



**NO. 95-201**  
**FISHING TRAWLER *AUSTRO CARINA* 100851**  
**PORT OF LYTTELTON**  
**16 FEBRUARY 1995**

**ABSTRACT**

On 16 February 1995 at about 0145 hours the fishing trawler *Austro Carina* suffered a fire on board while moored at No.5 Jetty in the Port of Lyttelton. The fire was initiated by oil over-heating on a stove. Safety issues identified included the level of fire fighting training for New Zealand 'Qualified Fishing Deck Hands'.

# TRANSPORT ACCIDENT INVESTIGATION COMMISSION

## MARINE ACCIDENT REPORT NO. 95-201

### Vessel particulars:

Name:	<i>Austro Carina</i>
Registered:	Timaru
Official Number:	349391
MSA register:	100851
Type:	Trawler
Class:	Coastal
Construction:	Steel hull
Built:	1977
Builder:	Brough and Horrell Ltd of Timaru
Power Plant:	Single screw, single engine, Caterpillar 3408 diesel
Length over all:	25.6 metres
Breadth over all:	5.84 metres
Gross tonnage:	141.83 tonnes
Net tonnage:	106.37 tonnes
Owner/operators:	United Fisheries Ltd of Christchurch
Normal operating crew:	5 including Master, First Mate, Second Mate, Engineer and Deckhand

**Location:** Port of Lyttelton, No. 5 Jetty

**Date and time:** 16 February 1995 at 0145 hours \*

**Persons on board:**

Crew:	1
Passengers:	Nil

**Injuries:**

Crew:	Nil
Passengers:	Nil

**Nature of damage:** Fire damage, moderate structural and severe to equipment and records

**Information sources:** Transport Accident Investigation Commission field investigation  
New Zealand Fire Safety Department report

**Inspector in Charge:** Mr T M Burfoot

\* All times in NZDT (UTC + 13 hours)

## 1. NARRATIVE

- 1.1 On the morning of the 16 February 1995 at about 0145 hours the fishing trawler *Austro Carina* was moored port side to Port of Lyttelton No. 5 Jetty when fire broke out in the galley, quickly spreading to adjacent cabins and up to the navigation bridge causing moderate damage to the vessel's internal structure and severe damage to internal fittings and equipment.
- 1.2 One crew member (The First Mate) was on board at the time of the fire. He managed to escape on to the wharf and did not sustain any injuries.
- 1.3 The *Austro Carina* is a stern trawler that operates within New Zealand coastal limits and mainly on the east coast of South Island as far up as Cook Strait. The vessel is owned and operated by United Fisheries Ltd of Christchurch and is registered in the Port of Timaru.
- 1.4 The *Austro Carina* had recently completed a voyage from Timaru to Lyttelton taking approximately 35 hours, fishing time inclusive. She berthed port side to No. 5 Jetty in the Port of Lyttelton at about 0900 hours on the morning of 14 February and commenced discharging her cargo of fish.
- 1.5 After completion of the discharge operations on 14 February, over the course of the morning the crew left the vessel. The last to leave was the Master who left at about 1300 hours.
- 1.6 Following the discharge of her catch, the *Austro Carina* was scheduled to lay over for general maintenance, expecting to sail on the evening of Friday 17 February. Over this lay-over period the vessel was connected to a 240 volts power supply from the wharf. All of the five crew members reside locally in Lyttelton or Christchurch and it is usual practice for them to live at their homes when the vessel is stationed in the Port of Lyttelton. On this occasion the First Mate was staying on board the vessel. He does not possess a current driver's licence making it difficult for him to travel home each night.
- 1.7 On 15 February, the day before the fire, the First Mate spent the day shopping in Christchurch, had a meal there, and then returned to Lyttelton at about 2100 hours. On returning to Lyttelton he entered one of the local bars and, "had a couple of beers and a couple of games of pool". He then went back on board the *Austro Carina* on 16 February at about 0100 hours and proceeded to deep-fry some chips in a saucepan on the galley electric stove. According to the First Mate's statement, he cooked and ate the chips, turned the stove off and went to sleep on the settee next to the stove in the galley.
- 1.8 At around 0150 hours on 16 February the patrolling Port Security Warden noticed flames coming from the *Austro Carina* and immediately contacted the Port Watchtower. The Watchtower Duty Officer contacted the Central Fire Brigade in Christchurch via a direct radio link. The Fire Brigade arrived on the scene at 0158 hours to find flames and thick smoke coming from an open skylight on the foredeck and the main accommodation entrance doorway, (both of which were left in the open position) and from under the navigation bridge door. The First Mate was seen standing on the wharf in an apparent state of confusion, but unharmed. The fire was quickly brought under control using water hoses, being completely extinguished at about 0235 hours.
- 1.9 The Harbourmaster and Duty Pilot were both notified of the fire by the Watchtower Duty Officer and arrived on the scene soon after the Fire Brigade to help co-ordinate the fire fighting operation.
- 1.10 According to the First Mate's statement, he was awoken about 0155 hours by some undetermined noise and saw smoke and flames everywhere. He could not remember if any other

person was on board, so he tried to check the other cabins. The heat and smoke from the fire prevented him from reaching the forward cabins and, in his opinion, the fire was too far advanced to tackle with portable extinguishers so he retreated to the wharf. No attempt was made by the First Mate to call for assistance and no attempt was made to close down the various openings, thus the fire was able to continue gathering momentum until the time the Fire Brigade arrived.

- 1.11 The Fire Chief Investigator carried out a detailed inspection of the scene at 0801 hours the same morning and confirmed the following: The fire originated from the stove top spreading aft through a servery into the dining room where the urethane covered squabs caught fire, lowering the level of the fire, which then spread back into the galley through the open doorway. From the dining room the fire also moved up the stairway into the navigating bridge. From the stove top the fire also spread forward effectively isolating the forward cabin area, and vented itself upwards through the open skylight leading on deck. The internal bulkheads of the accommodation were framed with timber and lined with hardboard. Most of the lining in the galley, dining room and bridge had been burned away exposing the framing and glass-wool insulation, the latter probably helped stop the fire spreading into adjacent compartments.
- 1.12 Extensive damage to galley and bridge equipment and internal wiring was noted. The pot that was used to cook the First Mate's chips was found still sitting on an element of the stove. The handle had been burned away and the chips were charred into the bottom of the pot. The underside of the pot had burn marks etched into it consistent with the pattern of the stove element. Although the plastic control knobs for the stove had been burned away, it could be determined from the keying arrangement for the knobs that the element the pot was sitting on had been left on maximum.
- 1.13 It is probable that the First Mate boarded the *Austro Carina*, set some chips deep-frying on the galley stove and fell asleep. The oil then reached a high enough temperature to self ignite. It is unlikely that he fell asleep on the settee next to the stove, as it is likely he would have sustained some degree of burns as he passed from the settee through the seat of the fire to escape on to the wharf. The bed in the starboard, aft cabin had been turned back consistent with having been slept in. This cabin sustained minor smoke damage only.
- 1.14 The First Mate had completed a Qualified Fishing Deck Hand (QFDH) course approximately two years prior to the incident. Since that time he has been employed in the fishing industry, having spent the previous four months attached to the *Austro Carina*. The QFDH Certificate of Competency carries with it the requirement to know how to operate basic fire fighting equipment. This subject occupies a small portion of the intensive two week QFDH course.
- 1.15 The Master of the *Austro Carina* holds a New Zealand Coastal Master's Certificate which he obtained approximately one year ago. He has been serving as Master of the *Austro Carina* for that year. A New Zealand Coastal Master's Certificate of Competency carries with it the requirement to have completed a Basic Fire Fighting Course. This is normally a five day course.
- 1.16 The *Austro Carina* was at the time of the fire fitted with the following firefighting equipment:
  - 1 fire pump (electric/hydraulic)
  - 2 fire hoses with nozzles
  - 3 fire buckets
  - 1 fire axe
  - 1 safety lantern
  - 4 portable dry powder fire extinguishers
  - 1 semi-portable large CO<sub>2</sub> extinguisher with long extension hose capable of reaching all parts of the vessel (stowe in a locker on the aft deck, clear of the accommodation)

All of the above listed fire fighting equipment was on board at the time of the fire and fully surveyed.

None of the equipment had been utilised in extinguishing the fire.

- 1.17 It was apparent that while the First Mate knew how to operate the equipment he had no knowledge of effective techniques for fighting such a fire. These techniques are taught in the Basic Fire Fighting Course.
- 1.18 Fire drills are not required under the Shipping (Muster and Training) Regulations 1989/286 for coastal fishing vessels under 45 metres in length. The *Austro Carina* falls into this category. There are no written standing instructions from the owner/operators regarding fire drills on board their vessels. Although no fire drill had been held on board in the previous four months since the First Mate had joined the vessel, the Master had in the past endeavoured to hold a drill each month. The fire drill normally consisted of visually checking the fire fighting equipment.
- 1.19 United Fisheries Limited has a policy of no alcohol or drugs on board their vessels at any time. This is stipulated in the 'United Fisheries Group Individual Employment Contract, Fisherman' to which the First Mate was a party. There is no reference in the contract to being on board under the influence of alcohol or drugs, although the Master of the *Austro Carina* stated that he constantly reminded his crew not to come on board after they had been consuming alcohol ashore.
- 1.20 The First Mate was aware that it was company policy not to consume alcohol on board their vessels.
- 1.21 The vessel's logbook and most documentation and publications on board were destroyed in the fire.

## **2. FINDINGS**

- 2.1 The *Austro Carina* was fully 'In Survey' and held current relevant documents for her class.
- 2.2 The *Austro Carina* was adequately manned and her crew held Certificates of Competency, as required for vessels of her class.
- 2.3 The *Austro Carina* was a well maintained vessel, in good condition for her age.
- 2.4 The *Austro Carina*'s owner/operators did not have documented Company Standing Instructions for safety procedures and crew management placed on board the vessel.
- 2.5 The First Mate was the sole occupant on board the *Austro Carina* at the time of the fire.
- 2.6 The First Mate had been consuming alcohol ashore before boarding the *Austro Carina* at about 0100 hours on 17 February.
- 2.7 The fire on board the *Austro Carina* started in the galley from a pot of deep-frying chips being left to cook on the stove top, unattended.
- 2.8 The First Mate did not raise the alarm and did not attempt to combat the fire.

- 2.9 No fire drill had been held on board the *Austro Carina* in the previous four months leading up to the fire.
- 2.10 Fire drills were not required by the Shipping (Musters and Training) Regulations 1989/286 to be held on board *Austro Carina*.
- 2.11 The First Mate had not attended a Basic Fire Fighting Course, nor was he required to under the “Masters and Mates (Coastal, Fishing, and Restricted-Limit Ships) Qualification Regulations 1993”.

### **3. OBSERVATIONS**

- 3.1 While this is the only marine occurrence involving a New Zealand registered fishing vessel the Commission has investigated, it is aware of the level of accidents and incidents within the fishing industry. While the Commission had not investigated any previous occurrences involving fishing vessels, discussions held during the course of this investigation with persons involved in training, regulating, operating and serving the fishing industry have led the Commission to make the following observations.
- 3.2 Detailed statistics on causes have not been kept for sufficiently long to enable a statistically sound conclusion to be drawn, and although the persons involved with the fishing industry acknowledged that the level of incidents in New Zealand was of concern, none were prepared to be identified as holding that view.
- 3.3 Occurrences involving fishing vessels operating in and around New Zealand waters are at a level that is causing some concern within the fishing industry. The International Maritime Organisation (IMO) shares similar concerns about the level of occurrences involving fishing vessels world-wide (IMO Consideration of Draft International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel 1995 (STCW-F)).
- 3.4 Often the Master is the only person on board who has received comprehensive training in all aspects of on board navigation, watchkeeping, safety and fire fighting. Although many of the crew have received basic training in these areas as part of a two week QFDH course, this training is not sufficient to enable a QFDH to safely take control of a vessel.
- 3.5 A Master must sleep and when doing so another member of the crew must have control of the vessel. The Master is responsible for ensuring that the crew is sufficiently trained to handle most situations, to know their limitations, and to call him in sufficient time for him to avoid an accident.
- 3.6 While it is recognised that fishing operations involve a certain element of inherent danger, it is apparent that a number of accidents occurring are caused by inadequate training of crews, inadequate monitoring of crew performances and standards by the operators and fatigue due to lack of adequately trained Watchkeepers to back up the Master.
- 3.7 A fishing vessel is capable of becoming involved in, or causing, a major marine accident. A person in control of such a vessel needs to be trained to minimise the risk of such eventuality.
- 3.8 The owners and operators of fishing vessels need to take the initiative and provide their Masters with the tools required in the form of company instructions to Masters, safety and training manuals and emergency response plans made freely available and taught to all crew members on board.

- 3.9 In the case of the fire on board the *Austro Carina*, the cause of the fire might have been averted had there been more emphasis on safety from a management point of view and the damage caused by the fire might have been lessened if the First Mate had been familiar with fire fighting techniques which are covered in the Basic Fire Fighting course and which should be practised during fire drills on board.

#### 4. SAFETY RECOMMENDATIONS

- 4.1 In view of the above the Commission recommended to the Director of United Fisheries Limited that he consider:

- 4.1.1 Taking steps to improve his company's instructions to Masters. (011/95)
- 4.1.2 Providing safety and training manuals for his vessels. (012/95)
- 4.1.3 Compiling a set of emergency response plans for each of his company's vessels and ensure each crew is familiar with the plans for their vessel. (013/95)
- 4.1.4 Upgrading the standard and frequency of fire and safety drills on board his vessels. (014/95)

- 4.2 The Director United Fisheries responded to paragraph 4.1 as follows:

*"We agree with the Preliminary Safety Recommendations made and as a result:*

- 1) *We have produced a checklist to be displayed in the wheelhouse of our fishing vessels that cover the following points:*
- *Daily checks to be made by crew*
  - *Weekly checks to be made by crew*
  - *Code of conduct relating to alcohol/drugs on board*
  - *Code of conduct relating to cleanliness and security on board*
  - *Instructions to Masters regarding safety and fire fighting equipment on board and training of crew in this regard*
  - *Instructions to Masters regarding helming of vessel within port limits*
- This checklist will be reviewed from time to time and changes made to it where found necessary.*
- 2) *A meeting is held with our Masters every two months to reiterate the above and discuss any operational problems encountered.*
- 3) *Every two years a seminar is held with all crew members employed by United Fisheries to discuss issues as mentioned above.*
- 4) *We will go on board when a crew change takes place and give a talk to the crew about conduct and safety on board."*

## **5. SAFETY ACTIONS**

- 5.1 The Director of Maritime Safety, the Training Advisor for the Seafood Industry Training Organisation, and the Acting Chairman and Chief Executive for the Maritime Industry Training Organisations, have indicated that they will liaise to consider whether:
- 5.1.1 The “Masters, Mates and Fishing Deck Hands (Coastal, Fishing and Restricted-Limit Ships) Qualification Regulations” be adjusted to make the completion of a Basic Fire Fighting Course an ancilliary requirement to obtaining a Qualified Fishing Deck Hand Certificate.
  - 5.1.2 A recommendation to the Fishing Industry should be promulgated recommending that all current holders of a Qualified Fishing Deck Hand Certificate complete a Basic Fire Fighting Course.

30 August 1995

M F Dunphy  
Chief Commissioner