



SOUTH AFRICAN MARITIME SAFETY AUTHORITY
MARINE NOTICE NO 6 OF 2021

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TOWING OPERATIONS IN SOUTH AFRICAN WATERS					

PRINCIPAL OFFICERS, SKIPPERS, OWNERS, MANAGERS AND OPERATORS OF VESSELS

Affected Marine Notices			
<i>Cancelled or superseded</i>	23 of 1992 10 of 1994 25 of 1995 16 of 2018	<i>Read in conjunction with:</i>	

SUMMARY

The purpose of this Marine Notice is to bring to the attention of the industry the requirements for vessels being towed in South African waters and off the South African coast.

Several towing operations take place off the South African coastline and in South African waters each year.

The following guidance is intended to provide clarity on the requirements and is applicable to all types of vessel, both commercial (including fishing vessels) and pleasure vessels, regardless of size (including vessels under the National Small Vessel Regulations, 2007, as amended).

1. TOWAGE REQUIREMENTS

- 1.1** Any vessel under tow making an initial departure from a South African port is required to hold a certificate of Inspection/Approval as evidence of conformance with international standards and industry best practices regarding seaworthiness, satisfactory rigging of tows and compliance with the International Regulations for Preventing Collisions at Sea 1972.
- 1.2** Application should be submitted to the nearest SAMSA office and should include the following documents (available on the SAMSA website or from a SAMSA office);
 - a.** SER-701-01-01 Service Request Form
 - b.** INS-701-09-01 Towage Inspection
 - c.** Supporting documents as required by form INS-701-09-01 Towage Inspection.
- 1.3** When a tow has been inspected by an approved warranty surveyor it shall not be necessary for a SAMSA surveyor to conduct an inspection, but a certificate signed by the warranty surveyor must be provided.
- 1.4** Failure to comply with the provisions above is considered a contravention in terms of the Merchant Shipping Act 57 of 1951 and may result in the vessel being unnecessarily delayed and/or the owner being prosecuted.

Note 1:

There are generally two situations where vessels may need to be towed:

- 1. Emergencies at sea which can be classified as an uncontrolled event e.g. vessel has a breakdown and is unable to return to port without assistance, or
- 2. Operational reasons which can be classified as a controlled event e.g. vessel needing to move from one port to another for repairs or modifications to be carried out.

A vessel that has been towed into port as casualty/emergency is considered as an operational tow if it were to depart the port again.

2. REPORTING OF VESSELS BEING TOWED AROUND THE SOUTH AFRICAN COAST

2.1 In order to reduce the danger and to monitor ships operating around the coast which are engaged in towing operations, it is requested that all vessels engaged in towage operations proceeding around the South African coast advise MRCC (mrcc.ct@samsa.org.za) prior to entry into territorial waters.

2.2 The following information should be provided:

- a. Name of Vessel,
- b. Official number,
- c. port of registry,
- d. gross tonnage,
- e. type and number of vessels being towed,
- f. whether the vessels are pollution free or not,
- g. vessels initial reporting position and final destination,
- h. expected date and time of entering territorial waters, and
- i. the name and address of the shipowners/agents.

2.3 All agents are requested to advise their principals of the contents of this notice.

Note 2:

Operational tows departing a South African port are not required to provide information to MRCC as the local SAMSA port office issuing the certificate of towage approval will advise MRCC of the details of the tow.

3. SAFETY OF TUGS WHILE TOWING

3.1 Following several casualties to tugs in recent years, attention is drawn to the danger of capsizing which may occur when the tow rope reaches a large angle to the centre line of the tug and the tug is unable to slip her tow.

3.2 The dangers are clearly illustrated in the following two casualties. In both cases the casualty became inevitable when the quick release mechanism on the towing hook failed to operate, causing her to heel over to such an angle that the sills of the unsecured openings were immersed, allowing rapid flooding to occur

- a. a tug was engaged in harbour duties acting as a forward tug and had just commenced towing prior to berthing. During the manoeuvre the tow rope reached an obtuse angle due to the towed vessel

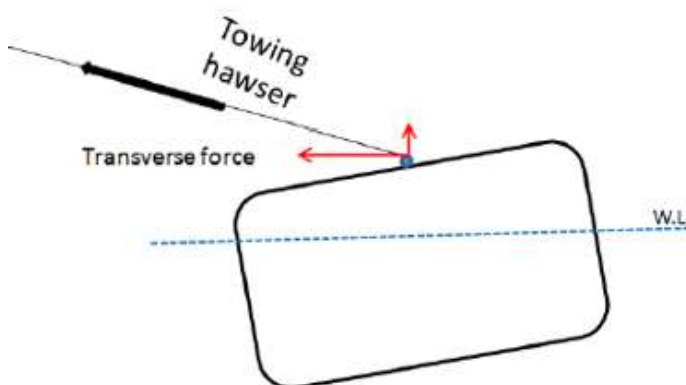
overtaking the tug (commonly referred to as "girting"¹) causing an upsetting moment on the tug to the extent that she capsized and sank with loss of life.

- b. a tug was engaged in harbour duties acting as a stern tug and had just commenced to cant a cargo ship, prior to berthing. During the manoeuvre the tow rope reached a position at right angles to the centre line of the tug (girting) causing an upsetting moment on the tug to the extent that she capsized and sank, fortunately without loss of life.
- c. Contributory causes to both casualties were:
 - i. Small freeboard.
 - ii. Poor curve of righting levers.
 - iii. Closing appliances for openings leading to spaces making up part of the enclosed volume not secured.
 - iv. Poor maintenance of deck towing equipment.

3.3 In order to reduce the grave dangers associated with such conditions, particularly with smaller tugs engaged in harbour duties, the following recommendations:

- a. It is of the greatest importance that the design of the towing gear should be such as to minimise the overturning moment due to the lead of the towline and that the towing hook should have a positive means of quick release which can be relied upon to function correctly under all operating conditions. It is desirable that the release mechanism should be controlled

¹ Girting may also be referred to as girthing, tripping or girding. A towline under tension will exert a heeling moment on the tug if the line is secured around amidships and is leading off towards the beam. As with any vessel which heels over due to an external force, a righting lever is formed as the centre of buoyancy moves towards the centre of the tug's underwater volume, countering the heeling moment and pushing the tug back upright. However, if the force in the towline is sufficiently powerful, it may overcome the tug's righting lever and cause it to capsize or "girt". Girting can occur very rapidly and incidents have occurred where crewmembers have not been able to escape in time. Moreover, it should not be assumed that the winch or winch brake will render or that the towline will break before a potential girting situation occurs as less force may be required to capsize the tug. The drawing below shows how the vessel heel over as the tow line comes abeam of the vessel. On a vessel's curve of statical stability (GZ curve), the point of contraflexure represents the point of deck edge immersion. From this angle of heel onwards, the rate of increase in the righting lever diminishes. Tugs generally have a small freeboard; therefore deck edge immersion will generally occur at a relatively small angle when heeled over. This means that tugs generally have less residual stability when compared with larger vessels or other ship types. The immersion of a tug's deck edge leads to a reduction in its ability to overcome the external transverse heeling force caused by the towline. Additionally, in cases where tugs have foundered due to girting or being overrun by their tow or being dragged over by their lines when pushing, the doors, hatches, vents and manhole covers on the weather deck have often been left open, allowing water to flood into the tug soon after deck edge immersion and causing a rapid loss of stability. (Extracted from West of England - Loss prevention Bulletin)



from the wheelhouse, the after-control position (iffitted) and at the hook itself. The local control at the hook should preferably be of the direct mechanical type capable of independent operation. It is also essential that the greatest care should be taken in the maintenance of the towing gear to ensure its full efficiency at all times.

- b.** Openings in superstructures, deckhouses and exposed machinery casings (including skylights) situated on the weather deck, which provide access to spaces below that deck, should be fitted with weathertight doors which comply with the requirements for watertight doors contained in regulation 21 of the Load Line Regulations 1968. Such doors should be kept closed during towing operations. Engine room ventilation should be arranged by means of high coaming ventilators and air pipes should be fitted with automatic means of closure.

3.4 Stability requirements are defined in Chapter 2, sections 2.2 and 2.3 of the International Code on Intact Stability, 2008 (the IS Code).

3.5 Vessels must also comply with MSC 97/22/Add.1, Annex 7, (or any subsequent amendment) with regards to:

- a.** heeling levers for towing operations (defined in 2.8.2)
- b.** heeling levers for escort operations (defined in 2.8.3)
- c.** additional minimum stability criteria (set in 2.8.4)
- d.** freeing ports covered by 2.8.5
- e.** requirements for minimum freeboard at all times as set in 2.8.6.2. as at least $0,005 \cdot L_{II}$ (L_{II} = load line length)

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