance of security alarms and communication system)
- means of maintaining integrity through strict access and egress controls and identifications
- establishment of IMO designated restricted areas
- means of organizing security inspection security training and security drill routine
- coordination with port facility security officers or with port authority's designated representative for the vessel's security.

2.5 Ship security survey

The purpose of the security survey is to ascertain the nature and scope of all security threats. Because a security survey is conducted with regard to a specific ship, the result of any two security surveys may not be alike. The methodology, however, of conducting the survey should be the same. The survey should be organized in such a way as to allow a complete and accurate analysis of all security weaknesses. That analysis is then presented in the subsequent security report.

The survey may be divided into two parts, the initial preliminary assessment and an on-scene security survey. The establishment may be based on the IMO guidelines, which is the product of collaboration among international experts in both government and industry. In fact, in many ways, a security survey conducted aboard a ship is the most difficult type of security survey. By its very nature, a ship presents continually changing security environments during its voyage. At the same time she is usually beyond reach of any outside security assistance while at sea.

The security officer must take into account as many possibilities as he can while performing his survey. His security analysis must allow for virtually every foreseeable maritime contingency. To do so the security officer must have a realistic view of life and of the world in which we live. One thing he must always keep in mind is that access control is the key to the security of a vessel. All of the ship's security procedures should be designed with one thought in mind – access control.

Once adopted, a copy of the resulting annual ship security report should be kept on the ship and should be shown to the regulatory authorities as evidence of the way the company is fulfilling its responsibilities.

CHAPTER 3

Piracy attack

3.1 Introduction

Piracy has always been an undesirable part of maritime commerce. Although the general public's perception of piracy is often romanticized, there is a substantial reality gap between the very false image and the hard fact. This fact is that piracy is a real threat which is getting more and more violent. According to P.Mukundan, director of ICC (IMB), a total of 86 attacks were recorded in the first 6 months of 1998, half of which involved violence and weapons. In March 1999 NUMAST (Nation Union of Marine Aviation and Shipping Transport) asserted, "It is only a matter of time before there is a serious incident involving loss of life or considerable damage to the maritime environment."

Since 1984, the total number of reported incidents of piracy has risen steadily, and after a lull in 1993-94, there has been a sharp increase in the number of attacks reported to the IMO until 1997.

Figure 3.1

Number of Attacks over the last 10 years

Year	Attacks
1989	48
1990	64
1991	107
1992	106
1993	103
1994	90
1995	188
1996	228
1997	247
1998	192
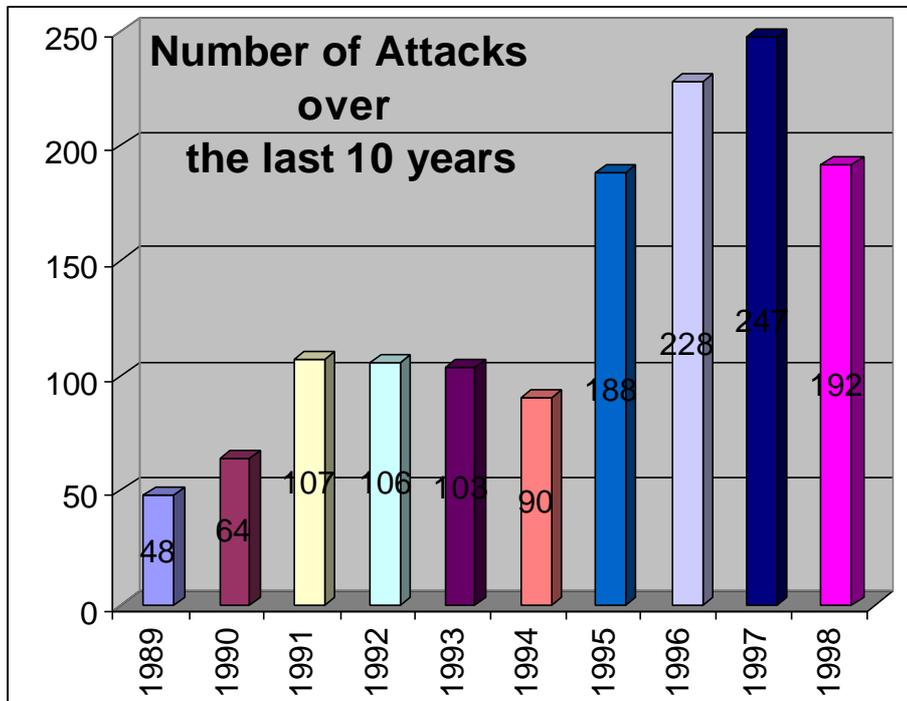
(Source: NUMAST, Special report: Piracy, 1999/3)

According to the International Maritime Bureau's annual report, acts of piracy and armed robbery against merchant ships decreased in the last year (1998) to around 192 globally from 247 in 1997. However, the IMB warns that there is no reason for complacency, citing that the 1998 figure may rise further as more details come in over the next few months. IMB deputy director Capt Jayant Abhyankar stated in the 1999 IMO piracy seminar that, "Before, we thought that only about one in three cases was reported. But after speaking to delegates here, I believe actual figures could now be up to ten times greater."

With this in mind, one needs to realize that many more attacks go unreported by these reluctant owners and operators. In addition, there are many small fishing vessels and coastal traders that are attacked which have no desire or capability of reporting due to either official pressure or extortion. In many cases these small

vessels are literally obliterated after the cargo is seized with no information as to the fate of the crew.

There are a variety of reasons for under-reporting attacks. D. B. Stevenson, director of seamen's Church Institute's Center for seafarers right, captured the shipping company's sentiments when he wrote in BIMCO special bulletin 1998 that "Reporting a pirate attack to local authorities can result in their detaining the vessel for a lengthy investigation, sometimes requiring bribes to free the ship. Some companies elect not to report piracy losses because they are afraid that reporting them could damage their commercial reputation. In some cases losses due to piracy are reported as other losses when insurance policies do not cover piracy losses." Stevenson also posits that local officials may discourage reporting piracy attacks in an attempt to burnish their nation's reputation and to protect their tourist industry.

3.2 Pirates today - how they act

The pirates of today are; as in yesteryears; ruthless, desperate criminals who often will not hesitate to harm their victims. Attacks are often violent and injuries and deaths occur all too frequently. Pirates today are more also determined than ever. At Rio, a ship was twice boarded by armed pirates. At first, the attackers were initially thwarted by the crew by locking all the doors. A while later, the attackers returned with the appropriate equipment that finally enabled them to gain entry (IMB Piracy Special Report, 1997). One IMB study expresses concern about the severity of the attacks and has shown in Figure 3.2 and Table 3.3 the types of violent attacks suffered by seafarers in 1998.

An IMO Seminar held in Singapore in 1999 re-iterated that in these days, piracy is becoming more organized with international syndicates involved rather than spur-of-the-moment acts by individual groups. They have shown considerable skill and daring and have boarded ships traveling in excess of 17 knots and with high

freeboard. They have demonstrated knowledge of ship's procedures, often seeking to board when bridge and engine room personnel are fully engaged in navigating through congested or restricted waters, and knowledge of the general layout of the ships they have attacked. They are better armed and ready to kill, in fact they adopt all manners of weapons for assault. Table 3.1 shows the types of weapons used by pirates.

Figure 3.2

Type of Attacks in 1998
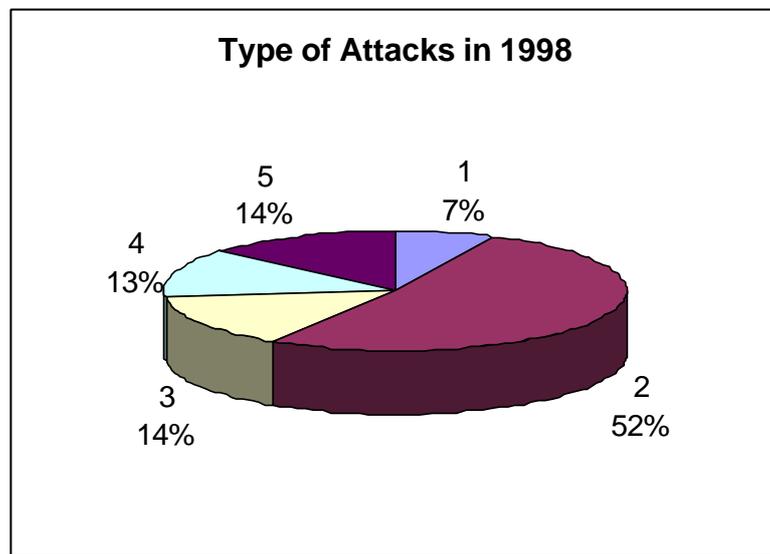
(Source: IMB, annual report, 1998)

Key words: 1 Injured   2 Taken hostage   3 Killed   4 Assaulted   5 Threatened

They always use small crafts coming from adjacent coastlines or being launched from "mother" ships (larger vessel running without lights have occasionally been reported in the vicinity of ships which have been attached). Those crafts, in most cases, are even fitted with modern radar which enables them to see if they are being followed.

Their tactics scarcely change. They come at high speed (if the ship is underway) between 0100 and 0600 hrs, alongside the intended target usually from the stern or, if the ship has low free board, from the side when it is fully laden. In ports, pirates

sometimes use women (usually in Thailand) to gain intelligence from seamen concerning the cargo and as diversionary tactic aboard ship. A number of reports that came to the IMO reveal that pirates even employ more covert tactics such as attempting to stop and board the ships wearing uniforms disguised as officials. The 70th session of MSC noted that on two occasions, pirates had used false distress signals to deceive their victims.

Table 3.1

	1991	1992	1993	1994	1995	1996	1997	Grand total
Unarmed	059	005	028	046	097	117	001	0353
Guns	001	018	029	017	039	032	068	0204
Knives	003	000	007	013	009	023	029	0084
Other weapons	042	029	002	006	033	054	022	0188
Unknown	000	004	037	008	010	002	109	0170
Total	107	106	103	090	188	228	229	1051

 (Source: BIMCO special bulletin 1998)

Often the attackers will try not to alert the crew though they may take a crew member hostage until the end of the attack. They may destroy the communications equipment and then head for the crew's quarter for personal possessions the master's safe for cash, or the containers where they can be very selective, revealing their previous knowledge about the cargo manifest. Access to the ship will often be by climbing up poles or grappling irons hooked on to the ship's rail while it is underway or by climbing up mooring ropes and anchor chains, or scaling the ship's side from small boats when the ship is at anchor.

3.3 Pirates: Their aim

Pirates' aims vary from one extreme to another. They can be involved in the petty theft of drums of paints, mooring ropes or other deck equipment within easy reach. If the attackers are lucky and the bridge or the accommodation is not locked, it will be

the bridge equipment or the crew's valuables. P. Mukundan describes them as 'maritime muggings', where thieves board the vessel to steal whatever they can and are easily frightened off by the crew. The other extreme extends from stealing the captain's safe, the cargo, part of it, all of it, or finally to the ship itself.

3.4 Pirates: Their target

All types of vessel can fall victim to act of piracy. Maritime piracy continues to rise in profile worldwide. The estimated odds of attack are 1 in 1000 worldwide. The worldwide average of reported attacks can be broken down as shown in table 3.2

Table 3.2

Tanker	26 %
Cargo Vessels	25 %
Bulk Carriers	17 %
Container Vessels	14 %
Miscellaneous Coastal Vessels	12 %
Fishing Vessels	06 %

(Source:http://usintel.com/counterpiracy, 5/1999)

3.5 Locations of attack

3.5.1 In port

In many countries and in some ports ordinary "bland" cargo port theft is endemic and so inevitable as to become almost acceptable. Of course, "bland" theft is not always the rule. Due to the increasing ferocity of pirates, attacks could involve violence even to the extent of committing murder.

3.5.2 At anchor

As Lloyd's list reported in April 18 1998 "According to BIMCO, more than half the incidents reported to BIMCO involve attack within port anchorage areas. This type of attack is found where ships lie at anchor either to discharge or whilst waiting for a berth. In such cases, the attackers require *water capability* in that they need to be able to get to the ship.

3.5.3 When underway

The pirates who attack ships underway are disinterested whether a ship is within territorial waters or not. With ships underway there is a sub-division of piracy type. A distinction between short-term, long-term and permanent seizures can be made.

3.5.3.1 Short-term seizure

Pirates avoid boarding at the bow or amidships because they can be seen and loose their element of surprise. The average length of time for any single incident is in the region of thirty minutes. Violence is a possibility. However, there is more than one recorded incident where the pirates have managed to board without being seen. They have stolen the safe from its fitting in the master's cabin and have left the ship without being detected.

3.5.3.2 Long-term seizure

This is probably the type of incident that closely resembles the piracy of years gone by. In these cases a ship is seized whilst underway, the crew are overpowered, and the ship diverted from its course. The ship will be held for several days, during which time the total cargo is unloaded, and after which the crew and the ship are finally released. Such crime is never opportunist; it involves detailed planning and organization. Moreover, according to IMB special report 1997 not only does such an attack display a high degree of organization, but a measure of the impunity with which it was carried out can be judged from the fact that one of the pirates, who

attacked *M/V MARTA* in 1990 by long-term seizure technique, said this was the sixth such successful attack they had made in past eighteen months!

3.5.3.3 Permanent seizure

Permanent seizures were first highlighted in the Far East Regional Investigation Team (FERIT) reports of the late 1970s and again by the IMB in the late 1980s (IMB, 1997). These crimes are planned well in advance, with ships deliberately targeted, usually for the value and easy disposal of the cargo. The attacks involve highly trained pirate gangs, armed with submachine guns, boarding the vessel, after killing the crew, with false ship's papers, cargo papers and passports. The ship would then be turned into a "phantom ship". This is possible because of temporary registrations issued indiscriminately by unscrupulous officials of some ship registries. This means that a ship can be registered under several names with different particulars, making the task of tracing a phantom ship very difficult. An example of phantom ship was the ISLA LUZON that was renamed NIGEL. One more recent example of a missing ship which had been turned into a "phantom" ship is the CHEUNG SON which disappeared in the Taiwan Straits. The average life of a "phantom" vessel before it is tracked down and arrested is two years, but during this period the ship would already have been used as vehicles to transport and sell stolen cargo, hide stowaways, and smuggle drugs.

3.6 Piracy victims

Crewmembers are the chief victims of piracy. This problem seems to be increasing and the level of violence seems also to be rising. The 1998 BIMCO special bulletin shows that each year an increasing number of crew members are taken hostage: 412 in 1997 alone, as compared to 411 for the previous five years, 1992 to 1996, combined. From 1991 to 1996, 55 crewmembers were killed aboard ship, while 51 were reported killed in 1997 alone. Table 3.3 shows the types of violence to the crew from 1991 to 1998.

Table 3.3

Type of violence	1991	1992	1993	1994	1995	1996	1997	1998	Grand total
Crew taken Hostage	33	18	6	11	182	194	412	228	1084
Crew threatened	3	9	1	8	59	52	116	067	0315
Crew assaulted	1	12	4	0	2	9	22	060	0110
Number of crew injured	4	16	3	10	3	9	30	035	0110
Number of crew killed	0	3	0	0	26	26	51	067	0173
Total	42	62	14	29	272	290	631	467	1807

(Source: Compiled from BIMCO, special bulletin, 1998 / IMB annual report 1999)

Figure 3.3
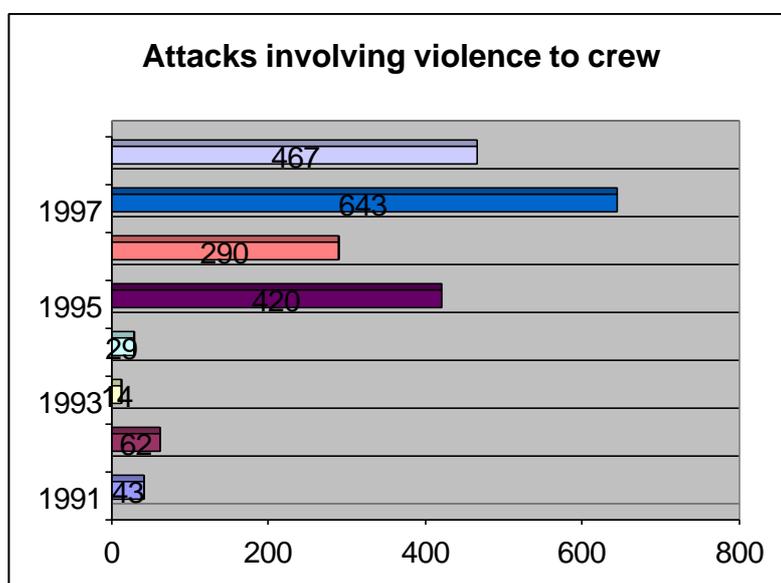
(Source: IMB, annual report, 1998)

Beside the physical and the property losses, there is another matter that should not be ignored, which is the psychological effect. As Rev. Peter Ellis described them in the 3rd Kuala Lumpur Piracy meeting, "Seafarers may fear future attacks, experience

'flashbacks' to these attacks, or have post-traumatic stress." Rev. Ellis spoke of a case where a victim came to the seamen's church institute director asking for his rights. Later on, a quick reply came from his company saying that he would paid for the value of his property. Nothing, however, could possibly compensate him for the trauma he suffered.

Officers are more likely to be attacked while crewmembers are merely regarded as pawns. According to a survey presented by Captain Choy Ngee Cheng in the 3rd International Meeting in Kuala Lumpur, all ranks on board were aware of the problems of piracy, but the lower ranks were less anxious about piracy. He also added that since larger shipping companies are more prone to attack, they are also more proactive in measures to counter piratical attacks.

3.7 Dangerous world wide areas

General speaking, no area can be considered absolutely safe. However, there is a general belief that piracy is an activity rampant in poor countries where there is corruption and where the forces of law and order do not exist or are corrupt as well .From the report of the 70 meeting of the MSC (1998/12), the area most affected by pirates and armed robbers continued to be the same in the South China Sea, Strait of Malacca, Indian Ocean, East and West Africa, and South America. However, attacks also happen even outside those spots. In the USA, five crewmembers including the master were gunned down and killed aboard the general cargo ship Vanderpool Express which was berthed in Miami, Florida (Smith, 1998). Europe has not escaped from the threat either. According to B.A.H.Parrit's book "Security at Sea" pirates in France spray sleeping gas into the cabin door vent. As soon as the occupant is incapacitated, they steal his belongings.

3.8 Preventive measures

It is difficult for a crew to guard a weather deck the size of several football fields. However, following some simple precautionary measures can significantly reduce the risk of attack. Above all, potential raiders will be discouraged by visible evidence of good ship security and vigilance. The anti-attack plan should be prepared and ready to be implemented when a ship is trading in areas where attacks are known to occur. Furthermore some companies, as B.A.H.Parrit mentions in his book, believe that pirate attacks cannot take place if proper protective measures are in place, that no excuse is acceptable and that if those people get on board, the master must be disciplined. Therefore, crew should be trained on the basis that an attack will take place and not in the belief that with some luck it might not happen.

3.8.1 General precautions

There are two factors that encourage pirates to commit their attacks, namely, cash and smaller crew.

- **Cash**

  Parrit advises that "generally, the master's safe is the prime target of pirates and so it makes good sense to fit two safes to ships, one in the master's cabin, where a small amount of currency can be held and another where the majority of the ship's cash can be stowed." However, even if the cash is dispersed throughout the ship, the attackers will intimidate crewmembers until the locations have been revealed (UK DETR). Therefore, the first preventive measure to be taken is to carry as little cash as possible. Although it is recognized that there is always some need to carry cash, the banking system today is such that it is relatively easy to send money across the world. For instance, STASCO (Shell International Trading & Shipping Company) instituted measures to eliminate the need to carry large sums

of cash, where all crews are salaried, and the use of cash for business purposes is strictly limited wherever practicable.

• **Smaller crew**

There is the universal problem in shipping where shipowners are cutting down on crew numbers. A small crew engaged in ensuring the safe navigation of their ship will have the additional onerous task of maintaining high levels of security surveillance for prolonged periods. Thus was stressed in a Kuala Lumpur meeting June 1998 by Mr. A. Linnington, who added that "25% of seafarers' working hours are in excess of 80 working hours. In addition, they have to cope with the additional pressure of piracy."

3.8.1.1 Establishing secure area(s)

Depending upon the extent to which areas can be effectively sealed off which, by its turn depends on the construction of the accommodation, secure area(s) can be established where crew members could possibly retreat to, in case of a pirate attack. This used to be known as the "citadel" which attackers will find difficulty to penetrate. It can also be used at night by those who are not engaged in essential outside duties. The secure area(s) can be established in the accommodation as a whole, around the bridge and/or inside the engine room. Such areas should give direct access to the key areas on the ship such as bridge, radio office, and engine room. When establishing secure areas provision should be made for escape during a fire or other emergency. In any situation where there is a conflict between safety and security, however, the safety requirement should be paramount. In any event, attempts should be made to incorporate appropriate safety provisions while allowing access and exits to be secured or controlled.

3.8.2 Anti attack plan when vessel is in port

Every effort should be made to limit the circulation of documents giving information on the cargo or their location on the ship. The minimum number of cargo manifests should be issued with only a general description of cargo. BIMCO agrees and insists

that even the sailing route and schedules should be confidential (Lloyd's List, April 18, 1998). Local agents play a role in these matters and should be chosen with great care.

Superstructure entrances should be restricted by securing all portholes and house doors, including the wings. All possible means of access to the ship like gangways, ramps, pilot ladder should be sealed or removed when not in use or at night. Even the access to the accommodation, storage, lockers, and hatches must be sealed.

Ropes or wires should not be left trailing over the side. People who are allowed access on board must be controlled. Names of those who are admitted must be recorded. Photographing can be a useful deterrent and may assist the identification of attackers who may have had access to the ship prior to their attack. Regardless if a local gangway watchman is employed crewmembers should be assigned to the gangway to ensure that access to the ship is restricted only to authorized persons. Local traders must not be allowed on board to sell their wares. Crew should never trade with them particularly when they use small crafts to approach the ship. Deck watchmen should make their rounds especially around the rear of the vessel at irregular intervals to avoid thieves timing boarding in between rounds. Crewmen on watches should maintain radio contact with the bridge, checking in at regular intervals.

The fire hoses should be under pressure and readily available for use, the hawse pipe should be covered by a buckler plate, the anchor wash-down water should be activated or a charged fire hose positioned to discharge through the hawse pipe down the chain when at anchor.

All decks and quayside areas should be illuminated during the night. Droplight must be rigged over the side. Crew members on duty outside the ship's secure areas should avail themselves of shadow and avoid being silhouetted by deck lights as this may

make them targets for seizure by approaching attackers. The ship should be thoroughly searched and all doors or access points especially of vulnerable areas like the bridge, engine room, steering space secured or controlled.

3.8.3 Anti attack plan when vessel is underway

On the bridge, to maintain surveillance of the water around the ship, a constant short-range radar watch should be maintained by switching to the 1.5 or 3 miles scale, and a guard ring may be set up with an audible alarm for contacts close aboard. The movements of the ship through the water, and the turbulence caused by the screws, form echoes on the radar screen, which can cause small boats to "disappear". Attention should be given to the fact that ship's radar will probably not detect rubber craft and it can not detect targets in its blind sector. Therefore, the use of small yacht radar, fitted in such a way to ensure complete coverage of the stern or blind sector, unobscured by the ship's radar, should be considered.

The ship's main deck should be blacked out apart from the mandatory navigation lights. The logic behind the concept is that a potential attacker will not be able to see what awaits him. By contrast, when he approaches a fully illuminated ship, the attacker is able to see whether there is an effective watch and if any measures are in operation to try to repel any boarding (IMB special report). However, the water surface in the immediate vicinity of the vessel should be illuminated. Wide beam floods could illuminate the area astern of the ship. Signal projector lights can be used systematically to probe for suspect craft using radar guidance if possible.

When possible a lookout at the stern is very important. Pirates frequently board the ship at the stern because firstly, they have to "overtake," which is easily done via the stern. Secondly, accommodation lighting is usually on, enabling them to see every

movement on board. In high risk areas, in order to provide a dedicated radar and visual watch for small craft which might attempt to maneuver alongside, and to allow the watchkeepers to concentrate on normal navigational duties, bridge watches and lookouts should be doubled. An additional officer should assist the normal bridge watchkeepers especially at night since most attacks occur between the hours 0100 and 0600.

Restricted superstructure entrances should be established by securing all portholes and house doors, access points should be regularly checked, especially those that can be used in the event of on board emergency.

3.8.4 Ship's practice in high-risk area

The ship's crew should practice and perfect the procedures set down in the ship's anti-attack plan including the use of alarm signals or any additional surveillance or detection equipment installed on the vessel. A suitably qualified Radio Operator should be on duty at all times. Masters should bear in mind the possibility that attackers are monitoring ship-to-shore communications and using intercepted information to select their targets. Caution should, therefore, be exercised when transmitting information on cargo or valuables on board by radio in those areas.

If possible, ships should be routed away from areas where attacks are known to take place and in particular seek to avoid bottlenecks. If ships are approaching ports where attacks take place on ships at anchor rather than on vessels underway, the ship's arrival should be timed so as to coincide with daylight. If a long waiting time before berthing is anticipated, "making a number" to establish berth priority and then retreating into safer deep waters must be considered. It is better to sail slow or stop during the passage and arrive when certain that a berth is vacant. Capt. C. Smith recommends in BIMCO Bulletin Maritime Security 98 that vessels "trading along coasts known for pirate attacks … stay well away from shore (i.e. about 50 nautical

miles), to avoid proceeding between the mainland and islands, to sail at full speed, and to keep as many lookouts as can be spared."

An appropriate procedure must be carried out to ensure that all transmitting systems are available for immediate use. Ship position if not automatically stored, must be manually updated at regular intervals into GMDSS installations. Where an INMARSAT ship earth station is provided it may prove useful to draft and store *standard message* format (MSC/circ. 623 Appendix 1) for ready use in an emergency in either the equipment's memory or on computer disk. A special code for "piracy/armed robbery attack" is now available for use on digital selective calling (DSC) equipment.

3.9 If Attackers are detected

The demonstration of detection is of tentimes enough to repel boarders. On the other hand, pirates are fully aware that their success in carrying out their attacks rely on maintaining the element of surprise (1998 report of piracy -Counter piracy Operation Center). Small craft that appears to be matching the speed of the vessel on a parallel or following course should always be treated as expected danger. When a suspect craft has been noticed it is important that an effective all-round watch must be maintained. Pirates always use alternative tactics to board a ship; a decoy boat is used to distract the crew from one side while other boats approach the other side. The first person that sights the potential attack should notify the crew on watch. As far as practical, all lights should be put on as searchlights can be used to dazzle anyone approaching the ship and to enable the crew to monitor their activities (IMB Piracy and Armed Robbery Against Ships, a Special Report). However, this could also place the crew at a disadvantage at a crucial point due to the temporary loss of their night vision. Sirens should be sounded as alarm signals including the ship's whistle will help crewmembers in exposed locations to select the most appropriate route to return

to a secure area. People should be seen running and a whole attitude of energy and preparation should be demonstrated.

An evasive approach could be used, by increasing vessel's speed and altering course to seaward if possible (ISF, Pirates and armed robbers, a Master's guide 2nd Ed) as the effect of the bow wave and wash may deter the attackers and make it difficult for them to attach poles or grappling irons to the ship. The not under command (NUC) light should be switched on to warn other vessels in the vicinity that an attack is about to take place and vigorous maneuver is being carried out. Maneuvers of this kind, however, should not be used in confined or congested waters. It is also not suitable for a vessel constrained by her draught to navigate in confined route such as Malacca and Singapore Straits. For such situations the use of fire hoses to direct a steam of water at suspicious approaching motor boats can be considered although such action in cases where raiders are known to be armed with firearms is not recommended. If used, the recommended pressure is at least 80 Pounds per square inch. With such pressure, not only does the attacker have to fight against the jet of water but also the flow may swamp his boat and damage engines and electrical systems (MSC/Circ.623 June 1993).

Tear gas could be extremely effective against pirate boats. Even in strong winds, a short duration of concentrated gas from a gas bomb would cause chaos and thus provide a useful deterrent. Cattle prods are another useful non-lethal defense. Distress flares, on the other hand, should only be used when the master considers that the attackers actions are putting his ship in imminent danger. If they are attempting to board using grappling hooks, the line attached to the hooks should be cut (Master's guide 2nd Ed, ISF).

Shore stations and other ships in the vicinity should be alerted that the guidance for the use of radio signals (MSC/Circ. 805) should be complied with. The guidance distinguishes the attack between two phases - either the pirates are detected before

boarding the ship or the pirates board unnoticed, taking hostages and making threats of violence to the ship's crew. In the former case, contact should immediately be made with ships in the vicinity and shore authorities by sending the message through Inmarsat or DSC or other distress and safety frequency or through any other methods to make the pirates aware that they have been detected. In the latter case the ship most probably will be ordered by pirates not to make any form of transmission. In order to avoid any physical violence or death to the crew, any such order should be complied with.

3.10 If attackers board

Obviously, the most effective way to meet the problem is to prevent the pirates from boarding the ship in the first place. If, however, in spite of best efforts the ship is boarded, then the priority must shift and a "damage control" attitude must come to the fore.

Once pirates have boarded, adhere as closely as is practical to the prearranged anti-piracy plan, retreating to the designated secure area(s) if necessary, ensuring that all crew is inside. The action of the master and crew should be aimed at securing the safety of those on board the vessel, ensuring that the crew control the navigation of the vessel and securing the earliest possible departure of the attackers.

The options of reaction available to the master and crew will depend on the extent to which the attackers have secured control of the vessel. If the master is certain that all his crew are within secure areas and that the attackers cannot gain access or by their actions outside the secure areas place the entire ship at imminent risk by using firebombs to start fires on a tanker, for example, then he may consider undertaking evasive maneuver to encourage the attackers to return to their craft.

When the attackers are in possession of firearms, compliance with their orders is recommended. On the other hand, the master can use a sortie by a well organized crew if he knows exactly where the attackers are on the ship, they are not carrying

firearms or other potentially lethal weapons and that the number of crew involved significantly outnumbers the attackers they will face. The intention should be to encourage the attackers back to their craft. Crew members should not seek to come between the attackers and their craft nor should they seek to capture attackers as to do so may increase their resistance which in turn increases the risk faced by members of the sortie party. Once outside the secure area the sortie party should always stay together. Pursuit of an individual attacker by a lone crewmember should not be undertaken as it may result in the crewmember being isolated and seized. Seizure of a crewmember is one of the more common means of attackers gaining control over a ship. Crewmembers should be in constant communication with the bridge and should be recalled if their line of withdrawal to a secure area is threatened. Crew may consider using fire hoses.

However, it must be kept in mind that the use of aggressive physical action may serve to escalate the violence. Even if the attacker does not possess a weapon, crew members are not totally safe. According to the IMB report on an attack in Douala, that crew members used "anti-aggression" sprays on the attackers, which made one of them react by picking up a metal fitting and throwing it at the officer, hitting him on the head, and causing a severe injury. Rev. Peter Ellis advises that the "best way to avoid physical harm is to keep a cool head, keep to normal procedures, and to remember that co-operation is still the best policy."

3.11 If attackers gain control

The master or officer in charge should remain calm and, if possible, seek to negotiate with the attackers with the intention of maintaining the crew's control over the navigation of the ship, the safe return of any hostages they may hold, and the early departure of the attackers from the ship. Securing ship control to the ship officer is of paramount importance to avoid a significant risk of collision or grounding with accompanying loss of life or a major pollution and a large scale environmental

disaster. According to the IMO 1998 annual report, chemical gas and oil tankers were the target of 26.6% of the reported incidents. In the Malacca Strait, one of the busiest waterways in the world and used by numerous fully laden tankers, the greatest possible time interval between ships in any one direction is about twenty minutes and the lateral clearance between two ships going in opposite directions is sometimes no more than a mile. The loss of control over a vessel due to a pirate attack in such narrow waterways could have disastrous consequences for the marine and coastal environment.

3.12 After the attack

Crewmembers should remain in the designated secure areas until a prearranged all clear signal has been given, confirming that the pirates have left the vessel. If the attack has resulted in the death of or serious injury to any person on board the ship or serious damage to the ship itself, an immediate signal should also be sent to the ship's maritime administration which usually has its statutory requirements covering the duty to report such disasters. Medical treatment should also be provided. All evidence of the attack should be collected including CCTV (close-circuit television system) and other recordings of the incident, a full inventory including a description of any personal possessions or equipment taken, with serial numbers when known, should be prepared. Crew who meet the fight should make written statement of the events, including detailed descriptions of the perpetrators. Characteristics such as tattoos, scars and other distinguishing marks should be noted. The master should submit a comprehensive reports including: a description of the pirates; their number and nationality; the number and type of boats involved; how the ship was boarded; when and where the attack took place and details of the attack. These reports must be made to the ship owners, local enforcement agencies, and the Rescue Co-ordination Center (RCC).

CHAPTER 4

Stowaway - Unauthorized Boarding of Ship

4.1 General

"The definition of a stowaway according to Oxford dictionary is a person who hides on board a ship or aircraft to get a free passage." Said Captain Neerav in BIMCO special bulletin. In the maritime field, the word stowaway is a traditional maritime word to describe an unauthorized passenger on a ship. At the heart of the current problem is the fact that this simple word now represents a most complex philosophy. It includes refugees, illegal immigrants, economic refugees, economic asylum-seekers and political asylum-seekers. In simple terms a stowaway is a criminal. He is travelling without payment, or in contravention of a national law. But when trying to define the actual 'criminality' of a stowaway, it can create great confusion. However, this word is commonly used to describe the person who hides himself on board ship to leave his homeland and escape persecution, war and poverty.

It is clearly recognized that the resolution of stowaway cases is difficult because of different national legislation in each of the several potential countries involved: the

country of embarkation, the country of disembarkation, the flag state of the vessel, the country of apparent or actual nationality/citizenship of the stowaway and countries of transit during repatriation. Therefore, it can be said that the problem in stowaway cases can be extremely complicated.

4.2 Nature of the problems

From the ship's view point , this problem will be addressed to the master because he is always the focal point of any dispute. Ultimately, he and his crew have to deal with the existence of the stowaway on board. Moreover, he has to make the command decision as to what to do until an external resolution, by arranging the disembarkation of the stowaway from the ship, can be achieved. In addition, if such achievement is not an easy task, the safety of ship's crew can be compromised by stowaways on board –especially when they outnumber the crew- as the stowaways can become progressively agitated and violent if they are faced with long stays on board as a result of difficulties in repatriation or disembarkation. "Many cases have been reported of stowaways having spent months or even years on board before a solution is found." Said Brian Parkinson of (ICC) in BIMCO special bulletin. According to Captain Tony Goh in the book "Stowaways By Sea", there is a case where a Brazilian had been on board various ships for about two years before he was repatriated. On the other hand it is important not to forget that ship's crew are in the unenviable position of having to cater for a most unwelcome guest in what is normally a close-knit community where routine and harmony are essential.

This is the drama of stowaways when being found. When they are not discovered, this can be a catastrophe. "It is certainly not over dramatic to claim that stowaways present a danger to the ships themselves," was the idea extracted from an article in *P&I International,* called 'Cracking down on the stowaway'. The author continued, "It only takes one lighted cigarette dropped in the cab of a truck to start a fire, which can, as it did in a recent major claim, call for a master to release his entire smothering equipment to avoid a large fire. An event no master would wish to undertake at any

time during his career." In addition, stowaways can cause cargo damage, "Many are thieves," added the same author, "looking to steal cargo and 'jump' ship at the next port. Many have been found with tool kits for just that purpose." In his article "Stowaway prevention and detection", Jonathan Nicholson said, "The consequences of failure to detect stowaways can lead to fine from immigration authorities, and spiralling security and repatriation costs." "On other occasions", said Brian Parkinson to Seaways, "stowaways have lost their lives by hiding inside sealed cargo units or by secreting themselves in cargo areas which are subsequently fumigated."

4.3 Stowaways on board - behavior and treatment

In general, stowaways discovered prior to departure are easily disembarked. Problems become more complicated, however, as the distance from the boarding port increases. The first consideration upon the discovery of a stowaway should be whether it is possible to return to the port at which the individual comes on board. If it is not possible, the ship's master will recognize that stowaways may be on board a vessel for a considerable period of time because the vessel is far from its next port and/or, as mentioned above, not able to deviate from its course in order to disembark them at the port of embarkation. During this period, those people become an extremely heavy burden for the master and his crew, who are inevitably anxious to be rid of such people as soon as possible, at least from the point of view of the inconvenience and disruption that they cause. For these reasons, the treatment of stowaways, once discovered, is an issue which needs to be addressed as it also bears on security.

The following considerations and steps must therefore be kept in mind

- Any details must be obtained from them. The Master should take a statement from the stowaway covering all details of his citizenship and actions. Photographs of the stowaway should be taken and kept by the Master. The IMO has approved a standard

list of details for this purpose ('Guidelines on the allocation of responsibilities to seek the successful resolution of stowaway cases') (A20/Res.871 27 November 1997). Also A notification of the existence of a stowaway and any relevant details should be made by the master to his shipowner and appropriate authorities at the port of embarkation, the next port of call and the flag state.

- The stowaway once discovered, should be searched for concealed weapons and drugs. Stowaways of tentimes carry these as their passport to a 'new life' elsewhere. If found, such contraband should naturally be confiscated. Stowaways can be involved in drug smuggling by two means, either as mere opportunists seeking to finance a new life in a new country with the illgotten profit obtained from the sale of their contraband, or as "mules" under the employment of an organized drug smuggling operation, as the adept crime groups have now realized that there are many poor people who will perform illegal acts to be illegally transported from impoverished countries to lands offering better opportunities. The involvement of stowaways in the illicit movement of narcotics is now becoming an increasing problem, and according to BIMCO bulletin no. 2/1998 there are no signs of abatement.

- Most of them give false information concerning their nationality and other personal details to avoid being returned to the country they came from. For this reason, a thorough search of identification papers in the area where the stowaway was found should be conducted. The Master should keep such identification papers in the ship's safe, as this will reduce the likelihood of the stowaway jumping ship prior to being put into the custody of immigration officials. Such incidents have been known to occur, causing lengthy delays and additional costs during subsequent investigations.

- The effect of locking individuals away, plus the trauma of stowing away and being detected, can lead these people to suicidal tendencies. They appear so utterly desperate that they are prepared to die in the attempt to escape in highly dangerous

circumstances. For this reason, they must be closely monitored 24 hours around the clock and any item that may conceivably be utilized as a weapon should be removed, to ensure that no attempt can be made to take their own lives.

- Stowaways may falsify and make accusations against ship's crew. They could claim that they had been physically abused whilst on board ship, or that one of them had been thrown overboard. (BIMCO bulletin, No 6/98) For this reason, it is a distinct advantage to photograph or videotape stowaways periodically whilst they are on board, as this can be used as evidence to establish the conditions under which they were kept during their stay on board.

- For humanitarian reasons, it is important to provide them adequate food, washroom facilities and quarters where they should be confined to, as this will ensure their and the crew's safety until the time of disembarkation. Confining is not a matter proposed for discussion; stowaways must always be kept locked up, preferably in a main deck room of some sort with limited subsistence and things to do such as reading. They must not be allowed in the bridge area, in the engine room, or any vital spaces like the steering gear room by any chance. In addition, they must not have access to a porthole which may facilitate escape.

- There is, of course, a temptation to *restow* the stowaways in the container and see them landed ashore. This course of action should not be pursued for a number of reasons:

   1- Humanitarian - the container may be landed and left isolated or hemmed in by other containers.

   2- Trust no one! If the stowaways are offered inducements to tell about their time on board they will do so.

   3- The fines for collusion will be higher.

   4- It is easier to manage a situation where all the facts are known than it is to practice deception.

5- It is reasonable to expect that immigration officials will assume that the ship is 'in on the racket' unless proved otherwise. Attempting to evade responsibility could leave the master in custody.

- Stowaways must be led to believe that it is inevitable that they will be repatriated, and the quicker they co-operate the more comfortable they will be. Thus a strategy must be followed. Since stowaways differ from each other, the strategy followed must vary also. For some of them, boredom is the best solution to encourage them to speak out against their intentions and actually discourages them also from illegally boarding other vessels. Some stowaways have been identified as criminals fleeing arrest. In such cases, as Martin Turner stated in an article called "Ship security and the Prevention of Stowaways", "an atmosphere should be created which makes it clear that they are unwelcome in order to prompt them to be honest with questioners seeking their disembarkation." This atmosphere could be created by adopting tough measures and by not making them too comfortable: These offenders may need to be shut in steel surroundings such as a linen store or a handling room without any fittings. Crew should not be encouraged to fraternize with the stowaway. Food should be adequate rather than generous. For the others, as B. A. H. Parrit stated, "The opportunity to become more involved should be seen as a reward in return for more complete information."

- In the book "Stowaways By Sea". Bill Robertson warned masters from allowing stowaways to work, he said, "Some of them can develop a good relationship with the Master and crew. Consequently, under certain circumstances, the owner can agree that he might work and be paid." This arrangement is strictly not recommended. The owner would lose his P&I insurance cover if the stowaway was signed on as a crew member and so would be unable to recover repatriation costs. In fact, making stowaways work is attractive in terms of labour cost, but some may take their case of exploitation to the ITF, and others could arrange to arrest the ship on return to the stowaway port on the grounds of improper treatment.

- As mentioned before, some stowaways are known criminals. Therefore, the potential for violence should be taken seriously as some can be violent and very disruptive. For this reason, they should never be left unlocked with less than two people in attendance. "Groups", said Martin Turner, "should be split up into manageable sizes where at all possible and kept confined." As mentioned earlier, anything that may be utilized as a weapon should be removed.

- Stowaway may not be healthy and may carry contagious diseases and should therefore be isolated.

- Generally speaking, stowaways must of course be treated humanely. Nevertheless, it should not be forgotten that they are trespassers who represent an unpredictable presence on board what is a very restricted environment. It should be kept in mind, however, that a stowaway on board becomes liable to the same laws, regulations and discipline as the crew.

- Success in getting accurate information from the stowaway is highly important. This information, if well presented and demonstrates reasonable concern, may be used to mitigate any fines imposed on the vessel and any risk that the master might be detained ashore pending an investigation. For this reason, the aim of the ship must be to present the best possible case in the event of a subsequent inquiry. This should comprise the logbook entry of a thorough search for stowaways before (and after) departure, a statement about how the stowaways were found, where they boarded the vessel, what precautions were taken to guard against the problem, as much factual information about the stowaway possible, and his motives for stowing away.

- To ensure the correctness of the information, checking of their stories, during the voyage, for consistency and recording points made in conversation to assess its validity are important. In addition, ask the P&I correspondent to check out the name(s) with a specialized agency keeping a register of known 'repeaters'. Use of

such a specialized agency is very useful in discovering by means of a computer-aided database if a stowaway is a 'repeater', as it saves time in determining identity and thus saves cost.

- When approaching any port of call, security measures need to be heightened to ensure that the stowaway does not escape. Escape can be expected to result in a fine against ship interests from the local Immigration authorities. In addition, according to capt. Cristoff iiddeke in the article "Security on board" the master should know that in most ports there is a legal obligation to notify the immigration authorities in advance about stowaways on board other wise heavy fine can be imposed.

- Always consider transferring a stowaway to a sister ship returning to the country of origin. Where the stowaway has to be landed, check his general medical condition and insist that the immigration officials are there to meet the ship on arrival. A stowaway can demand a lot of time and effort on board and the sooner the shipboard side is closed the better.

4.4 Measures to Prevent Stowaway

Stowaways are the most common instance involving a breach of ship security. Indeed, the frequency of incidents tends to create a feeling of resignation and inevitability that serves to perpetrate the problem. Consequently, the best solution must be therefore to take the strongest possible measures to prevent the stowaway from getting on board. It is not easy, but steps can be taken which do reduce the risk.

4.4.1 Methods of Illegal boarding

- Most of stowaways get their information from the stevedore or through the sailing signboard of the vessel's next port of call, before deciding to stow away on board.

Whilst obtaining access to the vessel, they get the adequate assistance from shore labor who give them their company hats and overalls.

Although the methods used to board vary with the type of ship, they can be summarized as the following:

- Boarding on foot up the gangway when alongside or anchored off in port by people such as port workers and stevedores who are authorized to board and then do not disembark.(Peter Duffield, Stowaways By Sea, 103)

- Boarding by climbing over the side of the ship or up anchor chains and hawsers or by using a rope, grappling iron or hooked bamboo poles. Climbing aboard may be attempted when the ship alongside, anchored off in port, and when underway, within small boat range of the shore. Then they hide themselves some where in many thousands of square meters of crowded space aboard the ship.(Peter Duffield, Stowaways By Sea, 103)

- Boarding concealed in cargo which is being loaded –general cargo, vehicles and containers. They remove container door, and then with outside assistance, enter the container and secure themselves inside with the bolt seals seemingly intact.(BIMCO review, 1999, 92)

Having boarded on foot or climbed aboard the aim being to avoid discovery until the ship has sailed and is well clear of the port. Many stowaways have little idea of the layout of a ship and will hide anywhere, which they can access. They have been known to hide in dangerous spaces they may attempt to avoid detection throughout the journey and disembark covertly.

4.4.2 Technical Defense Against boarding of Stowaway

Defense of a ship against stowaways boarding should be looked at from the following two aspects:

Firstly, Stopping unauthorized people boarding the ship at all.Secondly, Detecting, apprehending and disembarking any unauthorized persons who do succeed in boarding; among these are people who, having been authorized to board, as port officials, stevedores, etc., fail to disembark plus those who succeed in boarding illegally.

4.4.3. Security Measures

Stopping Stowaways getting on board is difficult but with a realistic ship security plan, practical support and motivation of the company, and with proper and precise crew training, it can be done In this respect, implementation of the following measures will reduce the risks of persons stowing away:

- Whilst the vessel is in port or at anchor, accommodation doors should be locked or guarded, except one access which should be illuminated and guarded. Similarly when possible, access to the vessel should be restricted to the gangway only or stern ramp in RO-RO ships putting into account that the local watchman in many developing ports is usually a waste of time and money. The gangway is always manned when in harbour by a member of the crew.

- Access to accommodation areas and other areas of the ship not associated with cargo operations should be restricted so far as is practical, by locking or guarding such doorways. Crew members should be encouraged to challenge strangers where they encounter them in unexpected areas.(Turner, p 61)

- Sealing off certain parts of the ship to prevent access and reduce the areas and compartments which may need to be searched .The hatches to the machinery and thrusters fore and aft are normally locked when in port except when crew are working in these spaces. The hatches to the holds are also normally locked when in port except when holds are being loaded or unloaded. Storage lockers, machinery rooms and any other areas which do not need to be open, should be locked or sealed, providing that the securing of such areas does not interfere with the normal working of the ship or pose a possible safety hazard.(The Britannia Steam Ship Insurance Association Limited General advice issued to members)

- The movements of stevedores and shore labour on board should be monitored and restricted to the area for which they are employed. Stevedoring gangs especially should be recorded, with stevedoring companies being required to declare how many stevedores will be boarding, and use only of the gangway for access.

- Other crew members should be separate from gangway watch and should patrol deck areas to ensure vigilance against stowaway climbing aboard. Moreover, all crew members should have a tendency to conduct the so called "random patrol" which are continually on the look out for people in unusual areas. The value of the random patrol can be significantly improved if all members of the crew are willing to report any abnormal activity

- "Placing appropriate personnel not only at the gangway to check all personnel boarding and disembarking the vessel, but at other pertinent points on the vessel to check personnel." Said Bill Robertson, from Robmarine Shipping Consultants, in an article to Seaways. He added, "At night, keep the same look-outs posted, particularly to prevent stowaways gaining access by climbing aboard the vessel both at port and at any anchorage."

- Good coverage of all around deck lighting will improve the effectiveness of the lookouts at night at night.(The Britannia Steam Ship Insurance Association Limited General advice issued to members) Lighting can discourage stowaway from even approaching a ship.

- Conducting searches of vehicles and loose cargo. Although a high percentage of cargo is containerized, people do attempt to board in general, loose cargo and once aboard, they will try to find somewhere else to hide. In fact, stowaways can be very mobile and often move by stealth. They are constantly on the look-out for search teams, and are quick to move to a 'searched' area once the team have passed through. According P&I International March 1999 "many stowaways remain undetected because of this very reason. Stowaways attempting to board in vehicles are a particular problem in RO-RO ships. Those who board concealed in cars and light vehicles will also seek somewhere to hide. Large vehicles, many of which are sealed, present a bigger obstacle However, Given time, effective visual searches are possible with open vehicles and cargo, but virtually impossible in sealed vehicles and cargo".

- The vessel should be searched thoroughly before departure. Intelligent and systematic searching before sailing is a necessity beginning at either the bow or stern, moving from one end of the vessel to the other. Although ships are difficult to search, a conscientious planned search of spaces, coupled with locking and sealing procedures does raise the likelihood of success considerably. During such search the integrity of locks on sea chests and storage lockers should be checked. The article "Cracking down on the stowaway" suggested the use of guard dogs. According to it, guard dogs only really feasible on liner routes where the port authorities are well appraised of the new 'crew'. Guard dogs and their handlers can be stationed at access points. Result are swift and immediate. The reduction of the number of stowaways trying to get on board is immediate. However, in "Stowaway at sea" some of usual places addressed by captain R. Brook-hart where stowaway have been found:

The chain locker

The paint store/forecastle store

Inside sealed containers (having entered the containers before being loaded)

In the hatches

In the funnel

Beneath the floor plates in the engine room; sometimes beneath the bilge water and breathing through a hose pipe (often carrying a short pipe to breathe under water when the bilges are being searched)

In the room recess of the stern ramp on a RO-RO ships

In the pump room on tankers

- If practicable (in coordination with the port authority), container seals should be examined for signs of tampering before loading. Any loaded, empty or unsealed containers should be checked and sealed before loading. Where stowaways are known to use containers in a particular port, inquiries could be made as to the availability of carbon dioxide "people sniffers" with which to check containers prior to loading. There is a container detector called "Human Occupancy Detector AMC-CO_2". It reacts to higher than average levels of CO_2 within a sealed container without the need to break the seal. This is done by taking an air sample through a probe and analyzing the result. (Crime at sea 1992) In addition, it is important to look for signs of leaking urine, remnants of food or a smell of feces, as stowaways hidden in containers may be discovered in this way (Nicolson,1998).

- A new and radical approach to stowaway detection was suggested in the article "Cracking down on the stowaway", which is the use of movement/heat sensors. These can be positioned over access between holds and with an alarm for each zone or hold which can be located on the bridge. During the stowaway search, one team member can monitor the alarms and contact the search team if an alarm sounds, advising them of the location of any sounding alarm. During the passage the alarms can remain active and a watch officer alerted to any movement between decks and

holds. Heat/movement detectors are inexpensive to fit and, most importantly, there is no additional demand on crew time.

- Checking everyone embarking and disembarking using a pass system. Everyone in a port area should have a pass issued by the port authority to gain entry into the complex, but this does not mean that they can embark on board any ship; ships or their agents should issue their own unique passes. At its most simple this pass can merely have a number on the pass and be coloured or marked to avoid repetition of use. These passes must be retrieved when the visitor gets off and, provided control at the access point is firm, at least it will be known if someone has not disembarked. If the master feels he can expand on this simple system, then before the pass is issued, the name of the visitor can be noted against the number of the pass and proof of identity obtained which is kept at the gangway _ e.g., driving license or credit card.(Peter Duffield, Stowaways By Sea, p 106)

- Issuing passes, or numbered vests, etc.; to stevedores can often be a complete waste of time and money. One satisfactory method is, with the agreement of those concerned, to fit a non-tamper proof band to the wrist of the stevedore, which has to be cut off when the stevedore departs. This avoid the well-tried trick of getting on board with a pass, and then handing it over to someone who is going ashore for them to hand over to someone else.

- Disincentives, punishments, of crew who fail in their pre-sailing searches are not to be encouraged given that it may lead to a situation where the stowaway is maltreated.

- Use of psychology. There are a variety of psychological 'ploys', which have been used by masters in the past, with differing degrees of success. They may be useful in the future. The following are example

1. False destination notices set outside the ship - e.g., poor port, as the next ship's destination port would probably be less attractive to potential stowaways than one of the developed country port

2. Announcement that there is a 'fire' or 'emergency' on the ship followed by the sounding of alarm bells and shouts in the appropriate languages.

3. Announcements that gas bombs or dogs are going to be released in the ship.

- Payment of a cash bonus to the agent if no stowaways comes aboard at his port is important. A similar bonus to be paid to the crew if stowaways are found before sailing. To be effective the amount of the bonus has to be attractive (Turner).Complete trust and confidence in the crew must be a prerequisite of this approach. It explained, "For example, a bonus paid to a member finding a stowaway could be open to abuse by a crew member's friend willing to come on board and be caught."

- All possible information from all available sources, concerning the stowaway problem in the visiting area, should be collected. This help ship's master how much reliance can be placed on port security. In ports where the risk of stowing away is high, this reliance will be very low and masters have to depend mainly on their own resources and defensive measures.

CHAPTER 5

Terrorism at Sea

5.1 General

Terrorism, in general, is a phenomenon that has captured the attention of the world. Every one thinks that he instinctively knows what terrorists do and how they operate, but when it comes to actually defining the term terrorism, insurmountable obstacles arises. It is a term fraught with political and ideological pitfalls. In 'Violence at Sea', Professor Wilkinson defined Terrorism as the "Systematic, indiscriminate use of murder, injury and destruction or threat of the same to create a climate of terror, to publicize a cause, usually political or religio-political, and to coerce a wider target into submitting to the terrorist's aims. This mode of violence becomes international when it is exported across international frontiers or used against foreign targets in the terrorist's country of origin."

5.2 Nature of Terrorism

Terrorism is an act carried out for a "cause" rather than for personal benefit. It is because of the pursuit of this non-financial "cause" that the participants see themselves as special because they are risking their lives for a motive unconnected

with monetary gain. This is what makes terrorism very unique. Since "cause" and self-sacrifice are usually not sufficient to seize the attention of the whole world, terrorists look for other elements such as innocent victims, horror, and, of crucial importance, widespread exposure. If there were no media coverage, there would be no terrorism. For this reason, this successful tactic will continue to be used by a growing variety of people who feel abnormally strongly about their own particular convictions and wish to gain worldwide publicity.

5.3 Maritime terrorism

Just as there is nothing new in the use of terrorism as a political weapon, so is there nothing novel about it being used in the maritime environment. Terrorism in the maritime environment is not a new phenomenon and arguably not a dramatically growing one. Maritime terrorism has been an adjunct to political and quasi-military campaigns for more than a century. The number of reported incidents demonstrates some growth from decade to decade, not all of which is accounted for by better reporting and analysis.

It can be defined by an equation stated by Thomas Schiller in "Violence at Sea" (1986):

"Maritime terrorism = Attacks on ships or maritime installations by non-governmental groupings for reasons other than immediate financial gain"

While the above definition is over simplified, it effectively screens out other forms of violence in the maritime setting such as piracy, attacks by state operatives, and attacks that take place during war

5.3.1 Why terrorists focus on the maritime environment

There are numerous reasons why terrorists would focus on the maritime environment. Following are some of the main ones as Dr Jeffrey D. Simon put forth in "Violence at Sea" (1986):

- Transport system are always vulnerable to terrorist attack, the threat against ships is increased by the displacement of terrorist attack from the aviation system where preventative security has reduced their opportunity for success.

- The need to other targets than governmental assets as they became somewhat routine, were they can use familiar tactics as bombings and hijackings, and also develop new tactics such as the firing of under water missiles or detonation of remote control devices at ports and on ships, to ensure that their actions receive maximum publicity and to keep the general public as well as governments and industry in a constant state of fear and uncertainty over the course of terrorism.

- The vital link of the maritime environment with international commerce. Any disruption with the former can paralyze a nation's economy.

- Passengers travelling by sea often feel vulnerable and that they are at the mercy of elements, which make the ideal ingredients for a terrorist's attack: an exciting and potentially hazardous situation, innocent people in a vulnerable position, and excellent communications.

For those reasons, the sea provides the perfect setting for a terrorist's drama.

5.3.2 Background

Until recently, maritime terrorism has only been considered a major threat to shipping and countries by thriller writers and a few farsighted individuals. It was not until the hijacking of the *Achille Lauro* in October 1985 and its 800 passengers and 300 crewmembers, and the killing of an American citizen, that maritime terrorism achieved any degree of international attention.

Since then, acts of maritime terrorist assaults have achieved unprecedented notoriety and showed similarities to the *Achille Lauro* incident: the hijacking of a ship, the

murder of innocent people, and the publication of political statements. Unlike the *Achille Lauro* incidents, however, most incidents pass without prosecution.

5.3.3 Terrorists: who they are

As Lt. Colonel F Mazzone noted in "Violence at Sea"(1986), "Terrorists may be specially trained agents assigned to a specific mission. They may infiltrate a specific segment of the maritime industry or work with a group near the port facility. They are not necessarily foreign nationals or of foreign parentage. They may be highly trained professionals or rank amateurs. They may be laborers, machinists, or members of the crew." Kenneth Gale Hawkes pointed in his book "Maritime Security"(1998) that most of them are fanatics and some have even been mentally deranged.

They are trained in physical conditioning, weaponry, electronics, communications, explosives, camouflage, first aid, document forgery, martial arts, and military tactics. Terrorists feed on problems of modern society without offering viable solution to the problems. Since terrorists deal with problems perceived of society they tend to select governments facilities or prominent individuals as their targets to attack.

5.3.3.1 How they act

Terrorists do not operate in a vacuum and they spend a lot of money on their operations. Today's terrorists are armed with automatic weapons, military explosives, and sophisticated equipment, all of which they know how to use. Before carrying out an action they must gather information about their target. This usually involves surveillance and test runs.

"It is easy for the terrorists," Professor Paul Wilkinson declared in "Violence at Sea"(1986), "to pass themselves through ports, and harbors as tourists, passengers or dock workers, and to gain access to vessels at the quay side. The more sophisticated

and better-equipped groups can easily mount underwater operations against sitting targets."

"For non-passenger vessels," B. A. H. Parritt expressed a tricky view in 'Security at Sea'(1991), "terrorists may attempt to seize the ship either by a ruse, e.g. by creating a 'ship in distress' situation or by a rule of the road infringement which obliges the ship to stop." It is possible that the ship could be taken by armed force whilst in port, although this is less likely.

5.3.3.2 The terrorist's aim

Usually, terrorists select their targets very carefully, concentrating on those conditions, which will be of the greatest political propaganda value to them and on those situations, which assure them of a strong likelihood of success in the attack. In 'Violence at Sea', Paul Wilkinson has drawn attention to the fact that democracies are clearly vulnerable to terrorist attacks because of the openness of their societies and the ease of movement across and within frontiers.

Within the maritime industry there are three types of ocean-going vessels, which are the most vulnerable to terrorist attack: passenger, tanker, and cargo ships. While all ships, in port and at sea, risk being subjected to unlawful acts, passenger ships on voyages lasting more than one day are potentially subject to the highest degree of risk. Passenger vessels provide the biggest theatre for terrorists intent on taking human life. Tanker ships carrying petroleum products provide for "spectacular" terror through explosions or environmental damage. Cargo ships, while unable to provide the kind of spectrum of violence usually desired by terrorists could still, depending on its load and crew, offer a humanitarian appeal to the world.

5.4 Preventive measures

Providing protection from acts of violence is the natural function of a military ship, but it is a very unnatural function for a ship designed to provide relaxed holidays or even to carry, peacefully, cargo from port to port. The preventative aspects of any security program must come from within the industry; while the reactive response must be the government's responsibility acting at both the national and international levels.

As it is said "what the Titanic did for safety, the Achille Lauro has done for security," the IMO recommendation for ship and port security against illegal act became extremely influential and these 'guidelines' have been followed by national legislation enacted by some countries, such as the USA, UK and Canada. As a consequence, the role of merchant ships has been modified to include measures to comply with IMO security standards. According to USCG revised Federal Register – (33 CFR) the ship security plan for every passenger ship must be examined by the National Maritime Center (NMC) 60 days before its arrival at any US port to ensure that security standards are complied with on board that ship.

Reducing the threat of terrorism begins with the ability to evaluate the scope of the problem. The objective of the security plan is to undertake a risk assessment of the various targets that may be attractive to terrorists and suggest flexible and graduated responses to match any change in the threat. The contingency plan and security survey must be updated accordingly.

The security officer and master need to know what is the likelihood of a terrorist attack, what is the probable nature of the attack, and how best to provide practical protection. In this respect the ship need not to duplicate any security provisions fulfilled by the terminal. When it comes to protection, priorities must be placed, with

the protection of human life always being of first priority and with the protection of property following afterwards.

In the light of the above function, the following actions must be emphasized and serve as guidance:

- Access control: It makes sense to try and prevent the potential terrorist from ever getting as far as the ship. It is easier for the terrorist to board through an open access than to launch an armed attack from shore or another ship. In the case of an armed attack from outside, there will be a degree of public sympathy for the ship as it is an unarmed commercial vessel and it is difficult for merchant seamen to resist boarders firing machine guns. Conversely however, given the public perception of security, if a terrorist manages to get on board by walking unchecked up the gangway, or jumping through an unguarded bunker or provisions station, it will be clear evidence that the standards of security on the ship are poor, and the company and officers will be justifiably criticized.

- The focus for passenger liner security has been, and must be, the passenger terminals. The key to passenger liner security is access control. While cruise ships can provide a limited amount of access control, the primary responsibility for such security must rest with the port facility in which the passenger terminal is situated. However, there must always be enough people of appropriate rank and capability at each opening to maintain a proper watch, and if an access is not being used – it has to be shut. For a commercial company the task of identifying potential suspects is difficult due to the large number of passengers, visitors, baggage handlers, ticket agents, food caterers and other services personnel found in and around passenger terminal. For this reason, an identification card system is required.

- A certain wireless channel should be used among ship's crew ,only, in case of breach of security. Also other channel should be established with terminal security people while the ship berthed along side.

- Lighting and alarm should be in order.

- Electronic screening, hand held vapor detecting devices, metal detectors or other means should be inspected before ship's arrival.

- Persons who refuse to be processed through an access point must be denied entry. Persons denied entry for refusal to be processed, or for a security reason, should be identified to appropriate security personnel.

- When visitors are permitted to the ship, their embarkation and debarkation should be closely controlled.

- All vendors should have a positive photo identification document prior to boarding the ship or should be escorted at all times on board the ship.

- Ship security officer should develop a list of items prohibited from being brought onboard ship. Prohibited items include at minimum weapons, explosives, incendiaries and illegal drugs.

- Concerning cargo, all of the following measures have to be taken such as inspecting the cargo as it is loaded on board, checking out the designated receivers of the shipments, checking out the shipping clerks of those companies who regularly ship their loads with one particular agent, and storing suspicious shipments in secure facilities for a period equal to the duration of the ship's cruise to its port of destination (if such a shipment was programmed to explode

upon a specific ship at a designated time, it will explode in the warehouse during the time it is being delayed and not on the targeted ship).

- Restricted areas should be appropriately secured with the access limited to authorized personnel. Each restricted area should be secured and conspiciously marked stating that the area has restricted access.

5.5 Suspected passengers on board

In the *Achille Lauro*, the cabin staff was suspicious, but no one mentioned this suspicion to the hotel director or captain, which was a big mistake. There are tell-tale signs that could lead the ship's crew to possible terrorists. As a guide, the ship's complement should be wary of any passenger who:
- is found wandering around in those parts of the ship which passengers do not formally frequent,
- -is wandering around the ship decks at unusual hours or in unusual circumstances,
- remains in his cabin and does not come out for meals or recreation, but always orders meals brought to his cabin,
- supposedly does not know any other passengers but who maintains contact with other "suspicious" passengers through signals or gestures at meetings in quiet places on the ship, or groups who have identical items purchased in the same place, such as valises of the same sort, hats of the same sort, etc.,
- does not disembark in transit at the port of call en-route,
- has purchased a ticket which seems incompatible with his means,
- is either a single passenger or someone travelling in a small group (2-4 people) between the ages of 18-40, including women,
- is strangely dressed or who enters the dining room or lounge with items one does not usually take to such places, such as large valises or wrapped packages.

5.6 Terrorists on board: intellectual consideration - ship's staff reaction

It is recommended to try to establish what group of terrorists is involved. It is wrong to seek or suggest to the hijacker, who may be no more than a stowaway, a drunken or a drug crazed individual, that he may have financial demands or a specific deadline. However, if the hijacker(s) is a terrorist, it is essential to know that:

- the adrenaline of the terrorists will be at a high level,
- at the start of the incident, they are likely to be very highly-strung and trigger-happy, they will wish to demonstrate that they intend to dominate the ship by force,
- among the hijackers there could be a psychopath who is seeking an excuse to kill, this excuse could be deliberately created or arise from a misunderstanding,
- they are unlikely to be fully aware of how a ship works or of any safety requirements which might be associated with the cargo, and
- they will be naturally suspicious about routine operations-even the simple procedures for altering course.

In the light of this information, it is wise that captain and crew:

- ensure the safety of the ship in accordance with maritime practice,
- broadcast, if possible, a distress message,
- comply with the orders given by the terrorist,
- .consider that the establishment of a reasonable harmonious relationship between hostages and captors is likely to reduce the chances of the terrorists acting violently against their hostages,
- act normally, this can lower the tension of the terrorists,
- offer reasonable cooperation,
- never try to provoke them,
- never return abuse or aggression, and
- always, try to reassure them that no subterfuge is being planned against them.

It may appear at face value that this policy of complying with the terrorist is weak and imaginative, it is in fact a planned strategy, which requires skill, patience and courage. According to B. A. H. Parritt, the experience from all maritime attacks proves that initial violent reaction to an armed terrorist is not only highly dangerous, but also ineffective. The ship's officer who runs to a safe and retrieves a pistol, which he may not have fired for many years, is in a very vulnerable position. Besides, there is always the risk of a passenger or a crewmember being shot. Another factor making fire exchange not the wisest policy has to do with the ship being a part of the sovereign territory of its flag and subject to the law of the country of register. This country may have stringent laws regarding the use of firearms, and although the ship may be sailing in international waters it could mean that an officer who shot a terrorist would be liable to a charge of manslaughter or even murder.

It is essential to know what the terrorists' demands are and what deadlines have been set for meeting them. Demands may be passed by accomplices ashore and the current incident may be linked with another elsewhere. At some stage in the incident a confrontation between the terrorists and outside authorities is likely. Before this confrontation, an opportunity may arise or may be created to pass information about the hijackers. The authorities will surely want to know how many they are, their descriptions, sex, how they are armed, how they deploy themselves, how they communicate with each other, the language spoken and understood, their standard of competence and their level of vigilance.

Wherever and whenever possible, Master should think in the idea that the hijackers should be encouraged to surrender peacefully and should be discouraged from mistreating either passengers or crew.

During the incident captain and crew will feel isolated, as they will be unaware of steps being taken by their company/government on their behalf. This sense of

isolation can lead to antagonism against their own authorities and sympathy for the terrorists, unless those involved mentally prepare themselves against these feelings.

Following the incident, the master and his crew should avoid talking to the Press and other media persons about the Government's methods of resolving the incident.

The establishment of a secure, direct negotiation channel between the terrorists and government negotiators is an essential step towards ending the incident successfully and peacefully. Ideally, the master and his crew should avoid being directly involved in the negotiations but, if forced to take part, should simply relay the dialogue back and forth.

CHAPTER 6

Conclusions and Recommendations

6.1 Conclusions

There are no simple solutions to dealing with any form of threats, and maritime threat is no exception. There are however, measures that can be undertaken to make responses more successful. Prevention is always better than cure. Every ship must implement a system to prevent unlawful boarding and examine the preventive measure necessary and the requirements for detailed security plan and contingency plan to be held and implemented. This will include conduct of security survey, control of access, designated restricted areas, establishment of secure area(s), and training of the crew.

The activities of pirates and armed robbers now pose a real threat not only to those on board ships but also to the territory and interests of coastal States through the threat of a major pollution incident following an attack. Particular trouble spots are the Far East and the South China Sea as well as South America ports. Typically, most attacks occur under cover of darkness, with thieves using grappling hooks or ropes to board vessels at anchor which represent the highest risk of attack, or when underway by the aid of speed boats.

Ships entering piratical areas should take appropriate measures to increase the level of surveillance and security on board and to devise means of responding to attacks. A clearly drafted anti–attack plan and the training of crews in security measures and response techniques are essential. Education and measures to reduce this risks of attack by restricting access to vessels at anchor offer the best means of ensuring a vessel's security and for cutting down the opportunities for boarders. Some key security measures are to ensure that details of cargo carried, sailing routes and schedules should remain confidential and to arrange voyage time so as to arrive in port during daylight and either ensuring that a berth is vacant in advance, or "making number" with the port to establish berth priority, then staying in deep water until the berth becomes vacant.

When preparing to respond, or when responding to attacks, masters and crew should seek to minimize the risk to those on board and seek to maintain effective control over the safe navigation of the ship. In any balance that has to be struck between resistance and safety, actions which secure the greatest level of safety, must be preferred. Compliance with attackers' demands is probably the best course, as aggressive action could precipitate a more violent confrontation.

The problem of stowaway is an ancient one. During more recent times stowaways have been regarded as an expensive nuisance primarily encountered by ships operating in the third world. Due to rapidly changing economic and political conditions stowaways have become a problem to ships in almost every sea. One alarming trend has been the increase in the number of stowaways on a given ship. Now groups that include women and children are being found. This trend reflects the fact that stowing away on a merchant vessel is usually a group effort resulting from shared know-how, bribery, collusion, and hard work. Unfortunately, the advance guide of the stowaways are those people who are essential for the ship's routine work on port such as stevedores, guards, chandlers, and customs official. By training crew in basic security proceedings and making them aware of the areas where stowaways

will attempt to board vessels, and educating them about where stowaways will secrete themselves once on board, the risk of individuals successfully boarding may be reduced. However, the achievement of total stowaway prevention and detection still largely depends on the adequately and capability of the crew.

The threat of terrorism against ships is increased by the displacement of terrorist attacks from the aviation system where preventive security has reduced their opportunities for success. Terrorists are unpredictable. Every ship must be considered a potential target for terrorist attack. So, to be effective, overall security for ship operations has to be strengthened.

Experience has taught us that terrorists will carefully plan and seek out opportunities to exploit weaknesses in security measures to achieve their goals. For this reason, strict discipline in security awareness must be insisted upon in order for security measures to have their effect. It includes knowing how they act, implementing preventive measures, recognizing suspected passengers and apprehending and training on the crew member's reaction in case of terrorists gain control. On the assumption that acts of terrorism are going to continue, companies and ships now have to look at security requirements as a routine part of running ships. Ten years ago, failure to implement adequate security was an act of irresponsibility. Now, failure to implement adequate security is a failure of standard ship management. Fortunately, the IMO Guidelines to Prevent Illegal Acts at Sea have been agreed to help ship managers and masters decide what is an appropriate level of protection.

6.2 Recommendations

The author recommends that the proposed measures already brought forward in each of the chapters on piracy, stowaways, and terrorism be incorporated in a set of guidelines for distribution to Egyptian ships by the Egyptian MARAD in cooperation with shipowners. In addition, the author wishes to make the following additional recommendations:

- Although, throughout the International Safety Management (ISM) code the word "Security" is never mentioned, section 2.2 of the code emphasizes that general safety management objectives should be "to establish safeguards against all identified risk." It is now inconceivable that the problems of piracy, stowaway, and terrorism should not be accepted as coming under that definition of 'identified risks'. Along this context, companies should, as a fundamental element of Safety Management System (SMS), design, reflect, and maintain the security measures on board ships. Accordingly, the Egyptian MARAD, while issuing the Safety Management Certificate, must ensure that Egyptian ships comply with security measures and is obliged to enforce them as part of their overall compliance with ISM Code.

- Merchant shipping companies must be required to audit the preventive practical guidance against crimes aboard ship and how these procedures are followed by ship's crew. Seafarers should face appropriate penalties or administrative action if it is proven that they have failed to exercise due diligence.

- As much as knowledge is power, the more knowledge seafarers have about threats, the better equipped they will be to combat them. Therefore, to enhance their knowledge and to transmit the means of security measures on board ships, the maritime education and training institutes should be encouraged to develop modules or courses on practical shipboard security for seafarers. The program could be in the form of a short course developed through an analysis of the tasks involved and an evaluation of associated risks. Form this point of view, this author believes that the Arab Academy for Science and Technology & Maritime Transport (AAST & MT), a regional maritime institute based in Egypt, can take charge of promoting and delivering this recommended course for Egyptian seafarers.

- The Egyptian MARAD should require masters of Egyptian ships to hold training sessions for the officers and crew to ensure the proper application of the security measures on board the ship.

- The Egyptian MARAD should encourage masters to report on all security-related incidents which have occurred on board Egyptian-flagged ships. Detailed descriptions of the incident with the resulting failure or deficient security measure, if any, should be reported so that security plans on board other Egyptian vessels may be upgraded or modified accordingly.

- Establishment of a coordinated security system between ships and ports of call. Prior to the arrival of the ship to the port, the ship security officer should make every effort to obtain from the local law enforcement or port security officer an updated threat assessment for the port. Copies of the vessel security plan should be provided to the port security officer prior to the ship's calling on the port. This will allow the port security officer to review the ship's security plan. Once the vessel arrives, the ship security officer should ensure that preventive measures are already in place at the port.

- Egyptian MARAD should, in connection with port authorities, establish a security program designed to control the physical access to the ports as well as access to information in its storage facilities, waterways and services. The improvement of ship-to-shore communications is very important especially since negligence in this field frequently contributes to increasing the risk.

- The awareness of potentially violent maritime threats such as piracy and stowaways must be heightened on a worldwide basis. Shipping companies should frequently share their own experiences with such problems in global fora, such as the Internet, in the hope that these details will eventually be used to advise other companies and governments of the magnitude of the problems facing the

industry. The Egyptian MARAD should publish incidents reported on Egyptian ships and offer suggestions on how to deal with such situations.

- Masters should take advantage of data base technology which provides a growing numbers of information of maritime threats that are becoming more freely available and that highlight the prevention and detection process.

- Every space on board ship should be kept locked in port as this reduces the number of locations that can be used to hide stowaways (or a terrorist's bomb) or from which goods can be stolen. It also limits the scope for sabotage. Though a lock is not an absolute barrier against a determined assault, it is effective against most criminal visitors who would not like their actions to be detected immediately. There is often a natural reluctance to keep doors always locked on a ship, and unless there is firm supervision by the OOW on his regular patrols, they will be left open. The standard of locking on a ship is directly related to the standards of discipline on board the ship.

- Unidentified stevedores, salesmen, prostitutes and all persons with no legitimate business aboard ship should not, in any case, be allowed to embark the ship. The golden rule must always be that no unauthorized visitors should be permitted access to the ship.

- It is essential that ships likely to find themselves in any risk area should have a contingency plan appropriate to the circumstances and that every crew member should know and understand both the general principles of the plan as well as the details that affect them. Equally essential is the necessity for total discipline before, during and after any attack. One maverick within the crew can completely destroy the effectiveness of any plan.

- Some shipowners and masters do not cooperate in making investigation possible because of the tight schedules of ships as they cannot afford to wait in port while crew members testify. In order to improve the accuracy of the statistics, shipmasters and shipowners could be assured that no undue or unjustifiable delay of their vessels would result when reports of piracy are submitted to the appropriate authorities. For this reason, investigation teams in the Egyptian MARAD must be well qualified, very quick and accurate to guarantee minimum delay to the ship. Only this can encourage masters and shipowners to report the occurrence of attacks.

- According to its classical definition, piracy (UNCLOS 1982) is a crime that occurs on the high seas. Today's reality shows, however, that pirates plunder, maim and kill with impunity in the territorial seas of many countries. The majority of attacks today in fact occurs within territorial waters and therfore falls outside the UNCLOS definition of piracy. The IMB has updated the definition by stating that "Piracy is an act of boarding any vessel with the intent to commit theft or any other crime and with the intent or capability to use force in the furtherance of that act." The author recommends that the Egyptian MARAD adopt IMB's definition of piracy, or a version thereof, as its own official definition in order to reflect the reality obtaining in the world's seas today.

- The Egyptian Government should support and encourage the harmonization of international procedures to help address current discrepancies connected with prosecuting piratical acts around the world. Egypt should support any proposal made by concerned nations calling for an international convention on the prevention of piracy, stowaways and terrorism.

- As an important step towards solving the difficult problems connected with the stowaways who gain access to ships, the Egyptian MARAD should amend regulations to allow the issuance of legally binding rules on shipowner's and

master's responsibilities in relation to stowaways. Such rules could be established on the basis of IMO resolution A. 871(20) " Guidelines on the allocation of responsibilities to seek the successful resolution of stowaways cases." In addition, stowaways should officially be treated as criminal offenders so as to completely take away the romantic or adventurous notions associated with it and to more effectively deter would-be illegal passengers.

- Since the Egyptian maritime industry does not possess neither the resources nor the capabilities to design and implement its own intelligence network, the Egyptian government should, in cooperation with other governments and agencies, establish an intelligence-sharing network designed to forecast the likelihood of future terrorist incidents. Just as good security can be thought of the last line of defense against terrorists, good intelligence is a vital first line of defence.

Even though the above recommendations are made for Egyptian ships, this author is confident that other flags will find them useful since violence crimes at sea do not discriminate against nationality, race, or creed. Maritime administrations should not wait for violent crimes to take place before instituting even the most basic security measures. An ounce of prevention is worth a pound of cure.

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