CITATION: *Inquest into the death of Ryan Harry Donoghue* [2016] NTLC 009

TITLE OF COURT:	Coroners Court
JURISDICTION:	Darwin
FILE NO(s):	D210/2013
DELIVERED ON:	3 June 2016
DELIVERED AT:	Darwin
HEARING DATE(s):	11 – 15 April 2016
FINDING OF:	Judge Greg Cavanagh
CATCHWORDS:	**Electrocution on fishing vessel, non-compliance with Work Health and Safety legislation, previous coronial recommendations for similar death, confusing regulatory regime, lack of response by regulators**

REPRESENTATION:

Counsel Assisting:	Kelvin Currie
Austral Fisheries Pty Ltd:	Paul Hopwood
Marine Safety Queensland:	Michael Maurice QC assisted by Adam Johnson

Judgment category classification:	B
Judgement ID number:	[2016] NTLC 009
Number of paragraphs:	226
Number of pages:	46

IN THE CORONERS COURT
AT DARWIN IN THE NORTHERN
TERRITORY OF AUSTRALIA

No. D210/2013

In the matter of an Inquest into the death of

RYAN HARRY DONOGHUE
ON: 29 NOVEMBER 2013
AT: SEA ON THE FISHING VESSEL NEWFISH 1 IN THE GULF OF CARPENTARIA

FINDINGS

Judge Greg Cavanagh:

Introduction

1. In my view, the evidence at this inquest has highlighted the unacceptable and indeed the shameful state of workplace safety on large numbers of Australian domestic fishing vessels. The lack of regulation and enforcement by authorities is of great concern (see paragraphs 215, 216, 217 and 218).

2. Ryan Harry Donoghue (the deceased) was born 23 September 1993 in Southlands Hospital in Shoreham by Sea in West Sussex, United Kingdom to Pauline North and Steven Donoghue. He had two older siblings and two younger siblings. He came to Australia with his family when he was just six years of age.

3. His grandmother says that he was "just the kindest and most considerate young man". Life for him however was not without its challenges and he struggled particularly with school.

4. He left 'mainstream' school in year 8 and from then attended specialist schools. He completed year 10 as part of the "LEAP program" and from there went on to enrol in the "Handbrake Turn program" to learn mechanics. He then commenced a mechanics apprenticeship. But once again the academic side posed problems.

5. Despite his difficulties with academia he proved very good with his hands.

6. He was nineteen and working, shark fishing in Bass Strait, when he was asked whether he would be interested in working on a prawn trawler in the Northern Territory.

7. In June 2013 Austral Fisheries Pty Ltd (Austral Fisheries) flew Ryan to Cairns to be a member of the crew on the fishing vessel Newfish1.

8. The Newfish1, a 22.8 metre prawn trawler, is one of two vessels in the Austral Fisheries fleet that was built in Spain in 1983.

9. Ryan assisted setting up the boat before heading to sea on 28 July 2013. The plan was to spend 16 to 18 weeks trawling for prawns in the Gulf of Carpentaria.

10. On board there was a Skipper, an Engineer, a Mate and a Cook as well as Ryan as the Deckhand. In September the Mate left and they were joined the following month by another Deckhand.

11. Ryan loved the work. He had the option each fortnight to go home with the 'mothership' that tended the trawlers, but he didn't. He stayed on the trawler. He was promoted to First Mate and in the words of his mother was "very chuffed".

12. Ryan found life on the boat helped his personal development. On 2 September 2013 he wrote on his Facebook page:

> "Working on a boat for four months has made me realise how much I miss the people at home, but more how I respect people around me and what I have."

13. On 11 September 2013 he wrote:

> "A man isn't someone who acts hard or acts like they run the joint. A man is someone who follows through, makes something of himself

> and never gives up. Being out here has teached me a lot about being a man."

14. On 25 September 2013 (two days after his 20th birthday) he wrote:

> "Sometimes in life there are things you don't want to do, but some things you have to. The thing I didn't want to do was change, but I had to. I don't regret anything I have done, and I don't dislike the person I was, but I did dislike the person I could have turned out to be. Instead, I pulled my head out of my arse and became a better person. Not saying I'm a good person, just saying I'm a better person than I could have been. For once in my life I am happy with myself thanks to all of you who have stuck by through this bullshit."

15. He told his family that he dreamt of being the skipper of his own boat.

16. The Newfish1 stayed fishing until 28 November 2013. At that point it was just off Bremmer Island in the Gulf of Carpentaria. The following morning, 29 November 2013 it headed back in the direction of Cairns.

17. Ryan and the Deckhand were tasked to pack up the boat. Ryan was dressed in just shorts and a singlet and wore no shoes.

18. At 2.24 pm that afternoon he sent a message to his father:

> "got a box of prawns for ya dad you said you wanted the big ones I got the biggest ones in the whole gulf;"

19. From that message his father understood how proud Ryan was of himself and his achievements.

20. Ryan's father also felt very proud. He was considering flying to Cairns as a surprise. He said "I just needed to see him as quickly as possible, as I missed him so much".

21. During the afternoon of 29 November 2013 Ryan and the Deckhand were unshackling the nets. The conditions were cloudy and the water was choppy. The swell was less than two metres.

22. Some of the shackles connecting the nets to the otter boards were rusted and seized.

23. The Skipper of Newfish1 recounted to investigators that it was reported to him by Ryan at about 4.30 pm that the Deckhand was using the angle grinder to cut the seized and rusted shackles and had wrapped the angle grinder in a plastic bag.

24. The Skipper said he told Ryan it couldn't be done. He should not try and waterproof it. Just not to use it around water.

25. The Skipper said he later saw Ryan and the Deckhand using a screw driver to free the nets from the shackles.

26. At about 6.00 pm Ryan was using the angle grinder to cut the shackles. As he was doing so the Deckhand was holding the power lead above the deck to keep it away from the water.

27. Ryan had cut some of the higher shackles and was bending down to cut the lower shackles when a wave washed over the deck engulfing both him and the grinder. He stood up straight. His arms locked in front of his chest holding the grinder. He took two steps backwards and fell on his back.

28. The Deckhand realised Ryan was being electrocuted and pulled the extension lead from the grinder. As soon as he did so Ryan's body relaxed and he let go of the grinder. Ryan got onto his hands and knees and tried to get up but stumbled. The Deckhand tried to help him but his body felt "like jelly". The Deckhand asked if he was alright. However there was no response. Ryan was making a noise as if gasping for air. His eyes were open in a blank stare.

29. The Deckhand yelled to the Skipper and told him Ryan had been electrocuted. The Skipper called for the Engineer and Cook and started cardio pulmonary resuscitation (CPR). Both he and the Engineer had Marine

Certificates in First Aid. When the Engineer arrived, he took over the compressions and the Cook did the breaths. Ryan seemed lifeless at times but then he would breathe for a few breaths. The breathing would then stop.

30. Austral Fisheries contacted an Intensive Care physician working for Careflight in Darwin who then rang the vessel. However it wasn't long before Ryan was not taking any breaths.

31. The Newfish1 was at that point 11 hours from the nearest port.

32. The Intensive Care Specialist spoke to the Skipper and then the Cook and asked them if they had a defibrillator aboard the vessel or an EpiPen. They didn't. He said:

> "… his heart is in a funny rhythm and needs to be defibrillated, you know. But the problem is … that you don't have a defibrillator"

33. He asked the crew to hit Ryan once or twice on the chest to see if his heart would restart. It didn't. The Specialist explained:

> "… you know, and this is due to a very uncoordinated electric activity …there is no mechanical pump function of the heart you see – so – so at the minute the heart is pumping no blood out to the body because of the funny… electrical activity."

34. CPR continued for approximately 75 minutes but at 7.19 pm the doctor told the crew to cease their efforts.

35. The CEO of Austral Fisheries then made telephone calls to the family. The father recounted that experience:

> "I received the phone call that completely devastated our family. A call that as a parent, I cannot bear to think about, and the reality we'd never want to receive. Since that day - since the day that Ryan was killed, we have been trying to accept that he has been taken from us forever."

36. The Newfish1 then redirected to Gove in the Northern Territory to meet with Northern Territory Police. Ryan's body was taken off the vessel and flown to the Royal Darwin Hospital mortuary. Police took statements from the Skipper, the Engineer, the Cook and the Deckhand and seized the grinder and power cord.

37. The Newfish1 returned to Cairns where it was inspected by Maritime Safety Queensland Officers and Senior Electrical Safety Inspectors.

38. The inspection found that the general purpose socket (GPO) that the grinder had been plugged into on the deck was not protected by a safety switch, what is known as a residual current device or RCD.

Residual Current Devices

39. The Australian and New Zealand Standard AS/NZS3000:2007 known as the Wiring Rules describe RCDs this way:

> "The use of fixed setting RCDs with a rated operating residual current not exceeding 30 mA, is recognized as providing additional protection in areas where excessive earth leakage current in the event of failure of other measures of protection or carelessness by users could present a significant risk of electric shock …
>
> RCDs with a sensitivity of 30 mA are designed to operate before fibrillation of the heart occurs.
>
> RCDs with a sensitivity of 10 mA are designed to operate before muscular contraction, or inability to let go occurs. Muscular contraction can result in inability to breathe. Infants may be more prone to this risk."

40. There were two newer GPOs on the deck that were protected by an RCD. It appears that the unprotected GPO was the only one that was not protected on the vessel. Why that was, has been the subject of some speculation and varying evidence.

41. There is no reliable evidence as to which circuit that GPO was on. It was suggested that the circuit may have been connected to a non-protected

circuit that was part of the wheelhouse distribution board providing power to a 24-volt transformer used for the navigation lights.[1]

42. Mr Timothy Snape the electrician that did all of the work on the Austral Fisheries fleet and in all likelihood transferred the GPO to a protected circuit after Ryan's death said:

> "I would have removed it from the circuit that it was on and added it to a GPO circuit with an RCD.[2]
>
> I didn't actually recall which circuit it was on. It was mentioned in passing by one of the fleet masters that it was on the nav lights transformer circuit."[3]

43. How it was that the fleet masters knew but not the man that actually did the work remains unclear.

44. If it was the expectation that all circuits to GPOs would be protected, it does seem unlikely that the electrician with the sole responsibility for electrical work on the Austral Fisheries fleet would not recall which circuit the GPO was on. After all, it might be thought that he would have a definite interest in that information.

45. When asked whether the fact that the GPO was not protected by a RCD had been picked up in the past, he said:

> "I don't - I can't really say if it had been picked up or not."[4]

46. The evidence of Mr Snape was at best vague and non-committal.

47. In 2009 another electrician, Mr Wegert, had recommended that RCDs be fitted to the Newfish1. At that time Mr Snape was employed by Mr Wegert.

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[1] Transcript pp. 208, 209
[2] Ibid p. 111
[3] Ibid p. 110
[4] Ibid p. 111

Mr Snape said he and another employee then went and installed RCDs to the whole fleet (then 9 vessels) over a five month period.[5]

48. That evidence however is not entirely consistent with other evidence. After the death of Ryan the Principal Inspector, Workplace Health and Safety Queensland asked whether Austral Fisheries could provide information on their initial request to install RCDs on Newfish1, whether later installation of further RCDs was carried out and if so the need for the installation of the further RCDs.

49. Barbara Bell worked for Austral Fisheries and had responsibility for survey, compliance and general governance.[6] In an email on 29 August 2014, she wrote to the Principal Inspector (copying in the General Manager and Chief Financial Officer of Austral Fisheries) stating that the initial request was the letter from Wegerts Electrical in 2009 recommending that RCDs be fitted, that Austral Fisheries "have a policy that whenever a GPO is replaced or a new one fitted there is an RCD installed and/or checked", and that "later RCDs would only be installed on newly installed GPOs and/or on replacements for damaged ones".

50. The evidence of Mr Snape relating to the fitting of RCDs to the Newfish1 and the rest of the fleet is also inconsistent with evidence from the Marine Surveyor, Mr Graeme Normington.

51. Mr Normington surveyed the Newfish1 from 2009 until after the death of Ryan. He said that he was aware since 2009 that the GPO was not protected by an RCD.[7] When asked how he knew that, he said:

> "Well, the vessel didn't have RCDs for the GPOs until two new GPOs were fitted on the aft deck and they were required to have RCDs fitted under the AS/NZ 3000 wiring rules but the original one didn't unless it was altered …"

[5] Transcript p. 106
[6] Ibid p. 200
[7] Ibid p. 125

52. The evidence of Mr Snape seems also at odds with the evidence of the CEO of Austral Fisheries (to which I will later return) that up to 29 RCDs were installed to the vessels in the fleet by Mr Snape following the death of Ryan.

Expert Evidence

53. To assist in determining the potential issues leading to the death of Ryan the services of Electrician, Mr Ian Ritchie of Scantec Industries were obtained by my Office. Mr Ritchie has 34 years of electrical experience and has worked predominantly in the marine industry. I acknowledge the very great assistance Mr Ritchie has been in both the preparation for this inquest and throughout the hearing.

Cause of Death

54. Mr Richie provided a calculation of the electric current that led to the death of Ryan:

> "From the ESO testing record (appendix 2), it is ascertained that the offending socket outlet final sub-circuit (FSC) had a fault loop impedance of 0.32Ω and the return current paths had - FSC Earth of 0.3Ω and - ship hull/superstructure fault path of 0.1Ω. With knowledge that Mr. Donoghue was wearing only a singlet and shorts and was standing (bare footed) or kneeling on the wet steel deck and the ESO inspection confirming the FSC was 2.5mm2 (all three conductors), a calculation of the approximate series/parallel impedance network exposed by a deluge of salt water (ie parallel return current paths consisting of FSC neutral, FSC earth and Fault path in series with FSC active) combined with the range of human body impedances in salt water conditions data, from AS/NZS 60479.1 (Effects of Current on Human Beings and Livestock) it can be calculated annexure B that a touch current (the current flowing through a human body upon a fault) was likely to be within the range of 48mA to 125mA. This level of touch current is consistent with AS/NZS 60479.1 physiological effects chart of possibly up to AC-4.3 which regards the probability of ventricular fibrillation of being greater than 50% and is commonly regarded as a potentially lethal level of touch current and is characterised by pain, muscular paralysis and extreme breathing difficulties.

> This characterisation of the probable approximate level of touch current is consistent with the witness statements and furthermore, physical burning of skin and tissue is not a characteristic of electric shock until around the level of 200mA or more of touch current, which is also consistent with the findings of the autopsy report."

55. The Forensic Pathologist, Mr Terence Sinton, was asked to do only an external examination. He was not able to provide a cause of death but confirmed that there were no burn marks on the body of Ryan.

56. The Deputy Director of the Emergency Department, Royal Darwin Hospital, Dr James Fordyce provided evidence that the likely cause of death was ventricular fibrillation secondary to electrocution.

Austral Fisheries

57. Austral Fisheries has operated for many years (prior to 2007 known as "Newfishing Australia Pty Ltd"). It was first registered in 1981 but from the evidence of its CEO he was a deckhand for the same business in the 1970s).

58. It remains a private company and has a $100 million turnover. Half of its shares are owned by Maruha Nichiro Seafoods Inc and the other half by Kailis Fisheries Holdings Pty Ltd, KFV Fisheries (QLD) Pty Ltd, Mr George Kailis and Mr Theodosios Kailis.

59. It has its own human resources personnel. It operates 10 vessels of similar size to the NewFish1 in the Northern Prawn Fishery as well as larger boats out of Port Louis, Mauritius.

60. In 1983 it acquired the Newfish1 and Newfish2 from Spain. It appears that they were first Surveyed in Queensland and Western Australia. However from 1990 the vessels were harboured in Darwin. In 2009 the fleet moved to Cairns where it has been ever since. Austral Fisheries has its headquarters in Western Australia but its Cairns operations are coordinated from Cairns.

Not the first electrocution of its type – The death of Bradley Howard Thomas

61. What makes the death of Ryan even more difficult for the family and the community is the knowledge that not only was his death preventable, it was similar to an earlier death on a fishing trawler from which no lessons seemed to have been learned.

62. Bradley Howard Thomas died on a fishing trawler offshore from Carnarvon Western Australia in similar circumstances on 16 March 2000. I apologise to the family and friends of Mr Thomas if use of the circumstances of his death to illustrate the issues and the failures in resolving them revive the trauma of his death.

63. The Western Australian Coroner, Stephen Wilson, held an inquest into the death of Bradley Thomas on 10 and 11 September 2001.

64. Mr Thomas was on the deck of the fishing vessel Cape Grafton II, attempting to grind part of the stabilizer fin with a portable electric angle grinder. He was dressed in shorts, t-shirt, sunglasses and thongs.

65. Mr Thomas was bending down grinding when a couple of larger than usual waves came over the deck. He was found by crew members lying on his stomach with the grinder in his hands, still operating under his body. A crew member disconnected the lead from the power outlet and CPR was commenced. It continued for about three hours but Mr Thomas could not be revived.

66. The investigation report found that Mr Thomas was electrocuted and found that the primary factors contributing to his death were:

> "a The use of a portable electrical tool and extension lead in an environment highly exposed to seawater, which electrically, is a good conductive medium.
>
> b Lack of foresight in assessing risks when the grinder was first introduced on the vessel.

c. The absence of residual current (earth leakage) protection device ("RCD") for the grinder and lead. The use of a RCD at a work place is mandatory under Regulation 3.60 of the Occupational Health and Safety Regulations Act 1996.

d. The use of thongs as footwear. Had Mr Thomas been suitably attired to carry out his task, by wearing knee high rubber boots, wet weather clothing and rubber gloves, he may well have survived. This type of attire does not fully guard against electric shock in such conditions as occurred."8

67. The Coroner concluded that "the death of Mr Thomas was tragic, unnecessary and avoidable". He made nine recommendations:

1. "That alternatives to electricity be investigated as a means of powering hand tools on vessels at sea. Compressed air should not be discounted as an appropriate source of power.

2. If any maintenance involving the use of electricity or electric power tools is to be carried out on any vessel at sea it should be done when the vessel is either at anchor or in calm waters.

3. If electrical power tools are required to be used the supervisor is to ensure that both the supervisor and the operator is suitably attired in protective clothing including rubber boots and gloves.

4. If electrical extension leads are connected to electric power tools ensure that it is fixed in a high position above the deck to minimise the risk of contact with water.

5. If any work involving the use of electrical power tools is to be carried out on a vessel at sea it should not be carried out by an unsupervised person.

6. That Department of Transport (DOT) and Worksafe, with appropriately qualified and experienced inspectors, coordinate regular pre-season inspection of all fishing vessels throughout the state with an emphasis on inspection of all electrical systems (including RCD's) and portable electric power tools.

7. All crew on fishing vessels to receive pre-season training on the use of electrical power tools and electricity whilst at sea.

[8] Record of Investigation into death of Bradley Howard Thomas p.10

8. That DOT and Worksafe coordinate the immediate notification of any future enactment of legislation in which workplace safety is a key intention to all appropriate industry bodies and thereafter conduct timely inspection of workplaces to ensure compliance with such legislation.

9. That appropriate protective clothing be provided on all vessels for use with any equipment provided."9

68. I have set out those recommendations in their entirety primarily because, as will become so patently obvious, Ryan would be alive today, had those recommendations been followed, even in part.

69. Many of the issues are so similar that I will include the headings and excerpts from the findings of the Western Australian Coroner. The full findings I have attached because they are not otherwise able to be sourced on the internet.

Appropriateness of Electric Tools on Vessels

70. The Western Australian Coroner stated:

> "The tragic death of Mr Thomas highlights the dangers of the use of such equipment in the marine environment. Further, other options are available including cordless power tools, low voltage tools, oxy acetylene equipment (with appropriate accessories) and compressed air powered tools. Despite those options being available they appeared not to have been considered as an appropriate option for use on fishing vessels prior to this tragic incident.
>
> If the use of power tools on fishing vessels is regarded as appropriate in the future, it is clear that their use should only occur in specific circumstances, which significantly reduce the risk of electrocution."[10]

71. Despite those comments a 240 volt portable electric angle grinder was on the Newfish1 in 2013. There was no restriction of the angle grinder to

[9] Ibid p. 24-25
[10] Ibid pp. 13 - 14

"specific circumstances". In fact there was no procedure restricting its use at all.

72. The Chief Executive Officer of Austral Fisheries Pty Ltd, Mr Carter gave evidence at my inquest this year. Mr Carter told the inquest that he had worked for Austral Fisheries since he was a young deckhand in the 1970s. He had worked his way through the ranks until his appointment as CEO in 2008.

73. He stated that in his opinion the angle grinder was not an "everyday device":

> "The only use for a power tool would be to cut stainless steel chain, because you can't cut stainless chain with a gas axe, you can't do it with a spanner and you can't do it with the bolt cutters." [11]

74. When it was put to him that angle grinders were everyday devices for many tradesmen cutting all sorts of metal, Mr Carter stated:

> "Yes. And they're very, very good at it. And they're also the cause of a whole host of factory and workshop incidents all over the country."[12]

75. It seems that there is no dispute that power tools and specifically angle grinders should only be used in very limited and controlled circumstances.

76. It is also clear that there were no limitations or controls on the use of the angle grinder on the Newfish1.

Foresight in assessing risk on introduction of power tools onto vessels

77. The Western Australian Coroner found:

> "The use of electric power tools on fishing vessels appears to have begun in the fishing industry some 20 years ago. The evidence indicates that the use of electric power tools has become more

[11] Transcript p. 214
[12] Ibid p. 214

> common since the introduction of stainless steel within the last 3 years or so.
>
> The evidence suggests that issues of safety were either not considered or given less priority to cost and convenience when electric power tools, such as the grinder, were introduced onto fishing vessels."[13]

78. The Newfish1 had a Safety Management System. It was introduced in 2011 in response to notification from the Australian Maritime Safety Authority that they would be required from July 2016 for all vessels wishing to operate in Australian waters.

79. The documents detailing that system state that it is to "Eliminate or control to acceptable levels risk associated with the nature of the activity conducted by the vessel".[14]

80. The Australian Maritime Safety Authority provided a template for a Safety Management System and Austral Fisheries obtained the services of a person to adapt them to the Austral Fisheries vessels.[15]

81. However there is no mention of an angle grinder or the use of power tools in those documents. There is no procedure or instruction relating to their use.

82. There is however a "Risk Assessment and Control Form" utilised by Austral Fisheries. The issue date for that form was July 2011. It was identified that "Use of electric equipment" was a task to which hazards attached. The hazards were stated to be "moisture, water". Associated risks were stated as "electric shock, electrocution". The "existing risk controls" were said to be, "isolation switches, engineering inspections; electrical safety policy" (there was however no electrical safety policy). The risk rating with the existing controls was said to be "H" (high).

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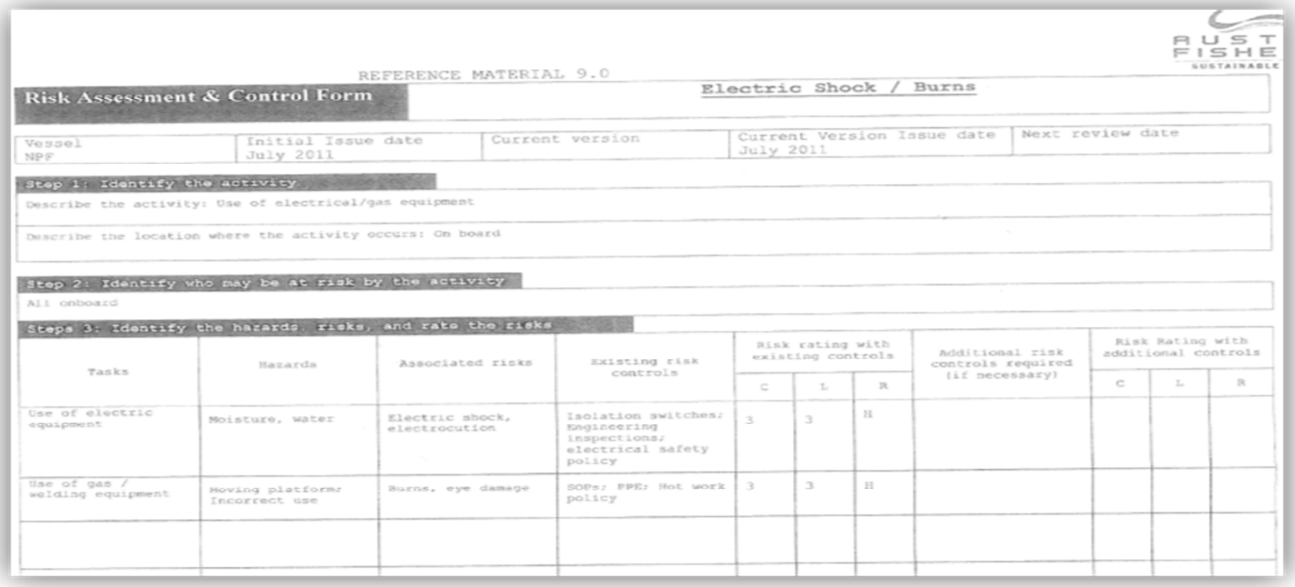
[13] Record of Investigation into death of Bradley Howard Thomas. 15 - 16
[14] Page 271 Investigation Brief
[15] Statement of David Carter paras 23, 24

83. Under the heading "Additional risk controls required (if necessary)" the area was left blank as was the area under "Risk Rating with additional controls".

84. Under the heading "Risk rating with existing controls" are the letters "C" (consequence), "L" (likelihood) and "R" (risk rating).

85. It was in the form below:



REFERENCE MATERIAL 9.0

Risk Assessment & Control Form — Electric Shock / Burns

Vessel	Initial Issue date	Current version	Current Version Issue date	Next review date
NPF	July 2011		July 2011	

Step 1: Identify the activity

Describe the activity: Use of electrical/gas equipment

Describe the location where the activity occurs: On board

Step 2: Identify who may be at risk by the activity

All onboard

Steps 3: Identify the hazards, risks, and rate the risks

Tasks	Hazards	Associated risks	Existing risk controls	Risk rating with existing controls			Additional risk controls required (if necessary)	Risk Rating with additional controls		
				C	L	R		C	L	R
Use of electric equipment	Moisture, water	Electric shock, electrocution	Isolation switches; Engineering inspections; electrical safety policy	3	3	H				
Use of gas / welding equipment	Moving platform; Incorrect use	Burns, eye damage	SOPs; PPE; Hot work policy	3	3	H				

86. The "consequence" is rated at "3" which equates to "moderate" and in terms of "human injury" is said to be "disabling injury requires medical treatment". For the associated risk of electrocution that is obviously the wrong rating. It should have been "4" which equates to "major" and may result in a "fatality".

87. Likelihood is also listed as "3" which equates to "possible".

88. In any event, the attached table stated that the two "3" scores equated to a "High Risk".

89. The legend attached to the Risk Management Control form in relation to High Risk stated:

"The proposed activity can only proceed, provided that:

a. The risk level have been reduced to as low as reasonably practical using the hierarchy of controls;

b. The risk controls must include those identified in legislation, Standards, Codes of practice etc.

c. The risk assessment have been reviewed and approved by the Supervisor and

d. The supervisor must review and document the effectiveness of the implemented risk controls."

90. Austral Fisheries did not follow their own Safety Management System. They failed to reduce the risk of electrocution as low as reasonably practical or at all. They failed to use the hierarchy of controls. They also failed to use the risk controls identified in legislation.

91. The *Work Health and Safety (National Uniform Legislation) Act* at section 17 is in these terms:

"17 Management of risks

A duty imposed on a person to ensure health and safety requires the person:

(a) to eliminate risks to health and safety, so far as is reasonably practicable; and

(b) if it is not reasonably practicable to eliminate risks to health and safety, to minimise those risks so far as is reasonably practicable."

92. The *Work Health and Safety (National Uniform Legislation)Regulations* state:

"36 Hierarchy of control measures

(1) This regulation applies if it is not reasonably practicable for a duty holder to eliminate risks to health and safety.

(2) A duty holder, in minimising risks to health and safety, must implement risk control measures in accordance with this regulation.

(3) The duty holder must minimise risks, so far as is reasonably practicable, by doing one or more of the following:

(a) substituting (wholly or partly) the hazard giving rise to the risk with something that gives rise to a lesser risk;

(b) isolating the hazard from any person exposed to it;

(c) implementing engineering controls.

(4) If a risk then remains, the duty holder must minimise the remaining risk, so far as is reasonably practicable, by implementing administrative controls.

(5) If a risk then remains, the duty holder must minimise the remaining risk, so far as is reasonably practicable, by ensuring the provision and use of suitable personal protective equipment.

Note for regulation 36

A combination of the controls set out in this regulation may be used to minimise risks, so far as is reasonably practicable, if a single control is not sufficient for the purpose."

93. When asked about the failure evident in the Risk Assessment and Control Form to control the risk Mr Carter said:

> "We're still - they're still fairly embryonic. Those SMS documents have been evolving for us. We continue to rate electrical risk as high, and even after quite a few measures that we've taken to reduce that risk, it's one of those areas that we want to continue to focus attention on."

94. When asked about leaving hazards as "high risk" he said:

> "Well, I think high risks have the opportunity to do a couple of things. Certainly from a management point of view, if there's a persistent high risk activity, then it means that every time you have an encounter in that space, you are ultra-aware of the consequence of getting that wrong. And I think we've made the judgment that high risk for electrical is appropriate regardless of the fact that we've already moved through and, for example, taken 240-volt angle grinders off the deck and replaced them with battery powered tools. So I actually defend that position as being a good thing."

95. Leaving the risk at "high" without putting controls into place to minimise the risk is clearly at the heart of the issues that resulted in Ryan's death.

Absence of Residual Current Device on the Vessel

96. It had been law in Western Australia since 31 March 1998 that non-portable RCDs be installed into the switchboard or fixed electrical power sockets of all workplaces. Vessels were and are considered workplaces.

97. Similar regulations had been in force in the Northern Territory at an even earlier date (*Work Health (Occupational Health and Safety) Regulations 1996* section 65).

98. At the time of Ryan's death the relevant workplace legislation in the Northern Territory was the *Work Health and Safety (National Uniform Legislation) Act* and *Regulations* (commenced 1 January 2012).

99. The Newfish1 was in the Gulf of Carpentaria, at latitude 11 degrees 50 minutes south, longitude 138 degrees 20 minutes east when Ryan was electrocuted and died. It was within the jurisdiction of the Northern Territory workplace legislation by reason of the *Crimes at Sea Act 2000* (*Commonwealth*) and *Crimes at Sea Act* (NT).[16]

100. The definition of workplace includes a vessel (section 8). The duties of the employer its officers and the person in control of the workplace are set out at length in the Act. However the most relevant parts of the primary duty are as follows:

> **"19 Primary duty of care**
>
> (1) A person conducting a business or undertaking must ensure, so far as is reasonably practicable, the health and safety of:

[16] I am indebted to Michael Maurice QC and Adam Johnson Barrister for providing a clear opinion on the matters of jurisdiction to which I will return later.

(a) workers engaged, or caused to be engaged, by the person; and

(b) workers whose activities in carrying out work are influenced or directed by the person;

while the workers are at work in the business or undertaking.

(3) Without limiting subsections (1) and (2), a person conducting a business or undertaking must ensure, so far as is reasonably practicable:

(a) the provision and maintenance of a work environment without risks to health and safety; and

(c) the provision and maintenance of safe systems of work; and

(f) the provision of any information, training, instruction or supervision that is necessary to protect all persons from risks to their health and safety arising from work carried out as part of the conduct of the business or undertaking; and

(g) that the health of workers and the conditions at the workplace are monitored for the purpose of preventing illness or injury of workers arising from the conduct of the business or undertaking."

101. The penalty for breach of such a duty is stated:

"Maximum penalty:

(a) in the case of an offence committed by an individual (other than as a person conducting a business or undertaking or as an officer of a person conducting a business or undertaking) – $300 000 or imprisonment for 5 years or both; or

(b) in the case of an offence committed by an individual as a person conducting a business or undertaking or as an officer of a person conducting a business or undertaking – $600 000 or imprisonment for 5 years or both; or

(c) in the case of an offence committed by a body corporate – $3 000 000."

102. I have set out the penalties to illustrate that these are offences the legislatures around Australia obviously wish persons conducting a business or undertaking to take seriously. Even for a Category 2 offence (strict liability) the maximum penalties are $300,000 for an individual and $1,500,000 for a body corporate.

103. Regulations 164 and 165 require the fitting and testing of RCDs. Failure to do so can result in penalties of $30,000 for a corporation or $6,000 for an individual. The offences are strict liability offences.

104. In the case of the death of Mr Thomas, legislation relating to RCDs had required their use in Western Australian workplaces for approximately two years. However thirteen years on it is difficult to understand how workplaces continued to be non-compliant in fitting such basic and relatively inexpensive safety mechanisms(the evidence in the inquest was that an RCD is less than $20 and an electrician would often charge about $150 to fit it).

105. Mr Carter was not aware that RCDs were required by law to be fitted to the vessel.[17] That was undoubtedly in part at least because the Austral Fisheries prawn trawlers were maintained in Queensland where the legislation relating to RCDs is less explicit (however owners still have the primary duty to ensure the workplace is safe).

[17] Transcript p. 194

106. But nor did Austral Fisheries provide any portable RCDs or RCD protected power boards to protect their employees when using electrical power tools.

107. Mr Carter stated that although he did not realise he had a legal duty to install the RCDs, he believed it was a moral duty to do so and that accounted for Austral Fisheries gradually installing them:

> "We've made, in our view, a moral commitment to fitting RCDs in advance of what we thought was the various maritime requirements".[18]

108. That commitment took 14 years to complete and did not include the use of portable RCDs in the meantime.

Lack of appropriate footwear and clothing

109. The evidence before the Western Australian Coroner was that if Mr Thomas had been more appropriately attired he may well have survived the electric shock. Yet thirteen years later Ryan was wearing even less appropriate attire.

110. The skipper of the vessel stated in evidence that the crew received training in Personal Protective Equipment (PPE). He said that when on deck they were supposed to wear boots, gloves and aprons. He said that was written in the procedures.[19] Indeed the policy stated: "Safety footwear, gloves and helmets is to be worn at all times.[20]

111. He said Ryan and the Deckhand were pretty good at wearing their PPE. However he didn't notice that Ryan was not wearing his on the day he was packing up the boat.[21]

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[18] Ibid
[19] Transcript p. 20
[20] Investigation file p 447.
[21] Transcript 21

112. Mr Carter agreed that the First Mate and the Deckhand should have been wearing their PPE when cleaning up the deck. He was of the view that his Company would be at pains to ensure that crew members did so.[22]

113. However, on Austral Fisheries very own website was a video titled "Frontier Fishermen". Mr Carter described as it being a "pitch for a reality TV show".

114. It showed at least three crew members on an Austral Fisheries vessel working on the deck in bare feet. Mr Carter said the footage was "cut for that kind of sensation".

115. However, it is inconceivable that a young man after four months learning on the job at sea would, against all training and supervision, be out of his PPE. Similarly, if the norm was that all persons on deck wore PPE the Skipper would surely notice when a member of the crew was not wearing his or her PPE. The Skipper alleges he spoke to Ryan about 90 minutes prior to his death and later saw him on the deck while working.

Training of Crew

116. The induction and training of Mr Thomas did not cover the use of electrical tools.

117. In 2013 there was on the Newfish1 a significant Safety Management System. The part of it relating to induction required all crew members to sign off on those aspects in which they were trained. However none related to use of portable power tools.

118. Each of the crew members went through a crew induction procedure that was recorded on a "crew training record". None of the induction topics recorded related to portable power tools, or electricity.[23] The Crew Safety Booklet

[22] Transcript 203
[23] Investigation file 197, 199

required that all crew members sign saying that they would read it before setting sail. It stated under the heading of "Electrical Installations:

> "All portable electrical equipment on the vessel shall be regularly inspected. Power leads run at deck level shall be secured from exposure to water."[24]

119. That was the extent of the safety guidance.

120. The angle grinder that Ryan was holding when he was electrocuted was obtained by the Deckhand from the deck store room. He plugged the lead into the socket next to the deck store and held the lead above the deck to keep it out of water.

121. It would appear that Ryan and the Deckhand followed the only procedure available to them in the Crew Safety Booklet.

Supervision

122. There was no appropriate supervision of Mr Thomas. He was, it seems, not in the direct sight of any other crew members at the time he was electrocuted. The Western Australian Coroner recommended that if electric power tools were to be used it not be done unsupervised (recommendation 5), and that both the supervisor and the person using the tools be in protective clothing (recommendation 3).

123. At the time Ryan and the Deckhand were packing up the boat and crucially using the angle grinder there was no other person supervising them.

124. Ryan had come onto the boat in late July 2013, the Deckhand in October 2013. It was Ryan's first employment on a prawn trawler and his first employment in the waters north of Australia.

[24] Investigation file p. 171

125. On 29 November 2013 the fishing had ceased and Ryan and the deckhand were packing up the boat for the return to Cairns. That was the first time they were packing up to return to port.

126. Andrew Tripodi, the Skipper, in his statement to Police said that at 4.30 pm,

> "Ryan came to me while I was in the wheel house and told me that he had stopped Jeremy while he was using the angle grinder because it was dangerous. He told me that Jeremy had been using the grinder with a plastic bag around it to try and waterproof it. I told Ryan that this couldn't be done and not to try and waterproof it and just not use it around water. I remained in the wheel house and the last I checked on Ryan and Jeremy I saw them unshackling the nets with a screw driver."[25]

127. He said in his evidence at the inquest that Ryan came to him and so they then got Jeremy and had a "meeting". He told them it was dangerous.

128. It is unfortunate that I didn't have the benefit of hearing evidence from the Deckhand in relation to whether such a conversation did take place and if so what was said. The Deckhand was at that time of the inquest at sea and couldn't be contacted to give evidence.

129. Mr Carter raised that conversation as proof of appropriate supervision and understanding by Ryan and the Deckhand of the dangers involved.[26]

130. The evidence does not go that far. Without the words allegedly said, the context and tone it is impossible to find that both young men just 90 minutes later were acting completely contrary to instruction.

131. It was not as if they were skylarking. They were doing the work asked of them. They were putting the equipment away in preparation for return to Cairns.

132. Mr Carter stated:

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[25] Statement dated 30 November 2013 of Andrew Tripodi pp 8, 9, 10
[26] Transcript pp. 213, 214

> "The angle grinder is very rarely required on these boats, maybe once to cut stainless steel chain. The job he was doing was not rushed. He was required to - they were heading home, as you know. The shackle was not distressed, the pin - from photographs we have show that it could likely have been removed with a spanner in undoing that. Those tools were in the deck store. Had that not been successful, a - bolt cutters were available. Again, very safe, quite capable of doing that job. The bolt cutters didn't get picked up. Again, in conditions of wet deck area, the other alternative for removing that shackle is through oxyacetylene. So it's probably more likely call the engineer and say, 'Blow this shackle off.' And then really the final, last resort - really not necessary tool for the job is the angle grinder."

133. The points raised by Mr Carter were never said to have been communicated to either Ryan or the Deckhand during induction and training, on the job or indeed during the conversation with the Skipper just 90 minutes prior.

134. If the employer expected the young men to follow a hierarchy of actions as described it was essential to communicate those expectations. They were points central to the young men completing the job they were asked to undertake safely. However it is obvious they were not communicated.

135. At the time Ryan was electrocuted the Skipper was in the wheel house, the Engineer and Cook were in the sleeping quarters and Ryan and the Deckhand were on the lower deck. During the inquest I made the comment in relation to Ryan's position on the deck:

> "When you've got his boss who can't see what he's doing, can't hear what he's doing, and you've got the engineer who can't see what he's doing and can't hear what he's doing, you've got the two most junior blokes here doing a job for the very first time, they've never done before. It's a recipe for disaster, isn't it?"

The workplace was unsafe

136. Ryan's life was forfeited due to the failure to provide a safe workplace.

137. Mr Carter conceded that the workplace was unsafe. At the time of that concession the question related specifically to the absence of an RCD protecting the circuit to the general purpose outlet. However, as noted the workplace was unsafe for many reasons previously specifically identified by the Western Australian Coroner.

138. Mr Carter said that in the year 2000 (at the time of the death of Mr Bradley Thomas and the inquest into his death in 2001) he was the General Manager of Austral Fisheries. He said that Carnarvon where the inquest was held was about a 10 hour drive away from where Austral Fisheries was situated and he had not heard of the death or the inquest.[27]

139. He was also not aware that RCDs were mandatorily required in all workplaces in Western Australia and the Northern Territory at that point in time.

140. He said that in the year 2000 his Company started installing RCDs in their vessels. He thought that may have been due to the death of Mr Thomas. He said because of their maintenance schedule and the limitation of workmen they employed it took a long time to install them.

141. It was estimated, he said, that when the fleet transferred to Cairns in 2009 80% of the fleet were fitted with RCDs. There was no documentation or any other analysis to support that figure.

142. That was unfortunately a common feature of the evidence given by Mr Carter. For instance, in his statement dated 22 March 2016 Mr Carter stated (at paragraph 28):

> "Immediately following Ryan Donoghue's death Austral carried out a survey of all of its NPF vessels to determine how many general power outlets were not protected by an RCD. That survey established that the GPO into which the angle-grinder that Mr Donoghue was

[27] Transcript p 191

> using at the time that he was electrocuted was the only general power outlet across Austral's entire NPF fleet not protected by an RCD."

143. On receipt of that statement my office requested a copy of the survey audit of the fleet vessels. On 15 April 2016 the lawyer for Austral Fisheries provided the following response:

> "The audit referred to in paragraph 28 was not recorded in writing. At the time Austral's focus was on ensuring crew safety as quickly as possible."

144. On the second day of the inquest I mentioned that I was anxious to hear what Mr Carter relied upon when making the statement there was just the one socket unprotected in the whole fleet.[28]

145. The following day, 20 April 2016, Mr Carter provided a supplementary statement saying that in light of my comment he had made further investigations:

> "Following my investigations I now understand that the statement I made in paragraph 28 may not be entirely accurate …"

146. Attached to the supplementary statement were invoices from Snape Electrical and within them it was identified that there were 29 RCDs that were fitted to Austral fleet vessels following the death of Ryan. Six of those he thought were likely to be replacements. Mr Carter concluded:

> "I believe that contrary to my earlier statement, it is possible that there may have been GPO circuits on some vessels that were not protected by RCDs at the time of Mr Donoghues death."

147. There was a similar lack of clarity when it came to what constituted the "survey" leading to the understanding that there was only one unprotected GPO. In the supplementary statement the "survey" was said to be Austral Fisheries instructing the electrician to ensure that all GPOs were protected

[28] Transcript p. 75

by RCDs on its vessels.[29] The actual instruction was said to be on a work sheet that stated in respect of each vessel: "Install RCD to all GPO circuits".

148. That is clearly different from "Austral carried out a survey of all of its NPF vessels to determine how many general power outlets were not protected by an RCD." It obviously wasn't to determine how many GPOs were not protected and in fact according to Austral Fisheries they are still not aware how many GPOs were unprotected. The best they can now do is look through the invoices of the electrician.

149. Rather, it is clear that the instruction was to have RCDs fitted to all GPOs just as the work order stated. The reason Austral Fisheries would wish it to be otherwise is obvious. However the evidence suggests that they did indeed know that not all GPOs were protected on their vessels.

150. When giving evidence Mr Carter was asked by Mr Maurice QC about a report being done in relation to the reasons for Ryan's death:

> "Q. Okay. Who did the investigation on behalf of your company?
>
> A. Tim Snape.
>
> Q. Tim Snape? Did he produce a report?
>
> A. There is a report. I'm not sure that I've seen it. But it - as is now evidenced on that boat, that was the only unprotected circuit.
>
> Q. I just want to stick with Mr Snape produced a report for your company about how it was that young Ryan Donoghue was using a GPO that was unprotected by an RCD. And you've just told us he provided a report. Are you able to give us a copy of the report?
>
> A. I'm not sure that I - I have not personally seen a written report. My verbal advice was that that was done. And my understanding is that Mr Snape is suggesting that that GPO was incorrectly labelled.

[29] Supplementary Statement para 17.

Q. And he's the very bloke now who is asked to give a report as to what happened afterwards. He'd been doing the electrical work on that vessel for a number of years.

A. A number of years.

Q. Whose idea was it to use him to investigate - to effectively investigate the cause of young Ryan Donoghue's electrocution?

A. I'm not sure exactly who, but we wanted to know - it didn't really matter as long as it was a licensed electrician. We needed to know what was the status of those GPOs on the vessel, and it was discovered as we know that one GPO was not - - -

Q. But at your level, you're a CEO, and you were the CEO then, were you directly involved in requesting that an investigation be carried out?

A. Through our lawyers, yes.

Q. But were you directly involved?

A. Yes.

Q. And did you agree to Mr Snape's appointment for that purpose?

A. I believe I did.

....

Q. How did you find out what Mr Snape report - what Mr Snape's investigation uncovered?

A. Let me take that on notice." [30]

151. I requested that overnight Mr Carter and his lawyers make every effort to obtain a copy of that report.

152. The next morning Mr Carter and his lawyers produced a report from Masons Electrical & Marine Systems dated 29 June 2014 and addressed to the lawyers of Austral Fisheries. It related specifically to an inspection of Newfish1.

[30] Transcript pp. 209, 210

153. Provided also was an email dated 17 April 2016 from Masons Electrical & Marine Systems which addressed in very general terms the electrical status of the fleet vessels, an overview of the electrical repairs required and suggested improvements. There was no indication as to when the inspections were undertaken. Neither document indicated why it was that the circuit was unprotected nor how many GPOs on the vessels needed the protection of RCD's.

154. The explanation provided by Mr Carter as to why he had to take the question "on notice" was that he believed that as those documents were directed to Austral Fisheries' lawyers they were privileged and he had not wished to waive privilege before discussion with his lawyer.

155. However at no time did he explain why he gave false and misleading answers to the other questions. There was clearly never an investigation by Tim Snape, nor was one sought and Mr Snape did not produce a report. All of that was known to Mr Carter when giving contrary evidence.

156. I formed the view that Mr Carter was making little effort to assist the inquest with the truth.

157. What the report from Masons Electrical & Marine Systems did state was:

> "If FV Newfish1 is deemed to be a workplace then the vessel will have to meet Safe Work Australia's code of practice (managing electrical risks in the workplace) … In my opinion I feel that the vessel FV Newfish1 may be deemed a workplace and therefore under Safe Work Australia regulations the requirement of RCDs should be fitted to all 240 volt outlets on this vessel."

158. There is absolutely no question that the vessel is and was a workplace. Perhaps the only issue is why people continue to have a question about that. There were a number of reports tended and comments made during the course of the evidence that led me to believe that those in the fishing industry and the regulators of that industry are often not clear on the law as it relates to vessels.

159. That may in part be due to the division between Marine Safety on the one hand and Workplace Safety on the other. Marine Safety appears to relate primarily to whether the boat is safe to navigate the high seas. Workplace Safety although somewhat related is seen as entirely different and dealt with by different Government Departments that appear to have little expertise or experience in the marine environment.

160. The Commonwealth and the majority of States and Territories now have the National Uniform Work Health and Safety Act and Regulations. If in the usual form the regulations mandate the use and inspection of RCDs in sections 164 and 165.

161. However where they are not in the usual form or the State hasn't adopted the Uniform Act and Regulations it is utterly indisputable that to comply with the primary duties, of any of the Acts in any of the jurisdictions, the person conducting the business or undertaking must fit RCDs to all general purpose outlets. The more so, when the workplace is a vessel surrounded by conductive salt water.

162. Sri Srinivas, the Principal Marine Safety Officer with the Department of Transport, Northern Territory Government gave a statement dated 13 April 2016. He is a Professional Naval Architect and Marine Engineer with more than 38 years' experience in marine construction, design, survey and safety. He stated:

> "NT's experience in asking owners to produce electrician's certificate of compliance indicates a general reluctance of boat owners to comply unless forced to. In most instances of a surveyor asking owners to obtain electricians certificate of compliance , the vessel has needed to be fitted with RCD'S and wiring needed to be changed etc. prior to the issue of the certificate. Clearly this indicates the problem of electrical non-compliance is widespread.

He estimated that 80% of Domestic Commercial Vessels working out of Darwin Port did not have RCDs fitted as required by the Work Health and Safety Regulations."[31]

163. Werner Bundschuh, Director (Vehicle and Vessel Standards) of the Transport Regulation Branch, Department of Transport and Main Roads in Queensland agreed. I said to him:

> "The fellow in charge in the Northern Territory who does your job, effectively, says that if he goes down to the local commercial port, 80% of all the prawn trawlers and fishery - commercial fisheries vessels will have unprotected GPOs on them. And there's not much he can do about it when he suggests they should, because they will all whinge about the cost. What do you say about that?"

164. Mr Bundschuh answered:

> "Yes, but - well, it's the same in Queensland. And the main reason for the fishing vessels being in such a poor state is because they're mostly old vessels."

165. What the Maritime Regulators were saying is that the vessels are not compliant with Work Health and Safety Legislation but they are not the regulators for that legislation and they believe they cannot enforce it.

166. The reason they claim to be unable to enforce the Work Health and Safety law when dealing with Maritime Safety is because their legislation refers to the USL Code, the Wiring Rules, AS/NZS 3000:2007, NSCV and NSAMS. All of those codes and Standards have inbuilt into them "grandfathering" clauses. That is, the vessel only need meet the standards applicable to it at the time it was built (or first registered in Australia).

167. In such cases unless the electrical installation is upgraded it need not meet the standards that are currently applicable to newly built or newly registered vessels. For instance the effect of the exemptions in the Wiring Rules at 2.6.3.4 is that RCDs are not required for circuits predating the requirement for RCDs.

[31] Transcript p 93

168. Austral Fisheries and their electrician were clearly not aware of the requirement for RCDs by reason of Work Health and Safety law. It is quite possible that the first time they became aware of those requirements was on 30 June 2014 when the report of Wayne Mason of Masons Electrical & Marine Systems was faxed to their lawyers.

169. The initial verbal report from Wayne Mason was reported to David Carter on 13 December 2013 by his lawyers:

> "As suspected, the power point into which the angle grinder was plugged was not fitted with an RCD. However, to the best of Wayne's knowledge, there is no legislative or regulatory requirement to have one installed because it is a 30 year old vessel. The obligation to install RCDs only applies to vessels constructed since 2002."[32]

170. The Accredited Marine Surveyor who provided the Certificates of Compliance –Survey was of the view that there was no way to force owners to install RCDs. He had known that the GPO (into which was plugged the angle grinder) was not protected by an RCD from 2009, but he said he couldn't insist it be protected.

171. The Director (Vehicle and Vessel Standards) of the Transport Regulation Branch, Department of Transport and Main Roads in Queensland took a similar view. In his view so long as the vessel complied with the Standards and Codes regulated by the *Transport Operations (Marine Safety) Act* 1994 and *Regulations* he was required to issue the Survey.

172. One might well wish to criticise the tradesman, surveyor and perhaps the Marine Safety bureaucrats for not understanding the requirements of the Work Health and Safety legislation or not finding ways to remedy the known issues. However to criticise them only serves to obscure the big picture: there appears to be a massive and systemic lack of understanding and compliance. There are clearly reasons for that.

[32] Email Paul Hopwood to David Carter 13 December 2013 – Exhibit 6

173. One reason is the confusion that so many Acts, Regulations, Standards, Codes and Manuals relating to the same subject matter engender. Those combined with the grandfathering provisions make the task of deciphering what is and isn't required a quest of significant magnitude.

174. The investigation by the Department of Transport and Main Roads Queensland (which did not consider the Work Health and Safety legislation) was unable to untangle the Gordian knot:

> "During this investigation it has remained unclear whether a definitive legislative requirement existed mandating that an RCD should have been fitted to the electrical circuit that the faulty Socket outlet was connected to. However it is clear that it is best practice to ensure all socket outlets are protected particularly in the Marine environment."[33]

175. Another reason is the failure of the regulatory authorities to adequately inform vessel owners and inspect the vessels to ensure compliance. Those were Recommendations 6 and 8 of the Western Australian Coroner:

> "That Department of Transport (DOT) and Worksafe, with appropriately qualified and experienced inspectors, coordinate regular pre-season inspection of all fishing vessels throughout the state with an emphasis on inspection of all electrical systems (including RCD's) and portable electric power tools.
>
> That DOT and Worksafe coordinate the immediate notification of any future enactment of legislation in which workplace safety is a key intention to all appropriate industry bodies and thereafter conduct timely inspection of workplaces to ensure compliance with such legislation."

176. True it is that the regulators involved with this vessel in its later years were not in Western Australia. However one would hope that regulators in all States and Territories would seek to learn from such tragedies.

[33] Investigation Report p. 23

Australian Maritime Safety Authority

177. The *Marine Safety (Domestic Commercial Vessel) National Law Act 2012* provided to the Australian Maritime Safety Authority (AMSA) the regulation for Domestic Commercial Vessels (DCVs) throughout Australian waters.

178. The legislation provides for the national body to take over the standardisation and regulation of marine safety. That meant that operators such as Austral Fisheries were no longer required to be under survey in the many jurisdictions in which they operated. Simplifying the process for obtaining Australia-wide survey and standardising the requirements for all DCVs in Australian waters is an undoubted improvement.

179. It does not however provide for the merging of marine safety and workplace health and safety functions relating to DCVs. The operation of sections 6 and 7 exclude the operation of the Act where inconsistent with State and Territory Law relating to workplace health and safety.

180. The artificial separation that has been fostered between marine safety and workplace health and safety is therefore likely to continue.

181. Marine Order 503(8) continues the grandfathering of Standards and Codes and is likely to further entrench the belief that RCDs are not required to be fitted to older vessels (unless upgraded).

182. It should be stated once more, that is a myth. It is a dangerous myth that has been perpetuated by the separation of workplace safety from marine safety.

183. Section 7 however does not prevent AMSA from regulation in the areas of gas and electrical safety. Certainly those areas are preserved to the States and Territories however if AMSA sought to regulate those areas and there was inconsistency with the States and Territories the Commonwealth law would prevail.

Failure of Regulators

184. A Domestic Commercial Vessel is a workplace. Every workplace is required to have RCDs fitted whether by reason of the primary duty of the operator (in all states and territories) or the specific requirements of the regulations (in most states and territories). Those duties and regulations apply no matter how old the vessel may be or whether or not the electric installation has been upgraded.

185. Put simply, all Domestic Commercial Vessels must have RCDs protecting all general purpose outlets. The evidence was that there are approximately 27,000 DCVs operating in Australian waters.

186. However, despite changes in law and regulation relating to workplace health and safety, it appears those changes have had little influence on Domestic Commercial Vessels.

187. If 80% of Domestic Commercial Vessels do not have RCDs fitted (as estimated by the Marine Safety regulators in the Northern Territory and Queensland) that is not only an indictment on the owners and operators of the vessels, it is a gross failure of the regulatory environment.

188. Mr Srinivas the regulator in the Northern Territory spoke of the "Trust and Verify model," trust the owner and verify with the regulator. However he was concerned that the model had changed to a "trust and trust" model. There was no verification happening.

189. That view is supported by the evidence relating to the electrical work done on the Newfish1. New work such as installing a shore power transformer was performed. The owner and the electrician did not report that new electrical work had been carried out. Rather, both signed the *Electrical Inspection Statement* indicating that "no new" work had been carried out.

190. Mr Srinivas suggested a number of changes that might be undertaken to assist marine surveyors in better performing their tasks. Among his suggestions were the following:

> "1. That AMSA's application form for periodic surveys be amended to include the question, "Have any alterations been made to the vessel since the last survey?"
>
> 2. If the answer is "yes" then, an application for "Initial Acceptance into Survey" must be completed;
>
> 3. That AMSA provide a guidance note for the inspection of electrical items on DCVs in plain and succinct language providing a list of the circumstances which would give rise to the requirement for a licensed electrician's certificate of compliance to be obtained.
>
> 4. That independent auditors carry out the verification function so as to provide assurance to the "trust and verify" model."

191. I commend those suggestions to AMSA for their consideration.

No Enforcement Action by Regulators

192. Added to the apparent failure of the regulatory environment to ensure compliance, is the fact that to this date there has been no action taken (apart from investigation) by any regulatory authority arising from the death of Ryan Donoghue.

193. Initially there was discussion between the Northern Territory and Queensland Work Health and Safety authorities as to which authority had jurisdiction. About three months later it was determined in favour of Queensland. That was legally incorrect however both the Northern Territory and Queensland took legal advice before making that determination.

194. The Work Health Safety (QLD) investigation determined that apart from "administrative" breaches there had been no substantial failure by the employer. On 19 March 2015 the Regional Investigation Manager sent a

letter to Mr Carter (the CEO of Austral) stating in part, "WHSQ has now considered all the material obtained in relation to the incident and has made a determination not to proceed with any further action."

195. Queensland Department of Transport and Main Roads also conducted an investigation. It was stated "The application of Workplace Safety Legislation is out of the scope of this investigation".[34]

196. The investigation determined that possible offences had been committed but that Newfish1 was not within the jurisdiction of Queensland at the time:

> "If the incident had occurred in a similar workplace in Queensland (QLD), where the Electrical Safety Act 2002 is in effect, the S.O. involved in the incident would have to be protected by an R.C.D. In addition the S.O. involved in the incident would have to have had the RCD tested for correct operation at the time intervals stated in AS/NZS 3760 and this could have highlighted that it was not protected by an RCD. The extension lead and angle grinder would have to be inspected and tested in accordance with AS/NZS 3760."[35]

197. Possible offences pursuant to Section 12 of the *Marine Safety (Domestic Commercial Vessel) National Law Act 2012* were referred to the Office of Legal Counsel, AMSA Domestic Vessel Division for further analysis and comment.[36]

198. The relevant parts of section 12 are in the following terms:

> **"12 Duty of owners of domestic commercial vessels to ensure safety of vessels, marine safety equipment and operations**
>
> (1) An owner of a domestic commercial vessel must, so far as reasonably practicable, ensure the safety of:
>
> (a) the vessel; and
>
> (b) marine safety equipment that relates to the vessel; and
>
> (c) the operation of the vessel.

[34] Investigation Report p. 9
[35] Investigation Report p 20
[36] Ibid p 26

(2) Without limiting subsection (1), an owner of a domestic commercial vessel contravenes that subsection if:

(a) the owner does not provide or maintain the vessel so that the vessel is, so far as reasonably practicable, safe; or

(b) the owner does not implement and maintain a safety management system that ensures that the vessel and the operations of the vessel are, so far as reasonably practicable, safe; or

(c) the owner does not provide, so far as reasonably practicable, such information, instruction, training or supervision to people on board the vessel as is necessary to ensure their safety.

(3) Without limiting subsection (1), an owner of a domestic commercial vessel contravenes that subsection if:

(a) the owner operates the vessel, or causes or allows the vessel to be operated; and

(b) the vessel is an unsafe vessel."

199. The Australian Maritime Safety Authority also took no compliance or enforcement action as a consequence of the death of Ryan Donoghue. [37]

200. Nor did WorkSafe NT investigate or pursue charges. Presumably that was because they were convinced that they had no jurisdiction to do so.

201. The death of Ryan Donoghue demands a response and yet there has been none.

202. The initial difficulty with determining who had jurisdiction appears to have influenced at least the Northern Territory in their decision to take no action. However, Barristers Michael Maurice QC and Adam Johnson jointly provided an opinion on jurisdiction to the family of Ryan. The effect of that opinion is that for the *Work Health and Safety (National Uniform Legislation) Act,* the Northern Territory is the appropriate jurisdiction to

[37] Statement of Brian Hemming para 62

enforce the obligations of Austral Fisheries, its officers and the skipper of the vessel.

203. Sections 31, 32 & 33 *Work Health and Safety (National Uniform Legislation) Act* create offences for breaches of various sections of the Act, including ss 19, 20 & 27. Sections 164 and 165 of the *Work Health and Safety (National Uniform Legislation) Regulations* create specific offences.

204. In the opinion of Mr Maurice QC and Mr Johnson:

> "Without doubt, these offences expressly fall within the definition of 'substantive criminal law' in s 4 of the Crimes at Sea Act 2000 (Commonwealth) and then in Clause 1 of the Cooperative Scheme in Schedule 1 of the Crimes at Sea Act (both Commonwealth and Northern Territory)."

The response of Austral Fisheries to Ryan's death

205. After Ryan's death Austral Fisheries did make significant changes. In addition to ensuring their vessels' electrical systems were compliant with the law, the company says it has replaced 240 volt electrical powered tools with battery powered tools.

206. It has also introduced an "Electrical Safety Policy & Use of Electrical Hand Tools" document that is said to have been incorporated into their Safety Management System. That Policy includes the following:

- "Only the engineer is permitted to use mains powered electrical tools and only with the permission of the Master;
- If used, all mains powered electrical power tools must be first connected to a RCD protected power board that in turn is plugged into the GPO;
- RCDs are to be tested weekly and recorded in the Engineers log book;
- Plugs sockets and extension leads to be tested fortnightly and recorded in the Engineers log book;

- Only the Engineer can remove an electrical tool from the storeroom. All removals are to be recorded by the Master;

- Where possible, manual bolt cutters, wire cutters or oxy acetylene tools are to be used and the Master will not approve use of electric power tools on the exposed deck unless absolutely necessary and conditions are suitable;

- Electrical equipment is not to be used without PPE including ear muffs, rubber gloves (with appropriate leather protectors), insulating hard hat, safety glasses and rubber boots."

207. There is then a warning at the end of the policy in **bold** stating:

> **"WARNING: Whilst RCDS can and do assist when electric shocks occur they are NOT infallible and care must be taken at all times when using GPOs and extension leads. Do not depend solely on the RCDs to protect you."**

208. Defibrillators and EpiPens are said to have been introduced to the vessels.

209. Pursuant to section 34 of the *Coroner's Act*, I find as follows:

(i) The identity of the deceased was Ryan Harry Donoghue born on 23 September 1993, in Southlands Hospital in Shoreham by Sea, West Sussex, United Kingdom.

(ii) The time of death was 7.19 pm on 29 November 2013. The place of death was the galley of the fishing vessel Newfish1situated in the Gulf of Carpentaria at approximately latitude 11 degrees 50 minutes south, longitude 138 degrees 20 minutes east.

(iii) The cause of death was ventricular defibrillation due to electrocution.

(iv) The particulars required to register the death:

1. The deceased was Ryan Harry Donoghue.

2. The deceased was of Caucasian descent.

3. The deceased was employed at the time of his death as the First Mate of the fishing vessel Newfish1.

4. The death was reported to the coroner by the Rescue Coordination Centre, Australian Maritime Safety Authority.

5. The cause of death was confirmed by Doctor James Fordyce.

6. The deceased's mother was Pauline North and his father was Steven Donoghue.

210. Section 34(2) of the *Act* operates to extend my function as follows:

> "A coroner may comment on a matter, including public health or safety or the administration of justice, connected with the death or disaster being investigated."

211. The death of Ryan Donoghue was needless and a tragic waste of a young life. It would have been prevented if there was even a modicum of compliance with the law. There was not.

212. It is clear that the previous recommendations of the Western Australian Coroner had no impact at all. That of itself is scandalous. Each of those recommendations was appropriate and if they had been taken seriously would have prevented Ryan Donohue being killed in his workplace.

213. The regulatory environment relating to Work Health and Safety appears to have excluded Domestic Commercial Vessels. There is no doubt at all that Domestic Commercial Vessels are workplaces and must be regulated as such.

214. One of the fundamental issues is undoubtedly the separation of work health and safety from marine safety. It is a pity separation is to continue due to the operation of sections 6 and 7 of the *Marine Safety (Domestic*

Commercial Vessel) National Law Act 2012. If that is ever able to be revisited I urge consideration of the issues that cases such as these highlight.

215. That no Commonwealth, State or Territory regulatory authority has pursued any action against the employer is most unsatisfactory. The lack of action beggars belief and is shameful.

216. Workers are entitled to the benefit of the safety laws that control workplaces. They should not pay with their lives for failures by others to abide the law. Families should be entitled to have confidence that their children will not be killed in the workplace through the non-compliance of employers. The Community is entitled to think that when its laws are breached, resulting in the death of its members, there will be a response.

217. The workplace on board the Newfish1 at the time of Ryan's death was unsafe and dangerous, a fact conceded by Ryan's employer. This workplace resulted in Ryan's death.

218. The failure of the regulatory authorities to respond to the death of Ryan Donoghue is unacceptable and must be remedied.

Recommendations

219. The *Coroners Act* provides that I may make recommendations pursuant to section 35(1), (2) & (3).

220. I **recommend** that both Marine Safety authorities and the Work Health and Safety authorities revisit the recommendations of the Western Australian Coroner with a view to ensuring that persons conducting a business or undertaking on Domestic Commercial Vessels well understand the law and their duties to their employees and others.

221. I **recommend** that those same authorities conduct inspections of Domestic Commercial Vessels (and require certificates from electricians where

necessary) to ensure compliance with the requirements of Work Health and Safety duties and legislation.

222. I have no doubt that unless that is done, there will be more needless and preventable deaths of young men and women on Domestic Commercial Vessels.

223. I **recommend** that the Australian Maritime Safety Authority take the lead in ensuring that the legal requirements and duties of the workplace are communicated through the mechanisms of marine safety and in particular the message that Domestic Commercial Vessels are workplaces and require all general purpose outlets to be protected by residual current devices.

224. I understand that AMSA have employed an Electrical Engineer and are looking to ways to communicate with the industry and improve industry compliance.

225. I believe that **offences** may have been committed in connection with the death of Ryan Donoghue and in accordance with section 35(3) I report my belief to the Commissioner of Police and the Director of Public Prosecutions.

226. I also refer the matter to NT WorkSafe for their further and better consideration.

Dated this 3rd day of June 2016.

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JUDGE GREG CAVANAGH
TERRITORY CORONER

Coroners Act, 1996
[Section 26(1)]

Western Australia

RECORD OF INVESTIGATION INTO DEATH

Ref No: 5004/00

I, Stephen McKenzie Wilson, Coroner, having investigated the death of Bradley Howard Thomas with an Inquest held at Carnarvon on 10-11 September 2001, find that the identity of the deceased person was Bradley Howard Thomas and that the deceased was aged 37 years of age and the death occurred at sea aboard the fishing vessel"Cape Grafton II" offshore from Carnarvon on 16 March 2000 as a result of being consistent with electrocution in the following circumstances:

Bradley Howard Thomas ("Mr Thomas") had followed on and off during his working life the occupation of a fisherman/deckhand. During the 2000 Carnarvon fishing season, Mr Thomas had obtained work aboard the fishing vessel "Cape Grafton II" ("the Vessel"). Tennereef Pty Ltd ("Tennereef") owns the Vessel.

The Vessel was built in 1984 and measures 19.84 metres in length with a beam of approx 7 metres. It is powered by a Cummins diesel motor with a

Perkins diesel that runs the auxiliary power unit. The Vessel is licenced to operate within 200 kilometres of the coastline.

For the period 13 March 2000 to 30 June 2000, Tennereef and Blue Water Diving Pty Ltd ("Blue Water") entered into a Share Fishing Agreement (" the Agreement") for Blue Water to use and operate the Vessel for fishing out of Carnarvon. Pursuant to the Agreement, Blue Water was responsible for engaging the crew for the Vessel. Mr Thomas, was engaged by Blue Water to work on the Vessel under the terms of a Sharefishing Agreement ("the Fishing Agreement") signed on 2nd March 2000 for the period 14th March to 30th June 2000.I note that the Fishing Agreement between Mr Thomas and Blue Water was signed by Mark Wilkinson ("Wilkinson"), a Director of Blue Water.

The terms of the Fishing Agreement were that Mr Thomas would share with Blue Water a percentage of the value of the catch and expenses. The catch made by the crew of the Vessel was to be sold to Nor West Seafoods Pty Ltd ("Nor West"). Mr Thomas was responsible for payment of his own insurance and taxation.

I am not required to, nor do I, make a finding of the relationship created by the Fishing Agreement. However, it would appear from the documentation produced into evidence that Mr Thomas was an independent contractor.

The Vessel set sail from Carnarvon on 12th March 2000 to commence fishing. The Vessel was crewed by;

1) Mark David Wilkinson (Skipper)

2) David Kimberley Garland ("Garland") (2nd Skipper)

3)Bradley Howard Thomas (Deckhand)

4) Glen Francis Kemp ("Kemp") (Deckhand)

5)Cameron Mackie ("Mackie") (Trainee Deckhand)

Wilkinson holds the necessary marine qualification to skipper the Vessel and has many years' experience in the fishing industry.

At about 1730hrs on 15th March 2000 the Vessel weighed anchor and steamed to a location south west of Carnarvon and west of Peron Peninsula. There the crew commenced to fish for prawns. Fishing continued throughout the night until the Vessel dropped anchor about 0700hrs on 16th March 2000. The crew then sorted prawns until about 0900hrs when they retired to bed for the day.

During the previous evening difficulty was experienced by the crew with the port stabiliser ("the Stabiliser"). The Stabiliser is attached by chains and springs to the booms. The booms protrude about 6 metres, at an angle of 90 degrees from the Vessel. The purpose of the Stabiliser is to help steady the Vessel when it is rolling at sea.

The Stabiliser had during the evening been bouncing out of the water and tangling in the fishing nets. A decision was made to remove the Stabiliser from the boom at about 0300hrs on 16 March 2000. When removed from the boom, the Stabiliser was placed on the deck of the Vessel.

At about 1600hrs on 16th March 2000, Wilkinson, Garland and Mr Thomas awoke and had a coffee in the galley. A conversation then ensued between Wilkinson and Garland regarding the rectification of the problem with the Stabiliser. Wilkinson indicated that the Stabiliser needed to have a part of the Stabiliser fin removed. That was to be done by using an electric angle grinder. Mr Thomas nominated himself to attend to that job.

The chain to which the Stabiliser had been attached was hanging from the boom and needed to be secured. Garland nominated himself to retrieve and secure the chain.

The weather conditions on 16th March 2000 were described by various crewmembers as being not pleasant with a southerly wind blowing at about 30 knots. The seas were described as rough with a heavy chop and waves of between 2 to 3 metres.

Garland started the motor on the Vessel and then operated the anchor winch whilst Wilkinson piloted the Vessel forward lifting the anchor off the seabed. The Vessel was moved forward at about 4 or 5 knots the same direction that the sea was running, north. Mr Thomas prepared to grind the Stabiliser on the deck of the Vessel a short distance from the galley door.

To do so, Mr Thomas obtained an electrical extension lead ("the Lead") and a Ryobi model CG10 240-volt angle grinder ("the Grinder") from a cupboard on the Vessel. Mr Thomas plugged the Lead into an electrical

power outlet located in the galley of the Vessel. I note from the inventory of the Vessel that an "extension lead" and "electric grinder" are supplied as part of the "Engine Room Tools and Gear" inventory. Wilkinson and others confirmed the supply of these items with the Vessel at the commencement of each fishing season.

Then, with the help of both Wilkinson and Mr Thomas, Garland with a length of rope, grappled the Stabiliser chain, then climbed out onto the boom to secure it. However, a wave struck the Vessel that caused the Stabiliser chain to again swing loose. Garland again grappled the Stabiliser chain and secured it whilst on the boom.

Whilst Garland was attempting to secure the Stabiliser chain on the second occasion, Mr Thomas was on the deck of the Vessel, near the engine room hatch, commencing work on the Stabiliser using the Grinder. Wilkinson was in the wheelhouse of the Vessel and Mackie and Kemp were still in their bunks located off the galley.

Garland testified that the area on the deck where Mr Thomas was working was partially obscured from his vision by the engine room hatch. As Garland was trying to secure the Stabiliser chain to the boom of the Vessel for the second time, the Vessel was struck by several waves which he described as bigger than those being experienced during the day-- about 3 metres. This caused the Vessel to lurch. He said he hung onto the boom which dipped within a few feet of the water. Garland observed the waves coming as he was facing the oncoming sea.

Garland said he heard a scream come from where Mr Thomas was working and looked in that direction but could not see him. He observed water go through the scuppers, located under the gunwales, on the port side of the Vessel. Garland said he heard another longer scream, as if someone was in pain, come from the same direction. He then finished what he was doing and came off the boom onto the Vessel.

Garland further testified that the previous day with the assistance of Mr Thomas, he carried out similar grinding on the starboard stabiliser on the starboard deck of the Vessel. The weather was calmer and the Vessel was at anchor in calm seas. The grinding had been carried out by him with Mr Thomas observing. Garland said that he had worn his wet weather gear including rubber gloves and rubber boot.

On 16th March 2000, the roles were reversed with Mr Thomas carrying out the grinding. Garland said on this occasion Mr Thomas was dressed in shorts, t-shirt, thongs and was wearing sunglasses.

Kemp testified that he was in his bunk when he heard two screams, both swearing, the last being a sign of pain come from Mr Thomas. He jumped from this bunk and rushed to the deck outside the galley.

Mackie testified that he was in his bunk trying to sleep when he heard the Grinder operating outside the galley. He observed Mr Thomas bending over the Stabiliser grinding it. Mackie said that he heard Mr Thomas swear and

then yell in pain. He was aware that something had happened and rushed from his bunk, through the galley to the deck. There he observed Mr Thomas lying on his stomach with the Grinder in his hands, still operating, and under his body.

Upon realising that electricity was still powering the Grinder, Mackie ran back into the galley and disconnected the Lead from the power outlet.

Mackie observed that the deck of the Vessel was wet after he had rushed to the aid of Mr Thomas.

I find that it is clear from the observations of Garland, Kemp and Mackie that whilst Mr Thomas was grinding the Stabiliser on the deck of the Vessel, water has found its way onto the deck of the Vessel through the scuppers. The water has come into contact with either or both the Lead and the Grinder that was being held by Mr Thomas thereby causing a current of electricity to flow through the body of Mr Thomas. The extent and volume of water that came into contact with Mr Thomas, the Grinder and the Lead cannot be precisely ascertained from the evidence.

By this time Wilkinson and all the crew had assembled where Mr Thomas was lying. Injuries inflicted by the Grinder to Mr Thomas's arms and body were treated and cardio pulmonary resuscitation was commenced immediately. Wilkinson headed the Vessel for Carnarvon at full steam. Enroute to Carnarvon, Wilkinson both telephoned and radioed for help and

obtained urgent medical advice from the Carnarvon Regional Hospital medical staff.

The Vessel arrived at the lead lights at the entrance to the marked navigation channels into the Small Boat Harbour at Carnarvon some 3 hours after the incident. During the voyage to Carnarvon the entire crew attempted to resuscitate Mr Thomas. At the lead lights, senior staff from Nor West, a doctor and a nurse from Carnarvon Regional Hospital met the Vessel and boarded it in heavy seas. The unrelenting efforts of the entire crew of the Vessel to resuscitate Mr Thomas were unsuccessful.

It is appropriate, at this stage, that special mention is made of the extraordinary effort of the entire crew of the Vessel to resuscitate Mr Thomas over an extended and difficult voyage to port.

The Police, Office of Energy and Worksafe were notified of the death of Mr Thomas.

As a result of the death of Mr Thomas, the Grinder and Lead were seized by inspectors of the Office of Energy for examination.

Consequently, a report into the circumstances of the death of Mr Thomas was prepared by the Office of Energy and produced into evidence. An inspection of the Grinder revealed that it had some rust, corrosion and crystalline deposits both inside and outside the Grinder. This, according to the report suggests the Grinder had been in moisture-laden air and moisture

had entered the body of the Grinder. Testing of the Grinder insulation resistance between 18th and 22nd March 2000 indicated that moisture was present in the Grinder on 18th March 2000 and had evaporated over the period of the inspection.

The report on the Grinder concluded, inter alia, that it is possible for a person to receive an electric shock by touching the handle of the Grinder near the ventilation openings, or touching exposed metallic parts of the Grinder, if the Grinder was submerged in water.

Inspectors from the Office of Energy also examined the Lead. Rust, rust stains and crystalline deposits were noted on the inside of the plug enclosures. This indicates that moisture had entered the Lead at some time.

The report concluded that Mr Thomas received an electric shock when he was overcome by a large volume of seawater entering through the scuppers and flooding the rear deck whilst he was using the Grinder. Further, the report concluded that the electric current would have passed from Mr Thomas's hand in contact with the wet (hence conductive) Grinder to both feet and/or his other hand in contact with seawater on the steel deck of the Vessel. Current flow through his body would have continued, while Mr Thomas lay on the deck, still holding the Grinder, until the power was switched off at the outlet.

The Office of Energy concluded that the primary factors, which contributed to the death of Mr Thomas, were;

- The use of a portable electrical tool and extension lead in an environment highly exposed to seawater, which electrically, is a good conductive medium.
- lack of foresight in assessing risks when the Grinder was first introduced on the Vessel
- The absence of residual current (earth leakage) protection device ("RCD") for the Grinder and Lead. The use of a RCD at a work place is mandatory under Regulation 3.60 of the Occupational Safety and Health Regulations Act 1996
- The use of thongs as footwear. Had Mr Thomas been suitably attired to carry out his task, by wearing knee high rubber boots, wet weather clothing and rubber gloves, he may well have survived. This type of attire does not fully guard against electric shock in such conditions as occurred.

Evidence was called from various people in respect to each of the above matters and other factors out side the scope of the report from the Office of Energy. It is appropriate to deal with each of the above matters in sequence and then other relevant matters.

APPROPRIATENESS OF ELECTRIC TOOLS AND ELECTRICAL EXTENSION LEADS ON VESSEL

The Grinder and Lead form part of the inventory of tools supplied to the Vessel by Tennereef at the commencement of each fishing season.

According to evidence given by Barry William Burton ("Burton"), Assistant Fleetmaster for Nor West, electric angle grinders have been present on fishing vessels to his knowledge for about 20 years. Burton further said that the use of stainless steel within the fishing industry and on fishing vessels has increased over the years. Electric angle grinders, fitted with cutting discs, are able to quickly cut stainless steel shackles and chain etc. This it seems accounts for the fact that electric grinders are provided to fishing vessels for general maintenance.

Raymond Bekeris ("Bekeris"), Fleetmaster for Nor West said in evidence that crew some times take electric angle grinders on board fishing vessels. Further, Bekeris stated that some fishing vessels are provided with electric welders. According to both Bekeris and Burton all fishing vessels in the fleet maintained by Nor West are provided with oxy acetylene equipment that is capable of cutting all types of metal.

The Stabiliser was made of mild steel, which according to both Bekeris and Burton could be easily cut by the Grinder, although this would time consuming. The oxy acetylene equipment would easily cut the mild steel. The only difficulty that would be experienced in using the oxy acetylene equipment to cut stainless steel is that the molten metal would "spit".

Richard Nelson Patty ("Patty"), the General Manager of Nor West gave evidence that electric grinders were introduced to fishing vessels for cutting of stainless steel. Prior to the use of stainless steel, bolt cutters could be used to cut steel, particularly steel chain.

Despite the fact that oxy acetylene equipment was provided on the Vessel, it was not regarded by Garland as appropriate to use for the job of cutting a portion off the Stabiliser. Garland stated that the gauges and hoses for the oxy acetylene equipment were still in its box and never used. The hoses were too short, about 2 metres in length. Accordingly, it would have been necessary to move the gas bottles to the location of the work, which on a vessel at sea is potentially dangerous. Further, Garland said that the job of cutting the Stabiliser would take only about 15 minutes with an angle grinder but would take over 30 minutes with the setting up of the oxy acetylene equipment.

The possibility of the use of compressed air to power tools on fishing vessels as an alternative to electric power tools was raised with Burton and Bekeris. It was suggested that the installation of a compressor inside the engineroom might be dangerous due to there being heat generated by the engines and the potential for explosion. Bekeris stated that compressed air tools were used on Nor West shore facilities in Carnarvon.

It was noted that during a visit to a sister ship of the Vessel, during the Inquest, that outlets for compressed air were located at very regular intervals

along the jetty at the Nor West shore facility at the Small Boat Harbour Carnarvon.

Bekeris stated that prior to the death of Mr Thomas no alternative to electric power tools had been considered for use on fishing vessels. According to Burton the cost of 24 or 32 volt power tools were excessive. Cordless power tools were considered by Burton to lack the power that electric power tools have.

It has been clear from the evidence that it cannot be precisely concluded from the witnesses where the Lead was located at the time Mr Thomas was using the Grinder. It is clear that, when found by other crew, the Grinder was under the body of Mr Thomas. The only conclusion that one can draw, in my opinion, is that the Lead was therefore at least partially on the deck if not wholly so.

The Office of Energy report suggests that portable electrical tools and extension leads, unless specifically designed should not be used in environments exposed to water contact. The tragic death of Mr Thomas highlights the dangers of the use of such equipment in the marine environment. Further, other options are available including cordless power tools, low voltage tools, oxy acetylene equipment (with appropriate accessories) and compressed air powered tools. Despite those options being available they appeared not to have been considered as an appropriate option for use on fishing vessels prior to this tragic incident.

If the use of power tools on fishing vessels is regarded as appropriate in the future, it is clear that there use should only occur in specific circumstances, which significantly reduce the risk of electrocution.

FORESIGHT IN ASSESSING RISK ON INTRODUCTION OF POWER TOOLS ONTO VESSEL

The use of electric power tools on fishing vessels appears to have begun in the fishing industry some 20 years ago. The evidence indicates that the use of electric power tools has become more common since the introduction of stainless steel within the last 3 years or so.

Prior to the more common use of stainless steel on fishing vessels, mild steel was used and was able to be cut, in the case of chain, by bolt cutters or oxy acetylene equipment. Mild steel can also be cut or grinded readily by electric grinders.

There was no direct evidence as to why the Grinder was used by Mr Thomas to cut a portion off the Stabiliser. However, the evidence of Garland clearly indicates that other equipment provided, such as the oxy acetylene equipment, was not readily capable of performing the task at hand without undue inconvenience and potential risk to the crew.

The evidence of Patty, Bekeris, Burton and Garland suggests that issues of safety, were either not considered or given less priority to cost and

convenience when electric power tools, such as the Grinder, were introduced onto fishing vessels.

There is no doubt that the convenience and inexpensiveness of electric power tools and electric extension leads are appealing to all that choose to purchase and use them. However, the appropriateness of the circumstances in which they are to be used should not be lost. The risk of electrocution when using electric powered tools on vessels at sea is high. They may be cheap and convenient but other options such as compressed air operated tools may pose far less risk to the operator.

I was surprised to say the least to observe an elaborate arrangement of air outlets for compressed air operated tools located at regular intervals along both sides of the jetty at the Nor West shore facility in the Small Boat Harbour Carnarvon during the inspection of a sister ship of the Vessel. The only conclusion that I can draw from that observation is that there has been at some stage consideration by Nor West of the risk of working with electric power tools in an area highly exposed to water.

Accordingly, I am perplexed by the view of Bekeris and Burton that the use of compressors on board fishing vessels is problematic. In my opinion, such equipment would appear to provide a far safer method of powering tools for maintenance on fishing vessels at sea than electricity.

It is the case that the fishing industry and owners of fishing vessels should consider options, other than electricity, for the powering of tools on fishing vessels.

ABSENCE OF RESIDUE CURRENT DEVICE ON THE VESSEL

The Office of Energy report and the evidence of Clifford Ross Reid ("Reid") clearly concludes that one of the most prominent contributing factors to the death of Mr Thomas was the absence on the Vessel of an RCD.

The provisions of Regulation 3.60 of the Occupational Safety and Health Regulations 1996("R 3.60") requires after 31 March 1998 that there be installed a non-portable RCD into the switchboard or a non-portable RCD in a fixed electrical power sockets of all workplaces. For the purposes of R 3.60 the Vessel would appear to be a workplace.

Reid gave evidence that an RCD has the ability to cut off the power when it detects leakage of electricity to the earth. The effect of this in the circumstances of this incident would have been to terminate the flow of electricity through Mr Thomas's body within a fraction of a second. Had an RCD been installed upon the Vessel it may have significantly reduced the chance of the electric shock causing the death of Mr Thomas.

Patty, Burton, and Bekeris were consistent in their evidence that they were not aware that there was a statutory obligation pursuant to R 3.60 for the

installation of an RCD on the Vessel. Whether, Tennereef was aware of the same obligation can not be ascertained.

The relationship between Tennereef and Nor West is not a matter for this inquest to determine. However, it is clear that the responsibility for the maintenance for the Vessel both during the off season and during the fishing season was with Nor West. Patty, Burton and Bekeris confirmed that.

Patty said in evidence that he was not aware that RCD's were mandatory until after the death of Mr Thomas. He further stated that as a result of the death of Mr Thomas, Worksafe placed a Prohibition Notice on the Vessel until an RCD was fitted. This was done at a cost of about $500.00.

Concern was expressed by Patty that RCD's could in themselves create a safety hazard on fishing vessels. Patty suggested that if the RCD were to work at night whilst the fishing vessels was at sea then the navigation lights would be extinguished, thereby creating a navigation hazard.

Evidence given by Bekeris was that since the installation of RCD's on various fishing vessels in the Carnarvon area he has not been aware of any cases of navigation lights being extinguished or other problems. He further, stated that the navigation lights are run off a different electrical system being a 24-volt system as opposed to the 240-volt system used elsewhere on the fishing vessels.

Burton gave evidence that he was not aware of any difficulties being experienced with the RCD's that have now been installed on fishing vessels in the Carnarvon area. Prior to the death of Mr Thomas, Burton was not aware of any RCD's fitted to any fishing vessels in the Shark Bay Fishery.

Patty, Burton and Bekeris all testified that Nor West relied on its electrical contractor to identify any electrical work that needed attention. Each stated that Nor West's electrical contractor had never raised with them the requirement to install RCD's upon fishing vessels.

Further, each stated that the Department of Transport ("DOT") conducts a survey of each fishing vessel every year for the issue of a survey certificate. That survey involves an electrical inspection. Nothing has been raised with Nor West by DOT in respect to the absence of an RCD on the Vessel during any survey, even since law required them.

There was evidence from Burton that Worksafe had visited Nor West's shore facilities and some fishing vessels. According to Burton, Worksafe did not alert him that RCD's were a mandatory requirement on fishing vessels. Burton recalled a visit by Worksafe inspectors in 1999, which resulted in a requirement for covers to be fitted to winches on fishing vessels. No literature on RCD's had come to his attention by any medium.

Wendy Joy Clarkson ("Clarkson"), the Legal services Manager for Worksafe, gave evidence and produced Worksafe's report into the death of Mr Thomas. Also produced by Clarkson was a copy of a publication by

Worksafe dated March 1998, which deals with the requirements of R 3.60, and RCD's. It is a comprehensive publication. Clarkson was not able to advise the extent of the circulation or to whom the publication had been circulated. Since the death of Mr Thomas, there has been a concerted effort by Worksafe to ensure fishing vessels are fitted with an RCD. Inspectors had visited the premises of Nor West about 1 month prior to the death of Mr Thomas in response to another matter. Prior to that Nor West had visits from inspectors in 1994, 1996 and 1998.

Clarkson indicated that there was widespread non-compliance with R 3.60 in industry. Upon the introduction of new legislation, Worksafe embarks upon a campaign of advising industry of the change. That is done by the Internet, magazines specific to industry and generally and through specific industry groups. This was done, according to Clarkson, when the R 3.60 legislation commenced.

Patty stated that he is a member of the WA Fishing Industry Council and the issue of safety is frequently raised. He was unaware of the Worksafe publication until Worksafe posted it to him after the death of Mr Thomas.

Clarkson gave evidence that Worksafe share an overlapping jurisdiction with several departments, but more particularly for the fishing industry with DOT. There is joint reporting arrangement for serious accidents or fatalities between Worksafe and DOT.

Any defects or breaches of legislation detected during surveys conducted by DOT of fishing or other vessels is reported to Worksafe for the issue of the

appropriate notes. Clarkson stated that Worksafe have only one inspector who conducts marine inspections. That person has no specific maritime experience. Clarkson conceded that it would be preferable that Worksafe had an inspector with specific maritime or fishing industry experience. Inspection of the fishing fleet based in Carnarvon is conducted from either Karratha or Perth.

Reid, in his evidence, said that if there had been an RCD fitted to the vessel, it was his opinion that, Mr Thomas would not have died.

That there was little, if any, proper inspection of the Vessel to ensure compliance with R 3.60 by those charged to do so, and an apparent lack of knowledge of the requirements of R 3.60 by those responsible for the maintenance of the Vessel is an indictment upon the industry in which Mr Thomas worked and, unnecessarily, met his death.

LACK OF APPROPRIATE FOOTWEAR AND CLOTHING

It is clear from the evidence that Mr Thomas was dressed in T-shirt, shorts, thongs and sunglasses when he commenced to use the Grinder upon the Stabiliser.

The Office of Energy report concludes that had Mr Thomas been more suitably attired, by wearing knee high rubber boots, wet weather gear and rubber gloves he may well have survived the electric shock he received. The

circumstances, in which this incident occurred, even if suitably attired, may not have fully guarded Mr Thomas from death.

The day before this incident Garland carried out a similar task, apparently with the assistance of Mr Thomas. According to Garland he attired himself in wet weather gear, rubber boots and rubber gloves. The sea conditions in which the work was carried out was significantly calmer and the Vessel was at anchor. Garland said that he had hooked the Lead, which joined the Grinder, off the deck.

It is clear that the attire worn by Mr Thomas was unsuitable for the type of job he was to carry out and more so because of the rough seas that were prevailing at the time. Despite those obvious circumstances, it would appear from the evidence, neither Garland or Wilkinson raised with Mr Thomas the inappropriateness of his attire to use the Grinder. It is more puzzling that Garland said nothing to Mr Thomas when the previous day he carried out the same task properly attired. There is nothing in the statement of Wilkinson, which suggests that he gave any direction to Mr Thomas as to the proper attire to wear to use the Grinder.

Evidence given by the crew indicates that it was a requirement of the job to provide their own wet weather gear. It would appear appropriate that as electrical power tools are provided for use by the crew that it would also be appropriate that suitable protective gear also be made available for use.

That, in my opinion, would have made it abundantly clear that the protective clothing was also to be worn for safety reason when carrying out tasks with electric power tools.

There are a number of other matters which, in my opinion, should be addressed as a result of evidence heard at the Inquest.

TRAINING OF CREW

The evidence of Garland and Kemp was clear that the induction training conducted at the commencement of the season by Nor West did not cover the use of electrical tools. There was no mention by any of the crew of the Vessel as to training carried out by Wilkinson.

The fact that the use of electrical power tools on fishing vessel was not covered in the induction carried out by Nor West or Wilkinson at the commencement of the fishing season must call into question the adequacy of the training.

SUPERVISION

After Wilkinson, Garland and Mr Thomas awoke on 16th March 2000, the three drank coffee together and the immediate tasks were allocated. Beyond that, there seems that there was no supervision of Mr Thomas by either Wilkinson or Garland. In my opinion, it was clear to certainly Garland, and

should have been apparent to Wilkinson, that Mr Thomas was preparing to carry out work on the Stabiliser with the Grinder attached to the Lead in unsuitable attire, in significantly different weather conditions and whilst the Vessel was underway. Mr Thomas was left to carry out a dangerous task with no supervision at all.

It is without explanation why Garland and Kemp, who had both used the Grinder on 15th March 2000, gave evidence of lifting the Lead up off the deck and it seems onto the freezer cover, but it seemed that Garland did not mention same to Mr Thomas whilst he was preparing the Grinder.

Bekeris and Burton also demonstrated at the visit to the sister vessel how electrical leads could be hooked through various pipes over head height above the deck of the Vessel. That it appears was not what the crew did whilst at sea. Rather, Garland and Kemp placed the Lead on the freezer hatch only a matter of inches above the deck, which was capable of having water enter upon the deck through the scuppers.

It would appear that dangers of such practice was not covered at the pre season induction

In my opinion, the supervision of Mr Thomas by both Garland and Wilkinson was inadequate.

As a result of the death of Mr Thomas, Nor West issued a Memorandum to all Skippers regarding electrical safety on board fishing vessels on 20th March 2000.

Following the death of Mr Thomas a post mortem examination was conducted on 21st March 2000 in Perth by Dr G A Cadden who concluded that the cause of death was consistent with electrocution.

I find that Mr Thomas died by way of accident.

The death of Mr Thomas was tragic, unnecessary and avoidable. Accordingly, I make the following recommendations:

1) That alternatives to electricity be investigated as a means of powering hand tools on vessels at sea. Compressed air should not discounted as an appropriate source of power.
2) If any maintenance involving the use of electricity or electric power tools is to be carried out on any vessel at sea it should be done when the vessel is either at anchor or in calm waters.
3) If electrical power tools are required to be used the supervisor is to ensure that both the supervisor and the operator is suitably attired in protective clothing including rubber boots and gloves.
4) If electrical extension leads are connected to electric power tools ensure that it is fixed in a high position above the deck to minimise the risk of contact with water.
5) If any work involving the use of electrical power tools is to be carried out on a vessel at sea it should not be carried out by an unsupervised person.

6) That DOT and Worksafe, with appropriately qualified and experienced inspectors, coordinate regular pre-season inspection of all fishing vessels throughout the state with an emphasis on inspection of all electrical systems (including RCD's) and portable electric power tools.

7) All crew on fishing vessels to receive pre-season training on the use of electrical power tools and electricity whilst at sea.

8) That DOT and Worksafe coordinate the immediate notification of any future enactment of legislation in which workplace safety is a key intention to all appropriate industry bodies and thereafter conduct timely inspection of workplaces to ensure compliance with such legislation.

9) That appropriate protective clothing be provided on all vessels for use with any equipment provided.

Stephen M Wilson

Coroner

Carnarvon

30th October 2001