The Marine Advisor

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Welcome Back!

Welcome back to ***The Marine Advisor***, the quarterly newsletter of INAMAR's Marine Advisory Services. We received lots of positive feedback regarding our inaugural edition so here we are again. We're sure you'll find this issue as informative as the last. Our thanks to all who took time to share their expertise. As usual, we welcome your comments, and good reading to all! - John Monetta, AVP, INAMAR Marine Advisory Services

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INSIDE THIS ISSUE

INAMAR MAS Professionals To Play Key Roles In Upcoming National Cargo Security Council Conference

The NCSC will be conducting it's annual conference in Oak Brook, Illinois, April 28 - May 2 and INAMAR MAS associates will be taking leadership roles on several key panel discussions. **Ted Crosby** will be discussing air cargo loss prevention best practices, **Gerry deVries** will be discussing loss prevention and security issues as they relate to Europe and the C.I.S. **John Monetta**, is conference chairman. Monetta is also the NCSC national vice-chairman. Over 150 individuals, representing all facets of cargo security: manufacturers, carriers, federal and state law enforcement, etc. are expected to be in attendance. More information regarding this conference, as well as registration information can be obtained by visiting the NCSC website at http\\www.cargosecurity.com

Stowage Pre-planning Assures Safe and Sound Delivery - John Ferbend, Chicago MAS

Poorly stowed or secured goods in cargo containers often results in poor outturns of cargo. In most cases damage is restricted to the cargo itself, however, in more serious incidents the damage has been known to extend to the container itself, adjacent containers and their cargo and even the carrying vessel.

Before the advent of containerization the responsibility for properly stowing and securing cargo rested with the ships officers. Containerization has meant that this responsibility has transferred to the shippers who may fill the container at their own premises or subcontract the work to third parties. This means that often the container is being filled by personnel who have limited knowledge as to the violence of movement a vessel may endure when in heavy weather. For instance a container on the top of a container vessel may travel through an arc of 70ft (22metres) in 10 seconds during rolling - never mind the simultaneous effect of pitching into large seas. The potential result is that valuable cargo is delivered to the consignee with the contents or packaging damaged - resulting in expensive salvage costs, rejection of cargo or writing off of product. This can cause loss of market share and clients.

INAMAR MAS advises clients that before filling a container they should plan the order that the goods will be stowed, attempting to gain as tight a stow as possible. Suitable materials such as timber, steel strapping and air bags should be made available to secure and/or fill void spaces as the stow progresses such that the stow in the container is tight from side to side and in the ends. Our video "To Better World Trade" offers a visual representation of the hazards the typical shipment faces during transit. Contact INAMAR MAS for a copy of the video or for further advice on how to load and stow your cargo for the "toughest leg of the journey".♦

New Certification Requirements for Life Raft Servicing Facilities

If not properly serviced, life rafts can give mariners a false sense of security. How can you be assured that your life raft will operate properly in the time of need? In response to problems involving inadequate servicing and packing of inflatable life rafts and unapproved design and construction, the USCG is tightening down on the servicing requirements for life rafts. Because of growing concerns about unethical life raft repackers, the USCG now certifies facilities that can be used for the inspection and repacking of both approved and non-approved life rafts. Coast Guard inspectors check the hands-on technicians to see how they dry out, clean, inspect and repack the life rafts. The Coast Guard will not approve any facility where the personnel have not been through a manufacturer's training course. Accordingly you should look for Coast Guard certification or at the very least, check with the manufacturer of your brand for a list of those repackers who have been through a factory training course. This is important because not all life rafts are the same. As you might expect, each manufacturer has its own special parts and repacking instructions. Remember, not just any authorized agent is acceptable. The repacker has to be brand-authorized according to USCG requirements and the USCG approvals are specific to the individual brand. It is important to remember that repacking a life raft is like repacking a parachute: You will not know if it is going to work until you bail out. It pays to be sure about your life raft servicing facility. ♦

WHEN RECEIPTS ARE NOT CLEAN

When Sea Containers Ltd (SCL) issued so-called "clean receipts" for goods it knew had not yet been delivered so that a seller could obtain advance payments from its bank, it was found guilty of deceit, a London judge ruled. The judge added that the conduct would in any case have amounted to negligence and a breach of duty of care on the part of the company's senior staff. Shinhan Bank Ltd successfully argued deceit and negligence on the part of Sea Containers (SCL) in issuing "clean receipts" with respect to containers that had not yet been delivered (and which never were delivered) under a contract of sale with its customer, Win Corp. The presiding judge said that clean receipts, "common enough in international commerce", are an unqualified acknowledgement that the goods had been received in good order and condition. The judge held that SCL knew the receipts would be presented to the bank for payment, and had intended the bank to rely on them as genuine. It appeared the parties had agreed upon "advance issue of clean receipts" to "provide comfort" to the bank by showing there was an existing contract to supply 35,000 new containers from China and South Korea, and to provide ready cash for Win, which was in financial difficulties. However, under the contract terms, SCL would not have to pay until it had accepted bills of exchange following delivery. The bank duly advanced the money, but shortly afterwards Win went into liquidation, before the containers could be delivered. The judge concluded that the receipts meant "what they appeared to say" and were false because the containers had not been received. On the evidence of the transactions between the parties, including the statement that Win wanted the clean receipts to "comfort" the bank when insolvency threatened, the judge decided that Shinhan had proved "to the relevant high degree of probability that there had been an intention that the bank would pay against the false receipts. Fairplay, 7/27/00.

New Developments In EPIRB's (Emergency Position Indicating Radio Beacons) - John Strong, MAS Seattle

EPIRBs (Emergency Position Indicating Radio Beacons) are well into their next evolutionary phase. The system was recently put to the test in a simulated rescue off the Florida coast, and the results were impressive.

EPIRBs have been around for quite a few years, and the earlier versions, known as "Class B," operated on one frequency - 121.5 MHz - the same frequency used by many search-and-rescue (SAR) systems for locating aircraft, hikers and avalanche victims, as well as vessels in distress.

The latest EPIRB evolution is taking place as the U.S. Coast Guard is announcing its intention to stop responding to transmissions on the 121.5 MHz frequency, due to a false alarm rate as high as 98%. With limited budget resources, the USCG has decided it must concentrate its efforts where they produce results.

In the past few years, newer EPIRBs have been introduced that transmit on 406.025 MHz, and they transmit a coded data string on that frequency that identifies the vessel. Actually, these new 406 MHz units also transmit on 121.5 MHz. When a new-generation EPIRB is activated, the "data burst" is sent on the higher frequency once a minute, and an uncoded continuous homing signal is transmitted on the lower frequency. The data burst is received by GEOSAR satellites in high geostationary orbit, and it is immediately relayed to a ground station. The data in the burst is indexed to a database that provides information on the vessel, the people aboard, and a contact phone number. The lower frequency homing signal is received by COSPAS/SARSAT satellites in low-earth orbit. These moving satellites use Doppler-shift tracking to locate the general area of the beacon. Up until recently, this tracking method was a weak point in the system: it could take as much as an hour for the moving satellites to collect enough data to provide an approximate fix.

The latest generation of EPIRBs now use GPS (Global Positioning System) location data, which is transmitted as part of the data burst to the GEOSAR satellite. Some units include their own GPS receivers, and others get their location data from a GPS receiver aboard the vessel. As soon as the ground station receives the emergency alert from one of these new units, SAR personnel know who is in trouble and where they are. Rescue missions can be launched up to an hour earlier than before, which can make the difference between life and death. Once the rescue mission is underway, it still relies on the lower-frequency continuous beacon to guide aircraft or vessels directly to the people who need help. A GPS receiver in the EPIRB isn't really essential, since the higher frequency that includes GPS location data is only used once, for initial launch of the rescue mission.

When the EPIRB was activated in the test off the Florida coast, the phone number in the unit's database was called by Mission Control six minutes later. A rescue helicopter was on the scene in 48 minutes, and a rescue swimmer was in the water, shaking hands with the "survivor" in the test raft, 53 minutes after the test began.

A final note: Owners of EPIRB/GPIRB'S are cautioned to make sure that their units are registered in conjunction with FCC requirements. This applies to not only the original purchaser of the equipment but also second hand

purchasers. Failure to properly register the unit can result in hefty fines and penalties. (excerpted from: West, Gordon, *EPIRBs: Testing The System, ACR's RapidFix 406 and Northern Airborne Technology's GPIRB.* Marine Business Journal (Southern Boating & Yachting, Inc., Ft. Lauderdale), June 2000, pp. 14-15. ♦

CONDENSATION - BY JOHN FERBEND

Condensation can be a challenge, and certainly a frustration, for shippers of all types of cargoes. There are various means of controlling the effects of condensation during transport, but each shipping situation will have unique characteristics which must be assessed before attempting to address corrective measures. The cost of packaging relative to the value of the cargo often limits the options available.

A common and less expensive measure used to prevent damages from condensation is the installation of drying agents, such as desiccant, into the package. The successful use of desiccant is predicated on the subject package having been tightly sealed in order to prevent the ingress of further moisture content. This applies to all sized packages, from a small carton containing an individually packed electronic component, to an ocean container. In the case of small electronics, the goods must be protected in a sealed bag or similar package, the ocean container must be fitted with properly maintained door seals and the container vents blocked, etc. Without proper sealing of the package, the installation of desiccant can hinder, rather than help, as the drying agent can draw moisture into the environment, which can lead to the available moisture exceeding the retention level of the drying agent.

The potential amount of moisture present due to condensation is dictated by two variables; air temperature and relative humidity. The capacity of air to retain moisture increases as temperatures rise. At 85 degrees F. a cubic meter of air can retain as much as 30 grams (at 100% relative humidity) of moisture. For the purpose of demonstration, I will focus on the scenario of attempting to properly dry the volume of an ocean container. The volume of a standard 20' container is 33.3 cubic meters, a 40' unit 66.9 cubic meters. Using an example of cargo loaded in a tropical climate at 85 degrees and 100% humidity, a 20' container would have a potential of 999 grams of moisture present in the air. If the goods shipped are transported to a winter climate, and the air temperature dropped to 32 degrees, significant condensation would occur. At 32 degrees, saturated air (100% relative humidity) can only hold 5 grams of water, meaning the remaining amount of atmospheric moisture would have condensed within the container. A kilogram of desiccant can retain 250 grams of moisture. While it would appear the installation of four kilograms of desiccant would sufficiently protect a shipment within a 20' container, that is not necessarily the case. A much greater quantity should be installed to offset potential increases in available moisture, such as opening of the container by Customs officials, etc.

Since the sources of water vapor include both the interior container environment (liquid water left after cleaning, ambient air, timber flooring and wall liners) as well as the contents of the container (eg. Fiberboard cartons, paper labels, wood based glues, wood pallets, puntured cans or containers), you cannot reduce the amount of dessicant necessary to sufficiently control condensation.

A final note: Don't overlook other options available to you in controlling the sources of water vapor in the container include 1) using materials that do not contain or do not release water; 2) drying the container and contents to a sufficiently low moisture content either before or after loading. Clearly, it is preferable (and less costly) to prevent the water from getting into the materials in the first place rather than drying it out afterwards. For further information, contact John Ferbend at john.ferbend@ace-ina.com

Evinrude outboard engines 200 & 225 HP Recalled - Bombardier is recalling their 1999 and 2000 Evinrude outboard engines that have FICHT technology in the 200- and 225-horsepower categories. The engines — made by Outboard Marine Corp. (OMC) — suffer from fuel leaks that could potentially result in fire or explosion. A review of available incident reports indicate broken injector bolts as possibly contributing to the reported hazards. Bombardier in February purchased the engine trademarks, facilities and assets from OMC when the latter company filed for bankruptcy. Bombardier plans to absorb all the costs of the recall according to the company spokesperson. Bombardier is in the process of notifying registered consumers and dealers about how to obtain upgrade kits and compensation rates for making the necessary upgrades. For more details regarding this recall go to the following websites: http://www.boating-industry.com; www.evinrude.com or contact one of our MAS specialists.

PREPARING CARGO FOR LCL SHIPMENT John Ferbend, MAS - Chicago

Shippers often package their goods with the intent on stowage of the goods into full container load (FCL) containers. But on the occasion when a less than container load (LCL) shipment must be arranged, packaging must be considered. If your commodity is packaged, for example, in cardboard cartons fitted on wood pallets then double or triple stacked into an FCL container, the unitization of this type of stow will allow you the option of relatively simple and inexpensive packaging when shipping FCL containers.

But when encountering the occasional LCL shipment, is your packaging OK? Maybe not. Consider this: once your shipment leaves your facility, you have no control over the stowage of the LCL container. The stowage will be undertaken at a container freight station (CFS), at which point various consignments will be consolidated into one container. The CFS is concerned over two basic limitations: volume limitation of the container, and weight capacity of the container. More commonly, the volume limitation will dictate the quantity of cargo that can be stuffed into the container. Often it may resemble putting together a 3-dimensional puzzle. Through this procedure, your cargo has become nothing more than "a box" to the fork lift operator. As surveyors, all too often we see the effects of inadequate or insufficient stowage of consolidated containers. Heavy commodities are regularly placed on top of lighter packages despite package markings to the contrary, and void spaces lacking basic blocking are common.

If you are a shipper commonly transporting goods in FCL containers, and you have the occasion to ship LCL, take a good look at the packaging. Will it withstand a heavier commodity placed on top? You may need to re-address the concept of "packing for the toughest leg of the journey." If you're shipping a relatively large commodity protected only with a cardboard enclosure, you will need to alter your packaging methods! Consider a deated plywood box, or supplement the existing package with 2" x 4" hardwood framing. For packages over 8' in length, use 4" x 4" framing. If you're not sure, call the Marine Advisory Services, we're here to help!♦

Lightning Protection Procedures
Lightning is defined as a discharge of atmospheric electricity, accompanied by a vivid flash of light. This is the common rather benign sounding dictionary definition of the phenomenon that can be a terrifying experience to any sailor caught at sea during an electrical storm. What follows is based on the recommendations for lightning protection provided by the American Boat & Yacht Council, Standard E4.

The primary purpose of a lightning protection system is to provide for the physical safety of all aboard your vessel. Prudent actions that should be taken during an electrical storm are: 1) If at all possible remain in the cabin of a closed boat. 2) No one should be in the water or have any part of their body immersed in the water. 3) Do not come into contact with any components connected to the lightning protection system of a properly protected vessel. Otherwise your body could act as a conductive bridge between any items connected to the lightning conductive system. For example, you should not be in simultaneous contact with a metal steering wheel and a metal stern pulpit.

A good lightning protective system ensures that all large masses of metal are electrically connected. This purpose should not be confused with that of the vessel's basic bonding system. A properly installed and isolated bonding system is there to provide a low resistance electrical path to reduce electrolytic corrosion and as a measure of personal protection if there is an electrical fault in the boat's AC/DC electrical systems.

If your sailboat is a vessel with an aluminum mast you have the starting point of a well-grounded lightning rod. This will provide a zone of protection for a radius around its base equal to the height of the lightning rod. Due to some vessels overall length, it may be necessary to install another lightning rod to encompass any areas that do not fall within the zone of protection. Don't forget that the mast itself must be physically bonded or connected through to the common ground - one of the keel bolts or if a encapsulated keel, to the grounding plate, in order to provide optimum protection.

The apex of the rod should be a minimum of six inches above any masthead device. The end should be sharpened to a point. The base of the mast or the mast step if metal, should be connected to a keel bolt on externally ballasted vessels. The preferred wire gauge is No. 6 or even better, #4AWG stranded copper. In no case should such a connection be made to a vessel with internal ballast. The result could be a hole blown through the bottom of the hull. Boats with internal ballast should have a copper ground plate of at least one square foot in size installed externally on the hull bottom. The grounding wire should then be connected to the ground plate.

All wire conductors should be kept as straight as possible. All large metal objects above and below decks should also be electrically tied into the lightning ground conductor. This is a precaution against side flashes. Large metal objects include shrouds, chainplates, toe rails, sail tracks, winches, steering wheels, and bow and stern pulpits. These items can be tied into the ground conductor wire by a minimum #8AWG stranded copper gauge wire, or connected directly to the hull ground terminus.

A thorough inspection of the lightning protection system should be conducted on an annual basis as part of normal maintenance procedure. All connections should be maintained tight and corrosion free. Any corrosion will impede the flow of electricity and promote side flashes. For that reason it is important that the lightning protection system receive the same attention as the rest of the systems aboard the vessel. This should be included as a part of the annual lay-up and maintenance procedure.

For additional details regarding the lightning protection standards readers should refer to American Boat and Yacht Standard E-4♦

WATER WATER EVERYWHERE - Ted Crosby
Following are some general and specific definitions of various terminology used to describe the territorial and sailing waters of the United States and foreign countries.

Coastal Waters: No definition

Coastwise Voyage (Custom Regulations):
A voyage on which a vessel in the casual course of employment proceeds from one port or place in the U.S. or her possessions to another port or place in the U.S. or her possessions and passes outside the line dividing inland waters from the high seas (Customs Enforcement Area).

Coastwise Voyage (41CFR 175.10-3): "… A route (trip) which is not more than 20 nautical miles offshore on any of the following waters: any ocean; the Gulf of Mexico; the Caribbean Sea; the Gulf of Alaska; and, such other similar waters as may be designated by a Coast Guard District Commander

Coastwise Waters: Generally described as named waters not more than 20 miles offshore.

Contiguous Zone (Contingent Waters): A maritime zone seaward of a coastal state's territorial sea that may extend out to a distance of 24 miles from the baselines from which the territorial sea is measured. In this zone, the coastal state may turn back a ship planning to commit illegal acts inside its

territorial waters or arrest a ship leaving its territorial waters that has violated local law.

Continental Shelf: The seabed and subsoil of the submarine areas that extend beyond a coastal state's territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin. A coastal state may claim a continental shelf of up to 200 miles from the baselines from which the territorial sea is measured even if the continental margin is not that far seaward; but its maximum claim can be no more than 350 miles.

Economic Zone (Fisheries Conservation Zone): A zone contiguous to the territorial seas of the United States; the inner boundary is a line coterminous with the seaward boundary of each of the states, and the outer boundary is a line drawn in such a manner that each point on it is 200 miles from the baseline from which the territorial sea is measured - ("200 mile limit").

High Seas: All waters which are neither territorial seas nor internal waters of the United States or of any foreign country except as follows: In certain circumstances, may include the Great Lakes under certain acts, may include other water boundary definitions. Generally the ocean areas outside the territorial seas and maritime zones of coastal states. They are open to use by all states for peaceful purposes.

Inland Waters: Specifically designated internal waters; inland waters are generally defined by published COLREG demarcation lines that establish the need or use of navigation rules, inland or international.

Intercoastal Waterways (ICW): Bays, rivers, and canals, along the coast (such as the Atlantic and Gulf of Mexico coasts), connected so that vessels may travel without going into the open sea (generally part of the inland waters).

Internal Waters: U.S.: Waters shoreward of the territorial waters baseline.; Foreign: Waters shoreward of the baseline of its territorial sea, as recognized by the United States.

International Waters (High Seas): Those waters beyond the "200 mile limit" where international law applies.

Navigable Waters (U.S.): All defined waters except as restricted by Congress or other legal entities or acts.

Oceanic Waters: Generally described as named or unnamed waters more than 20 miles offshore.

Offshore Voyage: A route (trip) which is more than 20 miles offshore on any waters.

Territorial Waters (Seas): All waters within the jurisdiction of a country. U.S.: Includes internal and economic zone water (up to 200 miles offshore). States: Coastal states have jurisdiction over "territorial seas", a zone seaward not more than 12 nautical miles from the baseline, to control: fishing, the seabed, the subsoil, and the air space. (Extended from 3 mi. to 12 mi. in 1988).

"Twelve Mile Limit" (Law of the Sea Treaty - 1983): A territorial limit for signatories to regulate seabed mining.

Note:previously waters of the territorial seas (3 nautical miles) plus the contiguous seas (9 nautical miles) equaled a total of 12 nautical miles.

Energy Rate Hike To Make California "Brownouts" A Thing Of The Past

We have been closely following the situation in California as respects the occasional power outages. For those of you who may not be aware, these outages have not posed any real threat to cargo in storage (reefer facilities,etc), nor did they pose a threat from a security standpoint. We found that outages, when they occurred, only did so for a period of 1-2 hours (not enough time to adversely affect cold storage functions), and the area which is affected is normally alerted in advance - so there are no surprises. We have recently learned that apparently the outages will soon be a thing of the past ,as the reported residential and commercial electric rate hike of 46% is "guaranteed" to eliminate the need for same.....stay tuned.

ON THE CARGO SECURITY FRONT

W'ED LIKE YOUR OPINION:

Cargo crime, specifically theft and hijacking has become an epidemic which negatively impacts both insureds and insurer's alike. We at INAMAR MAS have struggled with how we can best focus our efforts and expertise to help our insureds combat this problem. Very often we are called in after the fact and thereby are reduced to offering "reactive, what if's" rather than proactive stop gaps. There is no easy way to beat this. In our opinion, education is the key to minimizing the potential for being a target. We have kicked around the notion of offering our insured's the benefit of our expertise in the form of a mini seminar(s) which would focus on cargo security best practices. We would target these seminars at the "soldiers", the people responsible for the day to day operations, the man or woman working the freight dock, dealing with the truckers, etc. We can think of no better way to partner with our clients.

Is the proposal feasible? To my knowledge no other carrier in the industry has offered anything like this. We'd like to hear from our brokers, as well as our clients - could we expect to have a favorable response? If there are pitfalls, we'd like to hear from you on them as well. Please drop me a line at john.monetta@ace-ina.com with your thoughts.

CARGO CATS: CARGO CRIMINAL APPREHENSION TEAM - *A special information article*

Begun in 1990 by the Los Angeles County Sheriff's Department, Cargo CATS has become one of the best-known "task forces" in the country. Its success in Southern California has proven that the surveillance and investigative abilities of a multi-jurisdictional team are far superior to that on any single agency. In its first decade, Cargo CATS has made over 1,000 arrests and recovered over $152 million in stolen property.

The current leadership of this highly successful apprehension body includes LA County Sheriff Leroy D. Baca along with Noel Cunningham, Chief of the LA Port Police; Bruce Olson, Chief, Vernon Police Department, Lloyd Sharf, Chief, Ontario Police Department; and Ed Gomez, Chief of the Highway Division, California Highway Patrol.

Among the objectives of Cargo CATS are the following (abbreviated in the interest of space): Increase arrests, prosecution, and conviction of cargo thieves; establish working relationship with cargo, transportation, warehousing and insurance industries within Southern California' recovery and return of stolen property; reduction of cargo theft and a reduction in court costs through the gathering of quality evidence; resource of cargo theft prevention information; and support the enactment of mandatory cargo theft reporting laws and development of a statewide cargo theft data base.

Cargo CATS has produced a training and informational video on hijack prevention and has published company security procedures for use by private industry. The video is available in English and Spanish for $250 for the first copy and only $25 per copy for additional copies.

Working in cooperation with the Western States Cargo Theft Association, Cargo CATS' leadership is ready to share its expertise and organizational information. Readers interested in additional information on this effective law enforcement group may write contact Jim LeBlanc (Sergeant, LA Sheriff's Department) at 3010 E. Victoria Street, Rancho Dominguez, CA, 90221. Phone is 310-603-3137; FAX 310-639-1070. Jim's e-mail is jdleblan@lasd.org. Courtesy NCSC♦

Theft of Computer Equipment - Ian McCarry, ACE Asia Pacific

Theft of computer technology such as chips, motherboards and the like is reaching high levels worldwide with it being forecasted that theft rates are reaching staggering levels.

Organized crime is fast recognizing that this sort of technology sells on the streets at 60 to 70 % of retail value against the 20% averaged for most other stolen goods. In fact the trade is so lucrative that selling of chips on the streets returns more than heroin with less risk to the seller.

Needless to say frequent reports of theft is becoming widespread and in some cases violent due to the focus of organized crime. Just look at these actual happenings:

- Criminals using semiautomatic weapons steal over US$1.0 Million worth of memory chips from the freight terminal at San Francisco Airport.
- Thieves in Taiwan armed with knives stole $15.0 Million of chips from a warehouse in Taipei and another US$5.0 Million of chips from a plant in Taiwan.
- In Australia, a hijacking results in a $1.5 Million loss of chips.
- An employee in Dallas went through the company reject bin and sold discarded chips on the street. These "bad" chips were then returned to the manufacturer for replacement with "good" chips. It is estimated the company lost $500,000 before the employee was caught.

So why all the concern? Apart from traumatizing staff and loss of valuable stock, these thefts can have major impact on clients through business interruption and effect the market by flooding it with cheap products, supplied by criminals.

There is no doubt a need for recognition by the electronic industry and insurers of these exposures and by understanding ways to prevent loss.

So how do you control these thefts? For high value goods INAMAR recommends as a basic guide, the following: 1)The use of a transport integrator to minimize multi-handling between different organizations. 2) Packing should not display logos, content details or company names. It should be stout in construction and wrapped with opaque or colored plastic. 3) Joints should be sealed with tamper proof tape and palletized goods shrink-wrapped with a request for cargo handling personnel not to breakdown the pallet. 4) Documentation should be as nondescript as possible with mention of contents or names of suppliers/receivers removed if possible. Use freight forwarder or agent's name instead. 5) Strict instructions/agreements should be in place with regards to temporary storage and types of vehicles and personnel to be used to transport and handle the goods. 6) Strict procedures should be in place for the checking of goods before signing for them. If necessary, cargo handlers such as freight forwarders and airline company premises should be checked for security. 7) Long term storage should be in a secure area restricted to authorized personnel. The area should be alarmed and under surveillance. Contact MAS if you need help with a difficult theft or pilferage exposure.

Sixth Cargo Security Management Seminar Held At Kings Point

The National Cargo Security Council in partnership with the Global Maritime and Transportation School (GMATS) at the U.S. Merchant Marine Academy, Kings Point, NY, concluded its 6th in a series of in-depth seminars in late March.

According to John Paepcke, NCSC Board member and Chairman of the Kings Point Seminar Committee of NCSC (a division of the NCSC Education Committee), "We again had the problem of an over-sale. While we try to limit attendance to 30 persons in order to enhance classroom participation, it seems we find ourselves with a late minute surge in registrations each course. This past course had 28 registrants until a week before when we got a sudden influx of an additional 8 students."

A student survey is distributed after each seminar and once again the results were 100% favorable. "Not a single student graded the course below 'Very good," Paepcke said. "And this has been the same result we have had at all six courses over a three-year period."

The next course will be held at the Academy in October, 2001. Contact NCSC for information. The NCSC website will have this next course posted within a few weeks.♦

Preventing Warehouse Burglaries

One area that requires the attention of underwriters, brokers and the assured is physical security of new premises. We have had several occasions where a forwarder, distributor or warehouse company has moved into a new facility located in a multiple tenant building and been broken into immediately. The major problem is that the landlord does nothing to protect the empty units. Within a few days of moving in, a hole is broken through the dividing wall and that leads to a major loss of inventory. Even when a good perimeter security system is in place, the "bad guys" find ways to

circumvent the system such as breaking through the wall past the effectiveness of motion detectors. They frequently hit before everything is complete. Making sure the building is ready for occupancy and everything is out of the old building. Implementing new inventory systems or upgrades and all the other last minute details, usually lead to some oversights.

The most important item is protecting the inventory. Security arrangements must be completed before moving in. The landlord of the new facility must be questioned, and in our opinion, must provide some type of perimeter security for the unoccupied unit(s) adjoining the insured.
Courtesy of Ralph Wood Services, Port St. Lucie, FL ♦

Surreptitious Entry of Cartons
The incidences of covert entry into palletized cardboard cartons are continuing to increase. We see repetitive situations where high value of shrink-wrapped cartons, that are palletized, are being opened and contents partially or completely taken. On occasion some type of "junk" has taken the place of the cargo making up the weight.

In some cases the "bad guys" are cutting the stretch-wrap from the pallet and rolling up the wrap to expose a few cartons. Then they remove the cartons a couple at a time, turn them upside down and cut the tape on the bottom. After removing the contents, they pull the stretch-wrap down to the pallet and staple it.

There are obvious efforts to place the tape on top of the original tape so it is not immediately noticeable. Sometimes it is clear tape and other times they try to match the original color.

In is our opinion, black stretch-wrap is of mixed value. While it hides any type of identifying marks or numbers, it also seems to have become a red flag, indicating the shipment is probably high value and therefore more of a target.

Prevention is extremely difficult if time and opportunity exist during transit. Certainly, banding pallets in two directions makes it more difficult to remove the cartons and requires the breaking of a band that could be noticeable.

In an effort to confirm pilferage in transit we strongly recommend every high value shipment be weighed upon receipt. This simply means pulling a pallet from the container or trailer and running it by the scale before placing it in inventory. Frequently it is several days before pallets are broken down or inventoried. If the shipment is weighed immediately, and a problem appears to exist, check the contents and have the delivering carrier verify the problem.
Courtesy of Ralph Wood Services, Port St. Lucie, FL ♦

The Pro's and Con's of Gas turbine engines in Marine Service
It is a common misconception that gasoline is the principle fuel for Gas Turbine engines. To the contrary, the word "gas" in relation to turbine engines refers only to the gaseous state of the compressed air and diesel fuel mixture that is continuously burned in a turbine engine's combustion chamber and then forced through the turbine's blades.

The "gas" issue is just one of many common misconceptions associated with gas turbine engines. Most people don't realize passenger and military jet aircraft are actually powered by gas turbine engines. They turn big, high-bypass fans, which are basically propellers turning inside a cowling on the wing or at the tail. The force of the air from the rotating fan – often called thrust – comes out the back of the cowling and drives the plane forward. In a diesel-fueled gas-turbine engine, the fuel and compressed air mixture is ignited initially at startup and then burns continuously as it is sucked through the combustion chamber. After ignition, the high-pressure gases and all their energy are directed against the blades of the power turbine wheel – a disk or disks with vanes like the torque converter of an automatic transmission – causing it to spin. As the turbine wheel rotates, it transfers mechanical energy through an output shaft to a gearbox and ultimately to either a propeller or waterjet pump. A large percentage of the turbine's output is also used to power the internal air compressor.

Among the key advantages of gas turbines in marine applications is the high horsepower output available in a system that is significantly smaller and lighter than a diesel piston engine. You get much longer life from a gas turbine because it is air cooled, and there is no wearing of metal against metal. It is also very environmentally friendly – with emissions about a tenth of an equivalent diesel – because a turbine burns all its fuel and burns clean.

The amount of fuel it burns, however, is one of the first objections raised against gas turbines. The nature of the engine is such that it runs most efficiently at full power, and fuel consumption is not significantly reduced at lower speeds. Secondly, the initial price of a gas turbine system is high. Comparing a 1,500-hp diesel to a 4,000-hp gas turbine (the smallest turbine engine Detroit sells), the diesel sells for around $250,000, while the gas turbine system might cost $1.5 million (for more than twice the horsepower). Cost per horsepower increases with engine size, and when you get up in to the higher levels with gearboxes, controls, and installation, it's at least $300 per horsepower – diesel or turbine.

Regarding fuel consumption, a (piston) diesel runs most efficiently and has greater longevity at about 80 percent of full power whereas a gas turbine is most efficient running wide open. As a result, you need a bigger diesel to get the same amount of useable horsepower. For example, a 5,000-hp turbine system in a passenger ferry will burn roughly 302 gallons an hour at full power and deliver a constant 5,000-hp. To get the same performance out of a diesel operating at only 80 percent would require an engine rated at approximately 6,250 hp. According to the specifications of a competitor's diesel in that size range, it would consume 287 gallons per hour – only 15 gallons less than the gas turbine. Further, the diesel (complete and installed) would weigh 65,000 lbs., which is over six times as heavy as the gas turbine at 9,950 lbs."

The players in marine gas turbines are Detroit Diesel, Rolls Royce – who now owns what used to be the Allison line – and General Electric. Rolls Royce sells many of their big turbines to nay fleets around the world, but General Electric is really the leader in marine turbine power from 16,000 horsepower and up. Lycoming turbines have gone primarily to smaller vessels with horsepower ranging from 4,000 up to 16,000 horsepower.

When comparing equivalent horsepower, long-term dependability, reduced maintenance, and low emissions, the price of gas turbines can begin to look competitive. Turbines make a lot of sense when you get up to 4,000 hp and above. But speed and distance are the main drivers in successful applications. On the other hand, if you don't need that much horsepower or have slower mission requirements, you probably need to look at other options, including a good pair of diesels. ♦

Question for the month:

Congratulations go out to Denise Frobey of AON New York who correctly answered both questions in our fall edition*

Q – The term "underway" which refers to a vessel not at anchor, made fast to the shore, or aground applies only where the vessel is moving ("making way") through the water. True or False?

All entries must be received by May 1, 2001 Winners will be acknowledged in our next edition scheduled for distribution in June 2001.

Fax or e-mail your answer to Chris Batezel in our Philadelphia office at (215) 640 4154 or e-mail chris.batezel@ace-ina.com. (please let us know how to get in contact with you).

NOTE: INAMAR employees are not eligible to participate.