SOUTH AFRICAN MARITIME SAFETY AUTHORITY

Occupational Health & Safety Newsletter

incorporating

Stevedoring

Ship Repair & Maintenance
Foreword

Over the past few years, SAMSA has embarked on a safety drive in the stevedore industry to improve safety standards and awareness with the main aim of reducing the number of fatalities and serious injuries. One of the initiatives has been the introduction of the Stevedore Safety Newsletter. Feedback from industry regarding the newsletter has been extremely positive, so much so, that industry now ask me when the next one will be published – nothing like a bit of pressure!

SAMSA have recently expanded their safety drive to include the ship repair and maintenance industry and are replicating the action plan used in the stevedore industry to improve safety standards and awareness in the ship repair and maintenance industry, through:

• The incorporation of the Code of Practice: Ship Building and Repair into the Maritime Occupational Safety Regulations (MOS Regs).
• The conducting of MOS Regulations Compliance Audits.
• The conducting of safety inspections.
• The publishing of a newsletter to raise awareness.

Therefore it gives me great pleasure to include a ship repair and maintenance safety section to the Stevedore Safety Newsletter. Obviously, the name of the newsletter will no longer be appropriate and the newsletter will now be titled Maritime Occupational Health & Safety Newsletter until a more suitable name can be found.

Although stevedoring and ship repair are quite different maritime sectors, I felt that it would be appropriate to combine the two sectors into one newsletter to avoid having to compile and publish two separate newsletters, but more importantly hoping that the two industries can learn from each other as many of the accidents that occur have common themes e.g. falling as a result of working at heights.

In this edition you will note that the ship repair and maintenance section is quite brief in comparison to the stevedoring section. Hopefully this will change once awareness improves, casualties are reported correctly and I obtain a greater understanding of the challenges facing the industry through audits and inspections.

Enjoy the new newsletter, I hope you find it informative and I look forward to your feedback.

Kirsty Goodwin

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Reporting of Serious Injuries & Accidents

The following summarised list of serious injuries and accidents are required by the Merchant Shipping Act to be reported to SAMSA immediately or within 24 hours:

**Serious Injuries**
- a fracture of the skull, spine or pelvis
- a fracture of any bone except a bone in the wrist, hand, ankle or foot, or a single rib
- the amputation of a hand or foot
- the loss of eye sight
- frost-bite which can lead to permanent disfigurement
- any impairment of a person's physical condition owing to:
  - the use of machinery
  - an electrical shock
  - the exposure to hazardous working conditions or substances
  - the exposure to natural or artificial environmental extremes
- results in more than 24 hours of hospital admittance

**Accidents**
- the collapse of any lift, crane, davit, derrick, mobile powered access platform, access equipment, staging or bosun's chair or the failure of any load-bearing part thereof
- the explosion, collapse or bursting of any closed container, including a boiler or boiler tube, in which there is any gas, liquid or any vapour at a pressure greater than atmospheric pressure
- any electrical short circuit or overload resulting in fire or explosion
- the sudden, uncontrolled release of flammable liquid or gas
- the uncontrolled release of any harmful substance
- either of the following occurrences in respect of any pipeline, valve or any piping system in a vessel—
  - the bursting, explosion or collapse of a pipeline
  - the accidental ignition of anything in a pipeline
- any contact of the human body with loose asbestos fibre
- the failure of any lashing-wire
- any collapse or significant movement of cargo
- the malfunctioning of any hatch cover
- any person falling overboard
- the parting of a tow-rop
**Good Day**

The last 6 months have been so action packed, that I’ve barely had time to catch my breath, hence the late newsletter! Apologies. My excuse, the Soccer World Cup! While everyone was out watching the beautiful game, blowing their vuvuzelas and experiencing the electrifying atmosphere in the country, work – what’s that – definitely took a back seat.

In brief, highlights from the last couple of months are as follows:

A spike in the number of accidents in comparison to the same period last year. Sadly, the life of one stevedore was lost as a result of being struck by swinging cargo. A number of the accidents that have occurred recently have been as a result of falling. I urge you to ensure that stevedores have received training on what precautions to take when working at heights.

Compliance audits and follow up audits took place in Richards Bay, Durban and East London. Audits are planned for Cape Town and Saldanha shortly, so expect to hear from me soon.

The establishment of the Durban Stevedore Safety Committee.

The stepping up of stevedore inspections, which, since I have lightened a few pockets, has resulted in me not being everyone’s flavor of the month.

Enjoy the new newsletter and take note of what is being experienced in the ship repair and maintenance industry as it may have a bearing on your operation.

Kirsty Goodwin

**Promulgation of the Amended MOS Regulations**

There is no news to report on the promulgation of the amended Maritime Occupational Safety Regulations.

**Stevedore Safety Induction Training**

A number of applications for interim accreditation for stevedore safety induction training have been received.

Well done to all those companies that have made the effort – it is apparent that a lot of hard work went into the applications. However, After reviewing the applications some clarification is necessary:

SAMSA’s requirements for interim accreditation for stevedore safety induction content can be found in the Code of Safe Working Practice for Ships Working Cargo in SA Ports in Annex 1. It is strongly recommended that the requirements in Annex 1 are adhered to. In order to apply for accreditation the SAMSA form: Initial Accreditation of a Training Institution needs to be completed and any additional information it stipulates must be submitted along with the training content.

TETA have a unit standard: Describe Stevedoring in South Africa, which covers an element of stevedore occupational safety; however this does not cover or fulfill SAMSAs requirements for stevedore safety training. In addition, SAMSA DO NOT accredit TETA unit standards. Therefore should an application be received for the above unit standard, it will not be accredited unless it can be shown that all SAMSA’s requirements have been met, as per Annex 1 of the Code of Safe Working Practice for Ships Working Cargo in SA Ports. In addition, during compliance audits, if stevedore safety training has been conducted according to this unit standard, it will be raised as a non conformance as training according to this unit standard, is not risk based.

I look forward to receiving your applications and should you have any queries or require any assistance, please contact me.

**Stevedore Casualties**

In Durban on 11/01/2010 at 21h30 a stevedore was fatally injured by a swinging load of wire rod coils which stevedores had been trying to position for stowing. Five wire rod coils had been hooked up to the crane hook using wire hooks and rope slings. Two coils were stowed, three remained suspended. The three suspended coils “bunched” and swung, carrying two stevedores away into a steel structure on the portside. They both fell between this structure and the wire rod stow. One came away unscathed whilst the other was killed.
Learning Points

• Ensure that the cranes jib is plumb over the cargo to ensure that cargo remains stationary whilst it is being positioned for stowing.
• Consider using a spreader beam when handling wire rod coils.

2.

In Port Elizabeth on 16/03/2010 whilst attempting to lift stevedores onto a container stow using the stevedores safety cage, which was hooked up to a shore gantry crane, the crane operator suddenly stopped slewing, throwing the stevedores against the safety cage. One of the stevedores sustained multiple rib fractures.

Learning Points

• Ensure familiarity with the use of the safety cage
• Ensure only trained and experienced crane operators are utilized.

3.

In Durban on 24/04/2010 at 10h40 whilst attempting to lash a pipe stow, a stevedore fell from the stow fracturing a vertebrae in his lower back and his right hand and wrist. The lashing gang had been in a rush to secure the stow as the ship was shifting berth.

Learning Points

• Where practical ensure fall protection is utilized.
• Training on how to work at heights to be provided to stevedores.
• Allow sufficient time to complete lashing cargo in the event the ship shifts berth and communicate progress to the vessels crew.

4. In Durban on 28/04/2010 at 07h20 a stevedore whilst trying to position a suspended steel coil for stowing, caught his thumb between a stowed coil and the suspended coil resulting in his right thumb being amputated.

Learning Points

Avoid placing hands and fingers in “pinch positions” – i.e. Between stowed and suspended coils.

5.

In Durban on 12/05/2010 at 08h10 a stevedore involved in hatch cleaning was throwing dunnage into a skip from atop a stow of steel I sections. A nail in a piece of dunnage caught the workers glove, causing him to overbalance and fall off the stow. He sustained internal injuries to his lungs.

Learning Point

• Pay attention to what is being handled.
• Stand clear of the edge of the stow.

6.

In Cape Town on 16/05/2010 a stevedore whilst working atop a three high container stow, lost his balance and fell to the deck. He sustained multiple broken bones and internal injuries.

Learning Points

• Where practical ensure fall protection is utilized.
• Training on how to work at heights to be provided to stevedores.

Minor Injuries

A summary of minor injuries reported to SAMSA:

1.

In Durban on 29/04/2010, whilst discharging a truck in no. 1 hold, the suspended truck swung slightly and pinned a stevedore against the ships side. Fortunately the stevedore only sustained a soft tissue injury.

2.

In Richards Bay on 16/03/2010, a stevedore sustained a laceration to his finger whilst trying to position steel plates.
The last six months have seen an increase in steel handling related accidents. Two of these incidents were as a result of falling from steel stows. I encourage you to ensure that stevedores are trained to work safely at heights and where practical to use fall prevention equipment. Happily, there has been a decrease in the number of container handling accidents reported. The only reported injury was also as a result of falling and as with working on steel stows, similar precautions need to be taken. Even though there appears to be a reduction in container handling accidents, please exercise extreme caution when handling containers as it is still one of the most dangerous cargoes to handle. One fatality occurred as a result of swinging steel cargo.

Overall, the usual suspects i.e. steel and containers have been responsible for most stevedore serious injuries and I urge you take care when handling these products.

**Ships Lifting Appliances**

A number of near misses have been reported in the last six months involving ships gear failing.

1. 

In Richards Bay on 27/02/2010 whilst discharging clinker using a grab, no. 1 crane wire came off the sheave causing the grab to fall approximately 17m into the hold.

2. 

In Durban on 31/03/2010 at approximately 11h15 the luffing wire of no. 3 crane failed dropping an approximately 21 ton forklift on the quayside. Fortunately no-one was injured, however the forklift was damaged beyond repair. It was not clear what caused the wire to part.

In Richards Bay on 22/03/2010 at approximately 14h45 whilst loading silicone carbide, the operator of crane no. 1 picked up a skip from the quayside and was in the process of lowering the skip into the hold when the crane wire parted, resulting in the skip falling approximately 6m. The lifting beam landed on the skip and the crane runner block fell on top of the ferro beam. There was a stevedore in the hold at the time of the accident; fortunately he was a safe distance away from where the skip fell.
have the required certificates and experience.

- Ensure that crane operators conduct safety checks on the crane prior to shift commencement and report any problems to the ships crew.
- Request to see the ships chain register to check when quadrennial thorough examinations and annual inspections have been conducted.
- Supervisors should regularly check that crane operators are not handling cargo dangerously, operating too fast, recklessly or shock loading.

**DO NOT USE CRANES THAT ARE DEFECTIVE REPORT THE FAILURE OF SHIPS GEAR TO SAMSA**

**Stevedore Compliance Audits**

Compliance audits and follow up audits were conducted in East London, Richards Bay and Durban. Generally the results of these audits were fairly good; however more focus needs to be placed on the following:

**Risk assessments**
- Should be updated on a regular basis to reflect changes in the operation.
- Actions to mitigate risks should be implemented to avoid the risk assessment becoming a paper exercise done solely for my benefit!

**Accident Investigations**
It would be helpful if the corrective actions identified as a result of an accident are, in fact, implemented to prevent it from occurring again.

**Safety Training**
Needs to be practical, risk based and should consider the target audience. If the requirements of Annex 1 in the Code of Safe Working Practice for Ships Working Cargo in SA Ports are followed, non conformances for inadequate safety training will be a thing of the past!

The above are fundamental requirements of any safety management system - get them right and you’re on the road to a safer working environment.

**Stevedore Safety Inspections**

Some areas that need improvement as a result of ship inspections:

**Housekeeping**
Chains, wire rope, beams etc need to be moved to one side of the deck and not left in the centre of the deck. Similarly bulk cargo spills from grabs need to be swept up. Someone is going trip or slip because of it!

**Signallers**
- Using an old milk bottle or a plastic bag is not acceptable tool for signaling to the crane operator. Use a baton.
- Only one person to signal to the crane operator at a time. How is the crane operator to know who to take instructions from if several people are waving their hands in the air?

- The newsletter would not be complete without my favourite gripe - signallers standing on coamings and hatch covers without harnesses or fencing being erected. Reasoning with stevedores has failed and a number of stevedore companies have felt the displeasure of the Authority.
Having said that, some stevedore companies have got it right and heeded warnings regarding standing on coamings and hatch covers. They have provided their stevedores with harnesses and have had the crew erect fencing. Well, seeing that certainly made my day and I hope that other stevedore companies follow suit. Well done to them!

**Gangways**
A single plank from the quayside secured to the ships railing is. A shore side ladder must be obtained or failing that another arrangement must be made.

![Gangway secured to the ships railing with safety net draped under it. Note that the safety net is not secured to anything, rendering it quite useless!](image)

**Foremen / Supervisors**
A reminder that Foremen / Supervisors hold overall responsibility for the stevedore operation AND the safety of all stevedores onboard. Therefore leading by example is important. If the Foreman does not wear PPE correctly or not at all, or performs unsafe acts, like jumping over the ships rails onto the quayside or walking along unfenced centre line bulkheads, the battle to improve safety standards is going to be that much more difficult to win, so remember: Actions speak louder than words!

**Durban Stevedore Safety Committee**
The Durban Stevedore Safety Committee has been established and has met twice since its inception in December 2009. The Committee is made up of a cross section of stevedore companies, TNPA, NASASA and SAMSA. A number of critical issues affecting stevedore safety have been raised at the meetings and are in the process of being addressed.

A number of valid safety issues have been raised and hopefully I will be able to report back on them when the next edition of the newsletter is published.

Of concern is that issues being raised and dealt with sometimes have a national implication and there is no input from stevedore companies in other ports. Therefore it is the committee’s intention to establish similar forums in other ports.

**International Maritime Dangerous Goods Code (IMDG) Training of Shoreside Personnel**
This is a reminder to all stevedores involved with the handling of IMDG cargo, that from the 1st January 2010 it is compulsory to have attended training pertaining to dangerous goods intended for carriage by sea transport.

The following is an extract from the IMDG Code and recommends the following training requirements for stevedores:

- Knowledge of cargo classes and their hazards
- Marking, labeling and placarding
- Emergency response procedures
- First aid measures
- Safe handling procedures such as: use of equipment | appropriate tools | safe working loads
- Cargo securing requirements
- CSC requirements, local requirements at loading, transit and discharge ports
- Port by-laws, in particular quantity limitation
- National transport regulations
Introduction
After successfully placing the stevedore industry on a path to improve safety standards, SAMSA has turned their attention to the ship repair and maintenance industry where a similar initiative is underway. As mentioned in the Foreword, the action plan includes the following:

- The incorporation of the Code of Practice: Ship Building and Repair into the Maritime Occupational Safety Regulations (MOS Regs).
- The conducting of MOS Regulations Compliance Audits.
- The conducting of safety inspections.
- The publishing of a newsletter to raise awareness.

Work on amending the MOS Regs and reviewing the Code of Practice: Ship Repair has been completed and the amended regulations and Code have been sent for informal comment.

I also made a start with compliance audits and a number of ship repair companies in Durban and East London have been audited. The results of the audits are included further on. Audits in Cape Town and Port Elizabeth will be setup shortly, so expect to hear from me shortly.

Lastly, one of the main reasons for the distribution of the newsletters is to notify the industry of accidents so that everyone can learn from them. Unfortunately the reporting of accidents in the ship repair industry, for various reasons, is sadly lacking and I hope with the advent of audits and the distribution of the newsletter this will improve.

Enjoy the newsletter and I hope you find it beneficial.

Kirsty Goodwin

Amended Legislation
Maritime Occupational Safety Regulations Code of Practice: Ship Repair

In early 2009 work began on amending the Maritime Occupational Safety Regulations to incorporate the Code of Practice: Ship Repair. Most of you will be aware that the Code of Practice: Ship Repair was compiled by the ship repair and maintenance industry, however was never incorporated into legislation, but used by the industry as a guide to best practice.

A team from a cross section of the industry was assembled to review the Code of Practice: Ship Repair and to amend the MOS Regs accordingly. This exercise was completed in July 2009. To standardize the naming of the Code in line with other codes incorporated in the MOS Regs, the Code of Practice: Ship Repair was renamed the Code of Safe Working Practice for Ships Undergoing Repair and Maintenance in South Africa.

You will note that the issue of ship building has been omitted from the code and this is because the Merchant Shipping Act states that the MOS Regs do not apply to ships being assembled or dismantled. Which raises the question, that when this type of work is conducted, what safety legislation is applicable? Hopefully common sense will prevail and the proper precautions will be taken when these activities are undertaken.

Both the amendment to the MOS Regs and the Code were sent out to the industry for informal comment in July 2009. Disappointingly, no feedback was received, however both documents will be sent out for formal comment shortly, before they go for promulgation.

A summary of the amendments to the MOS Regs applicable to shore contractors are as follows:

- Shore contractors must be medically fit, and hold a valid medical certificate, for the type of work to be undertaken. The Code prescribes medical fitness standards for the different job categories. This recognizes that the arduous nature of ship repair and maintenance work and demands appropriate levels of fitness, eyesight and hearing for occupational safety.

- Shore contractors must hold documentary evidence of having successfully completed approved safety training. Research has shown that most accidents happen because of a failure to appreciate hazards in the workplace.

- An employer of shore contractor must appoint a safety appointee for each vessel under repair. This recognizes the fact that the safety officer is unlikely to be able to visit every vessel working cargo. The safety appointee will therefore function as the eyes and ears of the safety officer and will be required to inspect the workplace before shifts commences.

- An employer of shore contractors must establish a safety committee. In practice, this committee is likely to be combined with the committee required by the Occupational Health and Safety Act 1993. An important function of the committee is to ensure that accidents and
unsafe working practices are reported and investigated and that appropriate corrective action is taken.

- An employer of shore contractors will be required to conduct compliance audits on a bi-annual basis as a form of self-regulation.

Major amendments to the Code of Safe Working Practice for Ships Undergoing Repair and Maintenance in South Africa (Code of Practice: Ship Repair) can be found in Section 1: General Provisions.

Possibly the most contentious of these amendments are the responsibilities of the Client, Principle Contractor and Contractor. Although these requirements may seem onerous, it was felt that in some instances certain parties were not taking adequate responsibility for ship repair / maintenance workers health and safety and this definition was therefore necessary. Surprisingly this was not picked up when the Code went out for informal comment, so perhaps the change was welcomed.

Should you wish to obtain a copy of the draft amendments to both the MOS Regulations and the Code of Safe Working Practice for Ships Undergoing Repair and Maintenance in South Africa please contact me.

Ship Repair & Maintenance Casualties

As was found in the stevedore industry the reporting of accidents to SAMSA has been poor. In 2009 only ONE accident was reported the entire year for the entire ship repair / maintenance industry in South Africa. Hard to believe that in an industry so dangerous and employing so many people that this is the case. I suspect rather that this is the reality:

- there is confusion between which authority to report accidents to i.e. the Department of Labour or SAMSA.
- Fear of the consequence of reporting accidents

Therefore in explanation, the MOS Regs “Apply on board vessels and to the performance of all work on vessels, whether or not the vessels are afloat”. HOWEVER, should work be conducted from the bottom of the dry dock using scaffolding erected against the side of the vessel and someone is injured, this injury should be reported to the Department of Labour. Page two of the newsletter lists what accidents and serious injuries must be reported to SAMSA.

Serious Injuries & Fatalities

In Richards Bay on 19/03/2010 whilst painting the vessel’s funnel, a worker was fatally injured when both the ropes of the stage he was working on parted, causing him to fall approximately 15 metres to the deck. Following is a summary of factors contributing to the workers fatality: the poor condition of the polypropylene ropes and inadequate inspection thereof; lack of control regarding the distribution and receipt of the staging equipment; the design of the stage is not according to any maritime best practice; there does not appear to have been any formal training conducted on how to rig the stage or how to inspect it for safety; no independent safety line was rigged (the deceased’s harness was attached to the stage ropes) therefore he did not stand a chance when both ropes parted; inadequate training provided for working at heights – specifically from a stage

Learning Points

- Stages onboard vessels should be rigged according to maritime standards.
- Staging equipment (ropes and planking) must be inspected regularly by a competent person and the findings recorded.
- Training on how to rig staging must be provided.
- Training on how to work at heights must be provided.
a complete list of all ship repair and maintenance companies in South Africa. As there is no such list available, a start was made with the companies belonging to the Ship Builders and Repair Association. To date audits have been conducted in Durban and East London. Audits are planned for Port Elizabeth and Cape Town in the near future.

Results of the audits ranged from excellent to lots and lots of room for improvement! Compliance to the MOS Regs in some companies was so bad that instead of asking for information, I ended up giving it. Quite frightening since the audit is a reflection on management’s commitment to the safety of their staff.

Usually I supply a list of areas that need to be focused on by industry subsequent to the audits. However due to some of the audit results being so poor, I will be concentrating on the following during future audits:

- Applicable safety legislation available
- Risk assessment documented and implemented
- Certificates of competence for machinery / equipment operators
- Proof that safety training has been provided to all workers
- Accidents have been reported to SAMSA, investigated and corrective actions implemented
- Proof that PPE has been issued
- A safety officer appointed in writing
- First aiders trained and have first aid equipment
- Adequate supervision
- Emergency procedures documented and staff trained on them
- Lifting gear / equipment inspected and tested

**Practices That Work**

**Learning Points**

- Principle contractors to ensure sub contractors are very clear on what work is to be performed and sub contractors to pay attention.
- Firewatches are not to leave there designated areas without informing the Safety Officer.

**Compliance Audits**

As already mentioned one of SAMSA’s initiatives is improve safety in the ship repair / maintenance industry is the conducting of Maritime Occupational Safety Regulation compliance audits. One of the challenges of embarking on this project has been to obtain

Worker using a similar stage that was used to the one involved in the fatality. Note the workers safety line is connected to the stage and not to an independent safety line

**Maritime Accidents**

In Durban on 05/03/2010, a boilermaker cut into no. 4 heavy fuel oil tank causing the fuel to smoulder. Subsequent to the accident the boilemaker absconded. Factors contributing to this accident are: the subcontractor supervisor appears to misunderstood in which tank cutting was required, even though it was documented. Furthermore did not follow the instructions on the Confined Space Entry Permit. The boilemaker was unable to differentiate between an area demarcated for cutting and one demarcated for a thickness test – no. 4 heavy fuel oil tank only required a thickness test. The Firewatch did not notify the Safety Officer of his new location – he was meant to be standing watch at a designated tank and not at wing tank no. 4. It is very fortunate that wing tank no. 4 had been declared gas free, as if this had not been the case, this near miss could have resulted in a catastrophe.

**Improve housekeeping and avoid slips and trips by using cable management techniques**