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MCIB
Marine Casualty Investigation Board

REPORT OF THE INVESTIGATION INTO THE FATALITY THAT OCCURRED ON BOARD MV "DUNKERQUE EXPRESS" AT FELIXSTOWE, ENGLAND ON 26 AUGUST 1998

The Marine Casualty Investigation Board was established on the 23rd, May 2002 under The Merchant Shipping (Investigation of Marine Casualties) Act 2000

CONTENTS

1. SYNOPSIS.

1.1 Mr. Isaac Ackon aged 37 years was a Ghanaian national employed on board the Irish registered ship "Dunkerque Express" as a Category 1 sailor.

During cargo operations in the Port of Felixstowe, England Mr. Ackon was trapped between the ends of two twenty foot cargo containers (TEU's). The accident occurred at the final stages of loading.

Mr. Ackon died as a result of this accident. Time of occurrence was at 12.25 hours (BST) on Wednesday 26 August 1998.

The Ipswich Hospital Consultant Pathologist determined that the cause of death was asphyxia.

2. FACTUAL INFORMATION

2.1 Description of the "*DUNKERQUE EXPRESS*".

Name:	"Dunkerque Express";
Official No.	402583;
Port of Registry	Arklow;
Gross Tonnage	1839;
Net Tonnage	946;
Engine Power	1300 Kw;
Length OA	78.5 metres;
Breadth	12.6 metres;
Trading Area	Near Continental ports of Dunkerque, Antwerp, Felixstowe, Rotterdam and Le Harve;
Type of Trade	General Cargo that is adapted to operate as a "feeder ship" to carry up to 126 TEU's
Built	1985;
Managing Owner	Coastal Shipping PLC North Quay, Arklow, Co. Wicklow, Ireland
Classification Society	GL (Germanischer Lloyd)

2.2 Crew on Board-

2.2.1

Position	Name	Date Joined
Master:	Captain Alan Thorburn Jamieson	6 June 1998
Mate	RE Larkin	12 Aug. 1998
2nd Mate	M.B Baig	21 Feb. 1998
Chief Eng.	EX Steele	7 Aug. 1998
Cadet (Eng.)	A. Stackpoole	12 May 1998
Cat. 1 Seaman	I. Ackon (deceased)	1 Mar. 1998
Cat. 1 Seaman	A.R Langdale	21 Aug. 1998
Cat. 2 Seaman	Cadet M.J.Moran	23 Mar. 1998

2.2.2 Manning on board was in excess of the Safe Manning Certificate issued by the DM&NR, Marine Survey Office on 21 December 1990.

2.2.3 A post accident meeting with company verified that the Company had considered the vessels' operation as a feeder ship and placed on board an additional watch-keeping mate to allow a watch system to operate between the Mate and 2nd Mate.

2.2.4 Following discussions with the Master and crew it was concluded that the crew working on deck on the day of the fatality were well experienced with the ships' operation and adequately rested.

2.2.5 Mr. Isaac Ackon was a Ghanaian national born 24 January 1961 in Takoradi. He held a Seaman's Record Book issued 22 July 1988.

2.2.6 Mr. Ackons' qualifications and training were as follows:-

- AB Certificate No. 0494 issued Tema, Ghana Dec. 1996.
- Survival at Sea (SUR/96/245)
- Fire Fighting & Fire Prevention (FF/96/245)

3. EVENTS PRIOR TO THE INCIDENT

3.1 Vessels arrival at Felixstowe

At 22.10 hours (CET) on 'Tuesday 25 August 1998 "Dunkerque Express" sailed from Antwerp in Belgium for Felixstowe in Suffolk, on the east coast of England. The vessel berthed port side alongside south end Dooly Terminal at 10.00 hours (BST) on Wednesday 26 August.

4. THE INCIDENT

4.1 ARRANGEMENTS OF CARGO OPERATIONS

4.1.1 Cargo work commenced at 11.05 hours (BST) on the morning of arrival. The vessel was scheduled to restow containers and then load ten TEU's and six 40 ft containers.

4.1.2 "Dunkerque Express" was operating as a "feeder ship". A feeder ship usually carries less than 160 to 200 TEU's and depending on the custom of the port and the charter party the crew are responsible for releasing/securing the cargo and therefore termed crew lashed ship, as opposed to stevedore lashed.

4.1.3 The Felixstowe Dock & Railway Company was responsible for loading/discharging by gantry crane and positioning the containers on board. The ship was responsible for fitting securing devices such as twistlocks, single stack cones which slide into the permanent hatch shoe fitting and then locked in position by means of locking bars.

4.1.4 The positioning of containers had been issued on a plan from the Port of Dunkirk a week previously. Refer to Appendix 8.3

4.1.5 In order to suit the exigency of the service from port to port the Mate would amend the plan and advise the stevedores accordingly.

4.1.6 As two containers had not been loaded at the previous port of Antwerp the Mate made some adjustments to suit operational and stability requirements of the vessel while at Felixstowe. This would not be regarded as unusual.

4.2 WORKING ARRANGEMENT AT DOOLY TERMINAL

4.2.1 The Mate has overall supervision of the crew during cargo and co-ordinating with the stevedores as required. The two AB's and a Cadet were assisting with cargo operations. The 2nd Mate was also assisting as required.

4.2.2 The Mate gave the stowage plan to FDRC with a copy to the deceased, Mr. Isaac Ackon who was the senior AB.

4.2.3 FDRC Shift Foreman, Mr. A.J. Hastings in a statement to Suffolk Police said that at the period surrounding the fatality the only job on the quayside (Dooly Terminal) that he was responsible for was the "Dunkerque Express" and a group of 10 dockers (FDRC employees). Portable voice receiving and transmitting radios tuned to channel 15 were held by Mr. Hastings and the Chargehand Berth Operator (and Crane Signaller). The Crane Driver, the Transcontainer operator, and the Tugmasters had fitted radio sets in the cabs also tuned to Channel 15.

4.2.4 So far as can be determined from FDRC statements to SP at the time of the accident the FDRC employees that were working on board or close by and immediately associated with the "Dunkerque Express" were Mr. A. La-Mont who was the Crane Driver; Mr. D. Emsden, who was the Chargehand Berth Operator (and Crane Signaller), and Mr. T. D. Cotterell, Berth Operator (labourer) who assisted Mr. Emsden.

Note: There are conflicting statements as to whether the FDRC Chargehand Berth Operator (and Crane Signaller) was on board "Dunkerque Express" at the time of the accident. Refer to Section 5 of this report.

4.3 THE WORKING AND STOWAGE OF THE CONTAINERS

4.3.1 The Crane Driver had radio contact on V.H.F. Channel 15 with the Chargehand Berth Operator (and Crane Signaller) and the Shift Foreman.

4.3.2 The gantry crane restowed some containers on the vessel and then loaded containers.

4.3.3 When a container is to be loaded it is taken from the "line" on the quayside by a Transcontainer and landed on to a Tugmaster. The Tugmaster is an articulated lorry unit and trailer that then brings the container underneath the dockside gantry crane.

4.3.4 The crane in use at the time was a Stork manufacture No. J 1195

4.3.5 An automatic spreader frame is lowered by the crane on top of the container and then a system of lights will indicate to the crane driver that he can engage and lock the spreader's twistlocks into the containers' corner castings from his cab.

4.4 THE STOW ON THE DECK (REFER TO APPENDIX 8.4)

4.4.1 Containers were stowed on the main deck hatch lids in the usual arrangement of four ranks abreast (port outer, port inner, starboard inner and starboard outer) and two tiers high. The usual stowage arrangement provides for an athwartships (right angles to the fore and aft line) corridor of about 18 inches in width between the tiers of containers at 40 foot (2 section) intervals. Refer to Photographs "a" and "g" in Appendix 8.1

4.4.2 The first tier of containers on the hatch lids was full and the second (top) tier was partly full.

4.4.3 At the time of the incident the load being handled was a stack of three flatbeds twist locked together to form a single 20 foot unit. The stack of flatbeds was to be stowed on the second tier of the inner starboard rank, in the second slot. That is a twenty foot slot immediately aft of the forward most 20 foot container in that rank (container "A"). The container in the outer starboard rank, second tier, immediately adjacent to container "A", was a 40 foot container occupying the first and second sections (container "B"). The second tier space aft of the slot intended for the flatbeds was also occupied by a container (container "C"). There were containers on both sides of container "C" on the second tier. There was a corridor between the first tier container (container "D") upon which container "C" was stowed and the first tier container (container "E") on which the flatbeds were to be stowed.

4.4.4 Accordingly the intention was that, when stowed on board, the flatbeds would be in a second tier, second section slot, with container "A" ahead and container "B" to starboard and container "C" aft and that there would be a corridor between the stack of flatbeds and container "C". The second tier space to port was to be occupied by the last container to be stowed which was an empty 40 foot container.

4.4.5 Mr. Isaac Ackon was pinned between the forward end of container "D" and the aft end of container "E"

4.4.6 There is also container stowage space in the main hold. The hatches were not opened during cargo operations at Felixstowe.

4.5 THE SPECIAL LIFT OF FLATBEDS

4.5.1 Towards the completion of loading at between 12.15 to 12.20 hours (BST) the penultimate load being handled was a stack of three flatbeds which were interlocked together to form a single lift and was to be landed on top of a first tier container "E". Refer to Photograph "b" at Appendix 8.1

4.5.2 The interlocking together of the flatbeds prevented the spreader frame twistlocks from engaging fully in the castings of the top flat.

4.5.3 The Shift Foreman, Mr. Hastings in his statement to Suffolk Police said that he and two other labourers attempted another method of lifting. This method is called a "pots" lift but was also unsuccessful.

4.5.4 It was then decided to use a wire lift method which is not normally used though the Crane Drivers are said to be trained in such methods.

4.5.5 The method requires 4 wires shackled to special points on each corner of the spreader frame. The wires hang vertically with hooks attached to the trailing ends. Refer to Photograph "c" at Appendix 8.1.

4.5.6 The Shift Foreman said that he and two Berth Operators (labourers) attached the hooks to the four corners of the flats and then moved to a safe position before he gave the signal to the Crane Driver to lift the load off the quayside. Refer to Photograph "d" at Appendix 8.1.

4.6 LOADING THE SET OF FLATBEDS

4.6.1 In preparation of the set of flatbeds being landed one of the crew had placed twistlocks in the four upper corner castings of container "E".

4.6.2 The lower part of the container was already secured at the corner castings to the hatch lid by a single stack cone. This cone slides into the permanent hatch lid shoe fitting and is then locked in place using a locking bar. Refer to Photograph "e" at Appendix 8.1.

4.6.3 After landing the set of flatbeds on top of container "E" the FDRC Chargehand Berth Operator (and Crane Signaller) and Berth Operator (labourer) went to release the hooks from the corner castings. (Refer to Footnote under Section 5)

4.6.4 One of the ships AB's was on top of the first tier of containers standing by to secure the forward twistlocks to the bottom of flatbed.

4.6.5 Mr. Isaac Ackon would be standing by to secure the aft twistlocks following the landing in position of the set of flatbacks.

4.6.6 It was noticed that the hooks had been hooked into the sides of the corner castings from the outside hooking in as opposed to from the inside hooking out. This method of hooking on resulted in one of the inboard hooks becoming jammed against a container "B" when the stack had been landed in position. Refer Photograph "d" at Appendix 8.1.

4.6.7 It was decided to re-hoist the load and position elsewhere in order to rig up correctly and then re-position.

4.7 THE ACCIDENT

4.7.1 The Chargehand Berth Operator (and Crane Signaller) gave the instruction to the Crane Driver to re-hoist the load and he, the signaller, quickly became aware that something was wrong as the load tilted to starboard on the aft corner. He could see that that container "E" was also being lifted which meant that they were twistlocked together.

4.7.2 The Chargehand Berth Operator (and Crane Signaller) instructed the Crane Driver to `stop' which he said he did so immediately.

4.7.3 The bottom corner castings of the container which were secure to the hatch lid by stack cones which slide into the permanent hatch shoe fittings and then locked using a locking bar, ripped away from the attachment. The combined weight lifted up and shifted aft resulting in Mr. Ackon being pinned up against container "D". Refer to the sketch in Appendix 8.2.

4.7.4 The Chargehand Berth Operator (and Crane Signaller) heard a scream at the same time gave the instruction over the radio for the crane to stop lifting. He went to the aft end of the flatbeds and when he looked down into the corridor he saw a crewman trapped by the container at chest high.

4.7.5 The Master was alerted and FDRC put in place the shore emergency procedure.

4.7.6 When the Master arrived on the scene he found the forward end of container "E" was on the hatch lids with the aft end up against Mr. Issac Ackon and pinning him, at approximately the mid point, up against container "D"

4.7.7 The situation was assessed and an attempt was made to move the container "E" by using a crowbar with the intention of wedging in timbers to prevent the container moving aft again. There was room in the 18 inch corridor for only one person to work at levering the crowbar. This method was unsuccessful.

4.7.8 It was felt that any attempt to free Isaac Ackon by shifting the gantry crane forward would have risked causing an uneven or jerking movement that may also have resulted in a fatality.

4.7.9 A decision was taken to free Mr. Ackon by adjusting the mooring ropes and shifting the vessel aft. Mr. Ackon's body dropped to the hatch lids and wooden wedges were inserted. By this time the FDRC Paramedics were in attendance and they transferred the body ashore by stretcher. A doctor arrived shortly afterwards and pronounced Isaac Ackon dead.

4.7.10 In view of conflicting evidence in relation to the position of the FDRC crane signaller, notably the specific allegation by a member of the ship's crew that the crane signaller was not on board but on the quayside at the time of the accident, the HSE notified the Suffolk Police (SP) and Crown Prosecution Service (CPS).

4.7.11 This led to a Police enquiry in order to comply with a UK protocol for liaison on Work-Related Deaths. No prosecution was brought in relation to the incident.

5. CONFLICTING STATEMENTS

5.1 The 2nd Mate recalls that as far as he was aware there was only one stevedore on board at the time and that he did not have a radio. The 2nd Mate was returning to the ship when the accident happened.

5.2 The Mate said that there was only one stevedore on board at the time of the accident and that the stevedore did not have a radio. The Mate was on the quayside when the accident happened.

5.3 The AB who was working on top of the first tier containers as part of the team with Mr. Isaac Ackon (deceased) said that he had only seen one stevedore on board the vessel during cargo operations and that he and the stevedore were working in the vicinity together.

5.4 The Cadet said that he saw only one stevedore on top of the container with the AB and that the second stevedore with the radio set was only on board at the very early stage of the cargo operations. The Cadet was on the quayside coiling a water hose when the accident occurred.

5.5 Mr. J.E. Hurst FDRC Head of Safety and Emergency Services said in a statement to Suffolk Police that with a wire lift, the signaller (Chargehand Berth Operator) has a much greater responsibility in both controlling and placing a load safely as the Crane Driver has lesser control than when using the spreader frame only. He also stated that in the incident involving the "Dunkerque Express" that Mr. Emsden the Chargehand Berth Operator (and Crane Signaller) should have been on board the vessel when the wire lift was made and that he would have been in such a position that he could see the path of the load from its position on the quayside and also its final position;

5.6 A statement from the FDRC Shift Foreman said that having hooked on the four corners of the flats and he then moved to a safe position before signalling to the Crane Driver to lift the load off the quayside. Following that he was walking back to the terminal office when the Chargehand Berth Operator shouted at him about the hooks being jammed. The Foreman states that the Chargehand Berth Operator was standing on the first tier of containers that were already loaded.

5.7 A statement from the Berth Operator (labourer) said that the Chargehand Berth Operator was on board with a radio at the time of the accident and that he was in radio contact with the Crane Driver.

5.8 The Crane Driver stated that saw the Chargehand Berth Operator (and Crane Signaller) and the Berth Operator going back on board "Dunkerque Express" before the accident occurred and that he had re-hoisted the flats lift on radio instruction from the Chargehand Berth Operator.

5.9 The Charge Hand Berth Operator stated that when he first went to unhook the set of flats that he was not aware of any crew member being down in the walkway between the containers. Even if the crew man had not being wearing high visibility clothing he believed that he would have seen him as he stood on that corner and could clearly see beneath him into the gap below.

Note: The term Stevedores as referred to in this section by the crew is a generic term for FDRC personnel who work the cargo on board their ship, such as the Chargehand Berth Operator and the Berth Operator.

6. CONCLUSIONS AND FINDINGS

6.1 IMMEDIATE CAUSES OF THE ACCIDENT

6.1.1 In order to avoid jamming with the offside container the hooks to the wire lift were not correctly rigged to at least one of the corner casting of the inboard side to the top flatback before lifting from the quayside; Refer 4.6.6 , 4.6.7.

6.1.2 Twistlocks had not been released between the aft end of the flatbacks and container "E" before re-hoisting; Refer 4.7.1.

6.1.3 Considering that this was an infrequent wire lift that had to be re-hoisted and re-slung the surrounding area had not been specially cleared of crew immediately before and during the re-hoisting attempt; Refer section 5.5 and 6.2.9.

6.1.4 That an excessive amount of hoist control may have been applied when the crane attempted to re-hoist the set of flats; Refer 4.7.3.

6.1.5 The load shifted aft during hoisting; Refer 4.7.2.

6.2 OTHER FINDINGS:-

6.2.1 The owner/operator of the "Dunkerque Express" had no written procedures regarding the safe method of work for their crew operating crew lashed feeder ships;

6.2.2 The wearing of high visibility vests etc., was not enforced on board. Section 4.11.2 of the Code of Safe Working Practices for Merchant Seamen refers. There are however different opinions regarding the effect of high visibility clothing in this particular case. Refer to Section 5.9 and 6.2.6 (a).

6.2.3 The communication or control between FDRC employees and the ships crew, immediately before the accident occurred, was ineffective.

6.2.4 There was no direct radio communication between the ships' crew and the crane cab.

6.2.5 Following the Police investigation the HSE investigation did not reveal any evidence to uphold a breach of Section 3 (General duties of employers and self-employed to persons other than their employees) of the UK Health and Safety at Work Act, 1974 or the 1988 Docks Regulations by FDRC. HSE report dated 29 June 1999 refers.

6.2.6 The HSE considered the main issues that emerged were:
(a) the deceased was not wearing high visibility clothing, and (b) the deceased had moved into a position of danger, and (c) these are matters for the Irish Dept. of the Marine (&NR) to pursue.

Reference is made to HSE report dated 29 June 1999 – See Appendix 8.8.

6.2.7 The report from the Coroner for the Ipswich District of Suffolk was received by the DM&NR Inspector on 23 August 1999.

6.2.8 The FDRC employees working in the immediate area at the time of the accident were on special leave following the fatality and therefore unavailable to this Inspector for interview on 26/27 August 1998. They were interviewed by the HSE Inspector and during October 1998 by the SP. Copies of the statements were obtained by this Inspector through the offices HM Coroner for Ipswich District.

6.2.9 There are a number of documents/publications available regarding safety when working containers on container ships. HSE, ICHCA and IMO publications refer mainly to falls while persons are working on the top of containers during container securing operations:-

- HSE Guidance No. PM 69 (Correct 11/97) * HSE Docks Information Sheet No. 7 (Draft)
- ICHCA Paper No. 4 & Pamphlet No. 8 -Container Top Safety
- IMO have issued a MSC/Circ. 886 Recommendation on Safety of Personnel During Container Securing Operations, Dec 1998;
- Code of Safe Working Practice For Merchant Seamen (publication of section 4 Specialist Ships is imminent);
- Seaways Feature Article on Containership Safety, May 1999
- FDRC Safe Code of Practice - Container Operations.

N.B. It is apparent that Immediate causes of the accident as listed in this section of this report do not fully concur with those findings of the HSE report.

7. RECOMMENDATIONS

7.1 The United Kingdom Health and Safety Executive should be requested to formally approach the Felixstowe Dock and Railway Company with regard to their procedures concerning:-

(i) the correct method of rigging special and infrequent lifts;
(ii) interface between FDRC employees and ships crew during the critical phases of shipboard operations and in particular on board crew-lashed ships.;
(iii) the crane control operations when engaged in special and infrequent lifts;
(iv) radio communications;

7.2 Coastal Shipping PLC should review further their safe operational procedures on container carrying vessels when deck crew are involved with the unlashing/lashing of containers and other deck operations with non standard loads;

7.3 In consultation with industry, DM&NR should issue a Marine Notice covering safety of personnel on container feeder ships.

8. APPENDICES

8.1 Photographs

8.2 Sketch of the area in which the accident occurred.

8.3 Port of Dunkerque Cargo Plan for itinerary ports

8.4 Ships Stowage Plan.

8.5 Tide and Wind printout for Felixstowe on 26/08/99

8.6 Sketches of Twistlock, Gantry Crane and Automatic Spreader

8.7 Brochure on the Port of Felixstowe

8.8 HSE Fatal Accident Report dated 29 June 1999.

8.9 Glossary

8.1 Photographs

Photograph “a” shows the stowage arrangement that provides for an athwartships 18 inch corridor at 40 foot intervals between section 2 and section 3 . The photograph is taken from the quayside port side of the ship. See also photograph “g”

Photograph "b" gives a view along the port side of the ship. It shows the stack of three flatbacks landed in position between containers "A" and "C".

Photograph "c" shows a *wire lift* with wires hanging from a manual spreader frame with the hooks connected to the trailing ends.

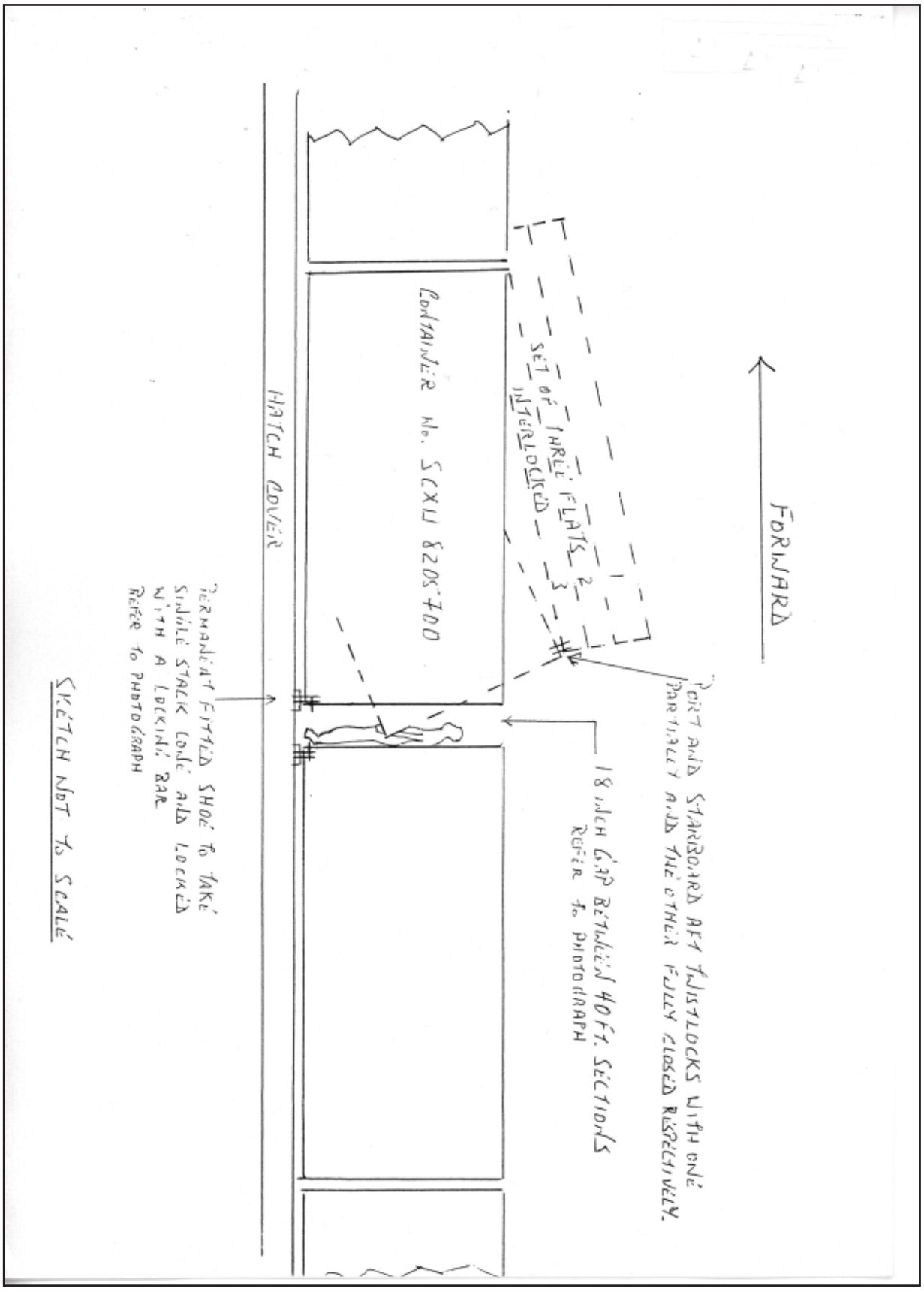
Photograph "d" shows the hooks rigged to the top flatback in the correct manner that would avoid the inboard hooks(s) being jammed against the inboard 40 foot container "B". Refer to paragraph 5.15.6.

Photograph "e" Shows the method of securing the first tier containers to the hatch lid as described in paragraph 5.15.2. A sheared section of the locking bar is lying to the right of the shoe and a twistlock can be seen in the front and to the left of the photograph.

Photograph "f" is a view of the port side of the ship with the white foremast to the left of the picture. It shows the set of flatbacks in position over container "E" with yellow container "A" forward of it and a blue 40 foot container outboard of the flatbacks..

Photograph "g" gives another view of the 18 inch gap from the top of the first tier,. The set of flatbacks (yellow) are on top of container "E" with container "D" to the right of the picture.

8.2 Sketch of the area in which the accident occurred.



CHARGEMENT DU DK EXPRESS

ANTWERP 913 / DUNKERQUE

TONS	20'	TOTAL	40'	TOTAL	
4,5			21	94,5	MT FLAT
11		0	1	11	
7	3	21		0	1x20' IMCO 3,2
15	2	30	1	15	
16	1	16		0	
18	3	54		0	
19	3	57		0	
20	3	60		0	
21	21	441		0	
22	4	88		0	
23	1	23		0	
24		0		0	
25	1	25		0	
29		0	1	29	Reefer
30	1	30		0	Reefer
31		0	1	31	
36		0	1	36	Reefer
TOTAL	43	845	26	216,5	

TOTAL 1061,5 T

FELIXSTOWE / DUNKERQUE

TONS	20'	TOTAL	40'	TOTAL
4,5	3	13,5		0
11	2	22		0
17	2	34	1	17
15	1	15		0
16		0		0
18		0		0
19		0		0
20		0		0
21		0		0
22		0		0
23		0	3	69
24		0		0
25	2	50	1	25
29		0		0
30		0	1	30
31		0		0
36		0		0
TOTAL	10	134,5	6	141

TOTAL 276 T

DUNKERQUE / LE HAVRE(Europe)

TONS	20'	TOTA	40'	TOTAL
3,5	1	3,5		0
4,5		0	21	94,5
11		0		0
17		0		0
15	1	15		0
16		0		0
18		0		0
19		0		0
20	1	20		0
21		0		0
22	5	110		0
23,5	7	164,5		0
24		0		0
25	7	175		0
29		0		0
30		0		0
31		0		0
36		0		0
TOTAL	22	488	21	94,5

TOTAL 582,5 T

Europe → Plus 27X20' weight unknwn
Plus 3X40' weight unknwn

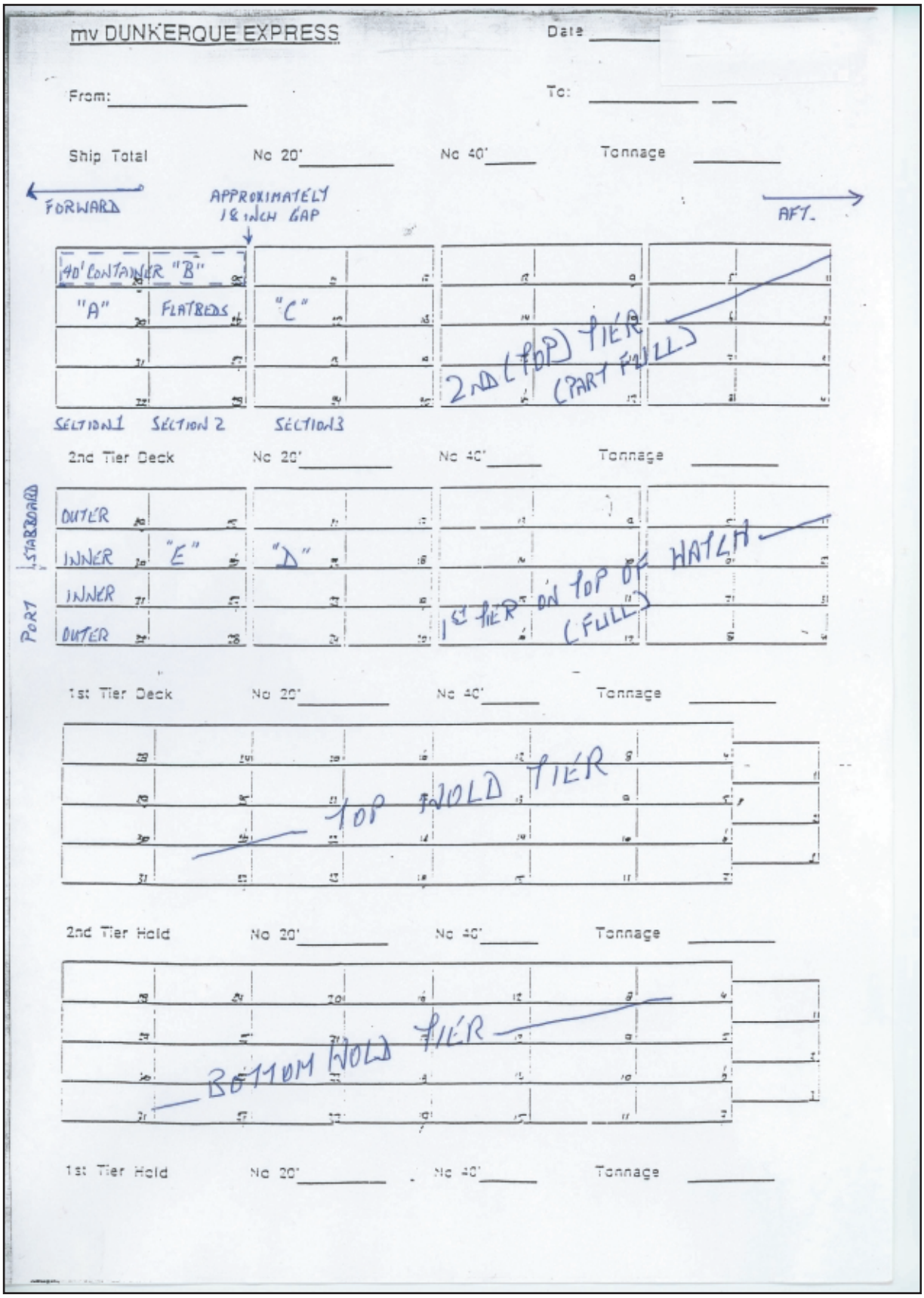
DKK / BGV

22X20' weight unknwn
2X40' weight unknwn
2X20' 1X8T
1X18T

TOTAL DES 2 PORT 1337 T

Page 1

8.4 Ships Stowage Plan.



APPENDIX 8.5

8.5 Tide and Wind printout for Felixstowe on 26/08/99

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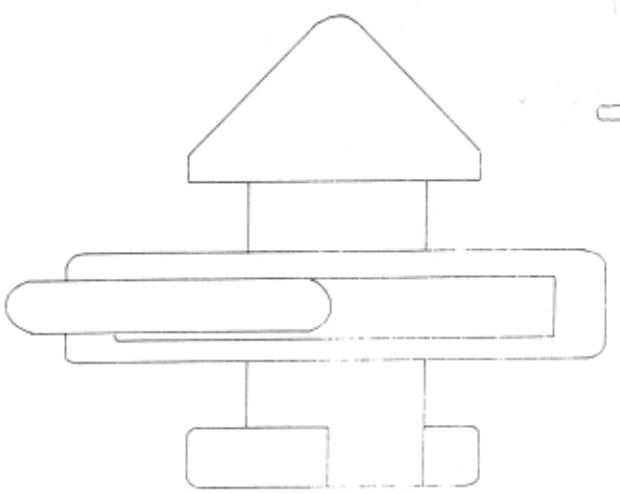
MI160              F.D.R.C. MARINE INFORMATION SYSTEM              27/08/98 13:45

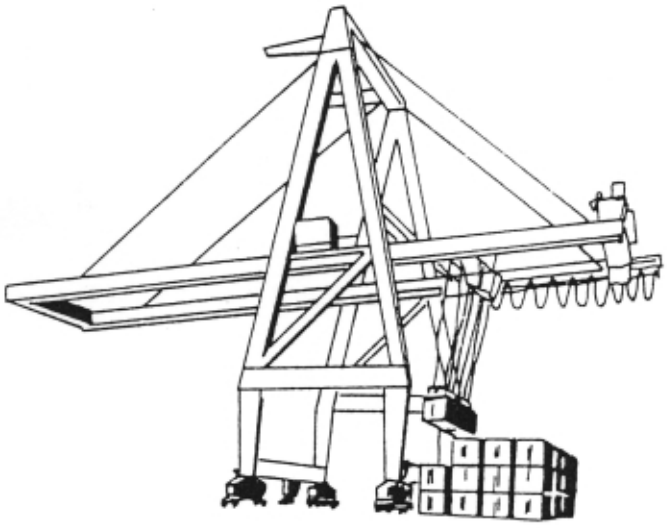
      ENQUIRE TIDAL CONDITIONS     DATE: WEDNESDAY 26TH  AUGUST   1998

TIDES    PREDICTED     TIME      HEIGHT          ACTUAL     TIME      HEIGHT
           HIGH       <03:04>   < 3.93>          HIGH     <02:57>   < 3.93>
           HIGH       <15:16>   < 3.95>          HIGH     <15:16>   < 3.95>
           LOW        <08:41>   < 0.63>          LOW      <08:42>   < 0.65>
           LOW        <21:07>   < 0.39>          LOW      <21:10>   < 0.61>
WEATHER CONDITIONS: (VISIBILITY, TEMPERATURE, WIND SPEED / DIRECTION)
 00:01 <   W 8-12 KTS FINE & CLEAR,TEMP21C.                                    >
 02:00 <   WSW 10 KTS FINE & CLEAR TEMP 19C.                                   >
 04:00 <   WSW 10-15. FINE & CLEAR. TEMP.20c.                                  >
 06:00 <   W 10. CLOUDY,HEAVY RAIN,POOR. TEMP.19.5c.                           >
 08:00 <   WNW 12-16.O'CAST & CLEAR.TEMP 20C                                    >
 10:00 <   WNW 12-16.O'CAST FINE & CLEAR.TEMP 21C                               >
 12:00 <   NE 20-25.O'CAST,SHOWERS,VIS MOD IN RAIN.TEMP 18.5C                  >
 14:00 <   NNE 10-15.O'CAST & CLEAR.TEMP 20C                                    >
 16:00 <   NNE 10-15.O'CAST & CLEAR.TEMP 19.5C                                  >
 18:00 <   N'LY 8-12.O'CAST & CLEAR.TEMP 18.5C                                  >
 20:00 <N,LY 12-15 O,CAST & CLEAR. TEMP 17.0C                                   >
 22:00 <N,LY 12-15 O,CAST & CLEAR. TEMP 15.0C                                   >
                    LIST ON PRINTER : DATE FROM <      >  DATE TO <      >
```

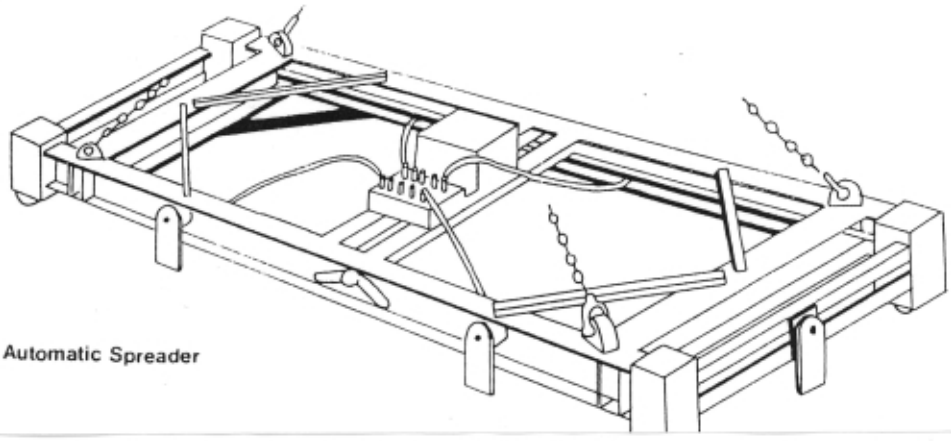
8.6 Sketches of Twistlock, Gantry Crane and Automatic Spreader



Twistlock



Container quay crane

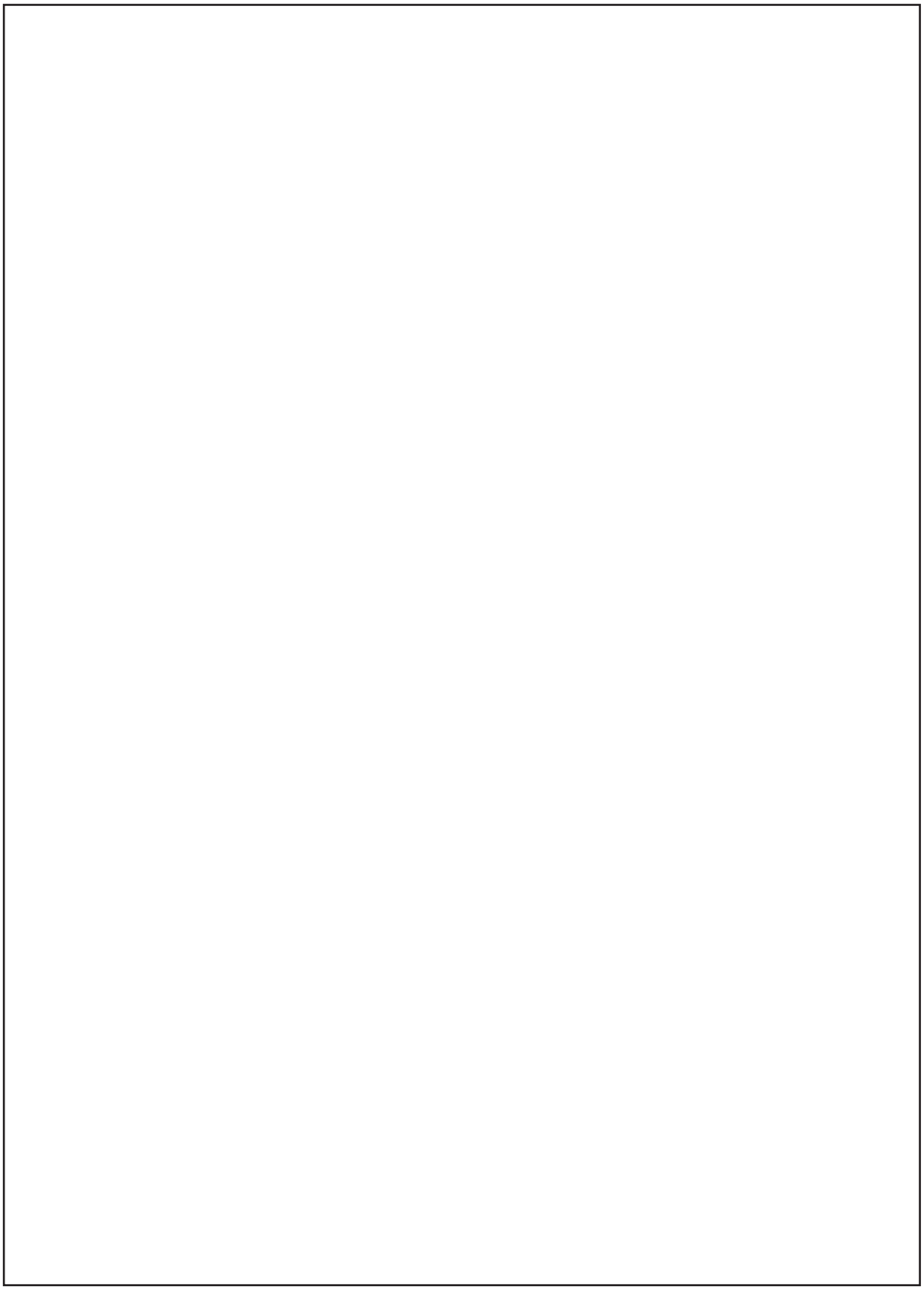


Fully Automatic Spreader

8.7 Brochure on the Port of Felixstowe

APPENDIX 8.7

CONTD.



APPENDIX 8.7

CONTD.

TERMINAL INFORMATION

Total developed area of the Port 267 hectares • Future development area 58 hectares

TRINITY CONTAINER TERMINAL

Total quay length:	2,334 metres
Total area:	108.8 hectares
Alongside depths:	11.6m, 11.9m, 13.4m and 14m
Total quay cranes:	16 (3 super post panamax and 9 post panamax)
Total RTGs:	49
CFS:	6,000m²

LANDGUARD CONTAINER TERMINAL

Total quay length:	439 metres
Total area:	28 hectares
Alongside depths:	9.75m and 11.9m
Total quay cranes:	4 (1 post panamax)
Total RTGs:	14
CFS:	4,000m²

DOOLEY RO-RO TERMINAL

Ro-Ro Berths No. 3 and 4

Quay lengths:	174m and 250m
Total area:	13 hectares (parking for 750 trailers)
Alongside depths:	7.3m and 9.75m

One 35 ton capacity rail crane

Ro-Ro Berths No. 1 and 2

Accommodates vessels up to 185m and 151m

Total Area:	21 hectares
Alongside depth:	7.3m

One 35 ton capacity rail crane

DOCK BASIN

Quay lengths:	509 metres (can accommodate vessels up to 137m in length)
2 Fixed cranes:	32 ton capacity
5 mobile cranes:	up to 33 ton capacity
Alongside depth:	6.7m

WAREHOUSING

21 Warehouses providing 93,824m² covered storage served by 75 forklift trucks with capacity ranging from 2 to 42 tonnes

OIL JETTY

Accommodates vessels up to 180 metres in length	
Maximum draft:	9.10m

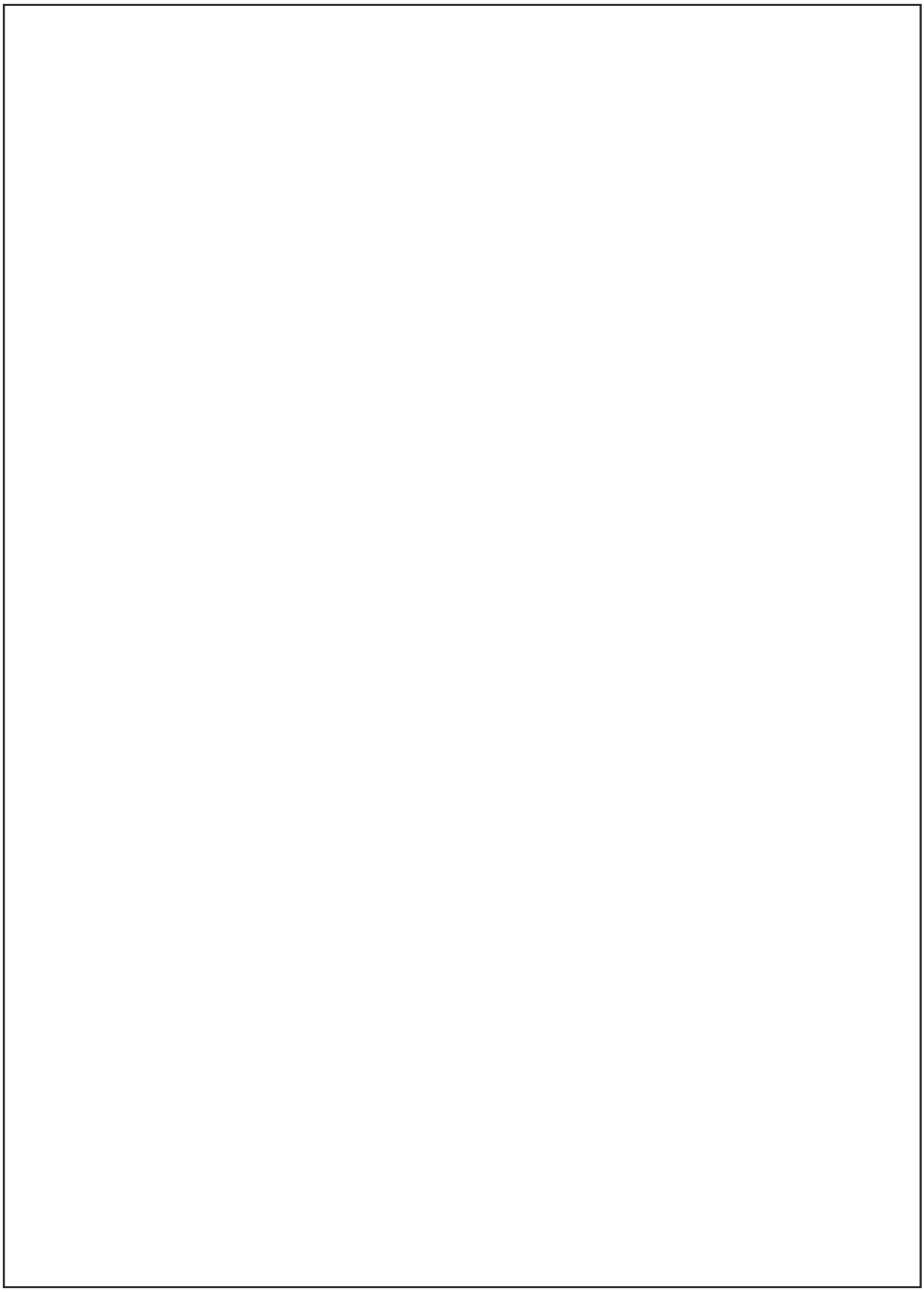
NORTH & SOUTH RAIL TERMINALS

North - 6 x 20 wagon tracks, 2 rail mounted gantry cranes
South - 3 x 20 wagon tracks, 2 rail mounted gantry cranes
3 reachstakers


PLAN OF THE PORT OF FELIXSTOWE
ADDITIONAL EQUIPMENT
Due for delivery 98/99
• 2 new rail tracks at Northern Rail Terminal
• 2 new rail mounted gantry cranes
• 2 new reachstakers
• 5 super post panamax ship to shore gantry cranes
• 11 rubber tyred gantry cranes
• 4 road trains
• 15 terminal tractor units
• 30 trailers
Port of Felixstowe
Future Development Area
Additional Cranes on Order
TRINITY TERMINAL
DOCKSIDE ROAD TERMINAL
LANGUARD TERMINAL
MAIN NAVIGATION CHANNEL

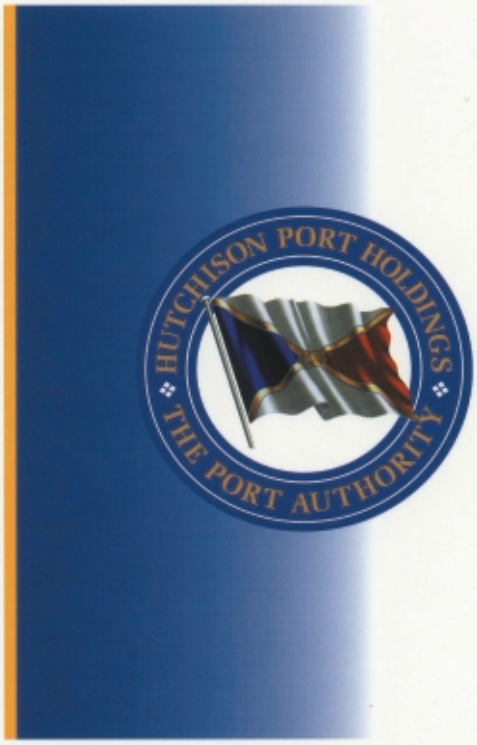
APPENDIX 8.7

CONTD.



Port of Felixstowe

Tomline House
The Dock
Felixstowe
Suffolk
IP11 8SY
UK
Tel: 44-1394 604500
Fax: 44-1394 604949
Telex: 98277



A member of the Hutchison Port Holdings Group

8.8 HSE Fatal Accident Report dated 29 June 1999.

APPENDIX 8.8

HSE
Health & Safety Executive

Department of the Marine
Marine Surveyors Office
Dublin 1

29 June 1999

Dear

FATAL ACCIDENT REPORT
ISSAC ACKON

Firstly I must apologise for the delay in sending you my report, which please find enclosed.
The inquest hearing was on 11th May,1999 . No new evidence came to light at the hearing. Alan Langdale, seaman AB who was working with Isaac was due to give evidence at the inquest but failed to turn up.
The main issues which emerged were that:
a) Issac was not wearing high viz and
b) had moved into a position of danger

The jury held that the death was accidental.

I have not included my photographs as I know you took your own, however if you require a copy please let me know.
If you have any comments or observations please contact me at the address below.

Yours sincerely

John B Hawkins
HM Inspector of Health and Safety

cc David Carter SPD A4 Marine Policy HSE Rose Court
Bob Meldrum PI HSE Docks NIG, Basingstoke

39 Baddow Road, Chelmsford, Essex CM2 0HL
Tel: 01245 706200 Fax: 01245 706222

FATAL ACCIDENT REPORT

Report into the death of Isaac Ackon, a crew member of the m.v. Dunkerque Express on 26 August 1998, at the port of Felixstowe.

1. BACKGROUND

The m.v. Dunkerque Express, Official Number 402583, a 1839 Gross Ton feeder container vessel owned by Arklow Shipping Limited of North Quay, Arklow, County Wicklow, Ireland; was working cargo alongside Dooley Terminal at the Port of Felixstowe, owned and operated by Felixstowe Dock and Railway Company Limited. (FDRC)

This was a 'crew lash' vessel. This means that the crew had the responsibility of releasing and securing the cargo to be discharged or loaded. The Port staff carried out the actual loading and discharge operation in accordance with the load and discharge plan.

The health and safety aspects of the Merchant Shipping Act 1995 under which the MCA and the the Marine Accident Investigation Branch (MAIB) operate, apply to UK ships wherever they may be and certain requirements apply to non - UK ships whilst they are in UK territorial waters.

The MAIB part of the MCA have powers to investigate following an accident on any vessel within UK territorial waters. Their powers are made under the Merchant Shipping Act 1995 Part XI. They were contacted at the time of the fatality but did not become involved. However the Irish Department of the Marine did send Capt Linehan out from Dublin to carry out an investigation representing the corresponding enforcing authority to the MCA in Ireland, given the ship's registration.

2 SUMMARY

At the time of the accident a special lifting technique known as a 'wire lift' was being used. This consisted of four wire legs with hooks being attached to the load. This method was used because they could not attach other lifting devices. It required dockers to be on-board the vessel to help position and release the crane hooks from the load. A banksman was deployed to control this operation and needed to communicate by radio instructions to the crane driver some 80 feet above. The crane driver at this height would not be able to see in any detail what was happening. To do the job effectively the banksman would have to be in a position on board the vessel where he could see what was going on and could be seen by the crane driver.

C:\WORK\WORDPRO\documents\Isaac Ackon Report.lwp

Based on the evidence, Mr Ackon was not wearing high visibility clothing. He walked between two containers secured on the vessels hatch lid to lock the twistlocks of a stack of flat racks being loaded on top. He secured at least one of these locks unaware that the wire legged sling could not be released by the port staff working above.

The banksman had given the crane driver instructions to lift the load again. A conflict of evidence did initially place the banksman in two places. The inquest heard subsequently that he had moved to a position of safety forward, and he was unaware that the deceased had moved in at the after end of the stow. As the load was lifted it brought the container beneath up with it, pulling it out of its locking cones and trapped the deceased against the container behind.

3 PERSONS SEEN

1)	Jeffery Edward Hurst	Head of Safety, FDRC (2 statements)
2)	Anthony John Hastings	Foreman, FDRC
3)	David John Emsden	Chargehand, FDRC
4)	Terry David Cotterell	Berth Operator, FDRC
5)	Anthony Edward Theodore Lamot	Crane Driver, FDRC
6)	Alan Thornburn Jamieson	Ships Master
7)	Patric Edward Larkin	Chief Officer, (2 statements)
8)	Alan Rodney Langdale	Seaman (2 statements)
9)	Edmund Steele	Chief Engineer
10)	Mirza Barber Baig	2nd Officer
11)	Mark Jonathon Moran	Cadet
12)	Austin Michael Stackpole	Cadet
13)	Steven Frederick Brumpton	Port Police Officer
14)	David Austin King	Suffolk Police Officer

4 INVESTIGATION

HSE (John Hawkins) arrived at the port at approx. 1600 hrs. By that time the scene had changed. The height of the tide and the position of the container and crane had changed and the deceased had been removed. He was later joined by Capt Linehan of the Irish Dept. of Marine who also carried out an investigation.

In view of the conflicting evidence relating to the position of the banksman notably the specific allegation by a member of the ship's crew that he had been 'AWOL' at a crucial point in the lift, HSE notified the Police and Crown Prosecution Service (CPS) which led to a Police enquiry, with HSE in support following the Protocol for Liaison for Work Related Deaths. **(APPENDIX 1)**

5 LEGAL COMMENTARY

1) Regulation 13 (3) of the UK Docks Regulations 1988 states that 'Lifting plant shall not be used other than in a safe and proper manner'. Paragraph 12 - 17 of the Approved Code of Practice, gives detail of interpretation. A copy is attached **(APPENDIX 2)**

2) Section 7(a) of the UK Health and Safety at Work Etc. Act 1974 states ' It shall be the duty of every employee while at work to take reasonable care for the health and safety of himself and of other persons who may be affected by his acts or omissions at work.' This duty implies not only avoiding obviously silly or reckless behaviour, but also taking positive steps to understand the hazards in the workplace, to comply with safety rules and procedures and to ensure that nothing they do or fail to do puts themselves or others at risk. Guidance is attached **(APPENDIX 3)**

3) ILO Code of Practice ' Safety and health in dock work ' paragraph 1.7 -Duties of signallers. **(APPENDIX 4)**

4) ILO Guide to safety and health in dock work, 'Rules for winch and crane drivers' and 'Rules for signalmen'. **(APPENDIX 5)**

5) British Standard BS 7121 'Code of practice for Safe use of cranes' Part 1. **(APPENDIX 6)**

6) Code of Safe Working Practices for Merchant Seamen **(APPENDIX 7)**

6 LEGAL CONCLUSIONS

a) Felixstowe Dock and Railway Company Limited (FDRC) and Banksman

The Suffolk Police investigation did not reveal any evidence against the banksman to support a prosecution for Manslaughter.

The HSE investigation did not reveal any evidence to uphold a breach of HSWA section 3 or Docks Regulations by FDRC: they had carried out risk assessments and adopted safe systems of work for load and discharge operations. In HSE's view the lifting operation at the time was planned and safe. Training had been given to those concerned in the incident and training records were available for inspection. FDRC generally have a good track record considering the hazards associated with this industry. The last fatal at the port prior to Mr Ackon was some ten years ago.

They act upon advice and report their concerns.

However the investigation did reveal a deficiency in the training of FDRC shipworkers in VHF radio procedure even though the port did have a code of practice for radio communication . Although this had no bearing on this fatality, HSE discussions with FDRC has led to them reviewing their training policy, to include all new and existing shipworkers who may take on banksman duties at the port.

b) **The Ship**

The m.v. Dunkerque Express is registered in Dublin, Ireland.

The ships Master is responsible for the safety of his crew.

The m.v. Dunkerque Express was a crew lash vessel, which means that the crew had the responsibility to release the cargo for discharge and to secure the loaded cargo before the vessel set sail.

The deceased should have been wearing high visibility clothing. At the time of his death he was wearing a dark coloured jacket. These are matters for the Irish Dept. of Marine to persue.

7 REPORT OF INQUEST HELD ON 11 MAY,1999

No new evidence came to light at the hearing. The jury held that the death was accidental.

29/6/99

John B Hawkins
HM Inspector of Health and Safety

C:\WORK\WORDPRO\documents\Isaac Ackon Report.lwp

8.9 Glossary

APPENDIX 8.9

GLOSSARY

AB	Issued under ILO Maritime Convention No. 74. Provides that no person shall be employed as an able seaman unless deemed competent under national law and in possession of a certificate of qualification attesting to his previous period of service (normally 3 years) and the passing of an examination.
BST	British Summer Time (Greenwich Mean Time + 1 Hour)
Castings	Reinforced corners to the top and bottom of containers which are used for slinging, locking in spreader frames and securing/lashing on board ship or trailer.
CET	Central European Time (GMT + 2 Hours)
CPS	Crown Prosecution Service will review the evidence and decide if there is a realistic prospect of conviction and if so, whether a conviction is justified in the public interest.
DM&NR	Department of the Marine and Natural Resources is the regulatory authority in Ireland for Marine Safety.
FDRC	Felixstowe Dock and Railway Company who are a member of the Hutchison Port Holding Group.
Feeder Ship	Coastal movement of loaded/empty containers on board smaller container vessels which co-ordinate between a number of ports and terminals.
Flatbed	Also referred to as Flat-racks. These are open containers with folding ends and conform to ISO. dimensions.

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GMT	Greenwich Mean Time now officially termed UTC
HSE	Health and Safety Executive. A U.K Statutory body responsible under section 18 of the Health and Safety at Work Act 1974 for making adequate arrangements for enforcement in the UK.
ICHCA	International Cargo Handling Co-ordination Association.
IMO	International Maritime Organization is a specialised agency of the United Nations dealing with maritime affairs.
ISO	International Standards Organisation
MAIB	Marine Accident Investigation Branch is a UK Statutory body responsible for the investigation of all types of marine accidents both on ships and to those on board.
MSO	Marine Survey Office is a technical branch of the DM&NR
Restows	These are containers that need to be moved to the quayside to allow containers that are stowed underneath to be unloaded. Afterwards the restows are loaded back on board again.
Safe Manning Certificate	IMO Convent Certificate issued under nation regulations reflecting the principles contained in IMO resolution A.481 (X11).
SP	Suffolk Police investigate under a protocol for liaison on work related deaths where there is evidence or suspicion of deliberate intent or gross negligence or recklessness on the part of an individual or company rather than human carelessness.

Stevedore	A person or firm employed in loading and unloading ships.
TEU's	Twenty Foot Equivalent Units (Refers to the number of units of containers size 20ft. x 8ft. x 8ft.
Tugmasters	These are inland movement vehicles which, together with trailers, transfer containers around the terminal.
Twistlocks	Twistlocks are used, one per corner (casting) fittings, to secure containers to the deck of the ship and also to each other vertically in the stack. They are simple deck lashings which eliminate the cost of additional equipment and the time taken by lashing personnel to secure other lashings.
UTC	Universal Time Co-ordination
vhf (VHF)	Very High Frequency radio (radio handsets/walkie talkies)

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9. INDEX OF CORRESPONDENCE RECEIVED

Irish Coast Guard

Irish Coast Guard
GARDA CÓSTA na hÉIREANN

Mr Dick Heron
Secretary MCIB
Department of Communications,
Marine and Natural Resources
Leeson Lane
Dublin 2.

18th Nov. 2003.

Re_ **MCIB Report 21 – Fatality on board MV Dunkerque Express 26/8/98.**

Dear Mr Heron,

The Irish Coast Guard has no comment or observation to make regarding this Draft Report.

Yours sincerely,

Eamon Torpay
SAR Operations Manager
IRCG HQ.

Department of Communications, Marine and Natural Resources, Leeson Lane, Dublin 2, Ireland.
An Roinn Cumarsáide, Mara agus Acmhainní Nádúrtha, Lána Chill Mochargán, Baile Átha Cliath 2, Éire.
Tel: +353 1 678 2324, Fax: +353 1 678 2269, Email: admin@irishcoastguard.ie

Family of the late Mr. Isaac Ackon

DE

THE FAMILY OF THE LATE ISAAC ACKON
C/O MR. E K ANKUMAH
P O BOX MC 626
TAKORADI
GHANA

20th November, 2003.

MARINE CASUALITY
INVESTIGATION BOARD
29 – 31 ADELAIDE ROAD
DIBLIN 2, IRELAND

Dear Sir,

Thanks for your letter dated 28th October, 2003, containing the report on the investigation made on the fatal accident of the late Isaac Ackon.

The family met on 15th November, 2003 and has since studied the report of your investigation into the circumstance which led to the death of Isaac Ackon, upon studying the report, it brought back the grief and anguish that we went through on that fateful day (28th of August, 1998) when the news of his death was first announced.

The report revealed that our beloved Isaac Ackon's death was by an accident, which we do not think we could do anything to reverse it. However, we are not much convinced that it was due to his laxity, especially where Mr. Alan Langdale, a seaman AB whom according to the report was working with the Late Isaac Ackon on that fateful day when the accident occurred failed to testify to the investigation committee. This to us brings many questions to be answered on the circumstance, which led to the death of Isaac Ackon of blessed memory.

Once again we thank you for a good job done.

Yours faithfully,

PP Frankoankhe

Opanyin Kwesi Inkoom
(Father & Head of the Family)

MCIB Response

MCIB RESPONSE

The MCIB notes the contents of this letter and has amended the Report where appropriate.

NOTES

CONTD.