

UNITED STATES OF AMERICA  
NATIONAL TRANSPORTATION SAFETY BOARD  
OFFICE OF MARINE SAFETY

**SS NORWAY ENGINEERING GROUP  
MAJOR MARINE ACCIDENT  
DCA 03 MM 032  
INVESTIGATIVE INTERVIEWS**

INVESTIGATIVE INTERVIEW OF:  
FINN NICOLAISEN, 2ND ENGINEER  
SS NORWAY

Thursday, June 5, 2003

In Attendance:

TOM ROTH-ROFFY, NTSB  
BRIAN CURTIS, NTSB  
KEN OLSEN, USCG  
DAN FARKAS, ESQ.  
MICHEL LAMBERT, BUREAU OF VERITAS  
JOHN RILEY, NCL CONSULTANT  
ERIK LASALLE, USCG  
CHRIS OELSCHLEGEL, USCG

## P R O C E E D I N G S

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8:15 a.m.

MR. ROTH-ROFFY: Okay. Good morning. It's about 9:15 and the date is the 5th of June 2003, and we are here to interview -- I'm sorry. 8:15. Correction.

Here to -- we are here to interview Finn Nicolaisen, the second engineer on the SS Norway.

Good morning, Finn.

MR. NICOLAISEN: Good morning.

PARTICIPANT: Officially a reinterview.

MR. ROTH-ROFFY: Correct. It's a second interview of Mr. Nicolaisen. Thank you for that.

Finn, we're going to try to do the same way we did it before, basically ask you a few questions and then we'll just go around the room and then we just keep going around until everybody is satisfied that they've asked all their questions.

We've asked you back to see if we could get more specific information about a few other issues on the boilers. We would like to specifically know about your recollection of the maintenance that was done in the drums, the water wall headers. I don't know. What do you call that -- that drum that is fractured?

MR. NICOLAISEN: We only call it header.

MR. ROTH-ROFFY: Header?

MR. NICOLAISEN: Yeah.

MR. ROTH-ROFFY: Do you call it a water wall header or just a header?

MR. NICOLAISEN: Header.

MR. ROTH-ROFFY: A header.

MR. NICOLAISEN: Only a header.

MR. ROTH-ROFFY: Okay. Do you recall the last time that you were inside that water wall header to do any repairs?

MR. NICOLAISEN: I'm not able to. Too many years ago.

MR. ROTH-ROFFY: Too many years ago?

MR. NICOLAISEN: Yeah.

MR. ROTH-ROFFY: Do you recall the last time you were in it to inspect?

MR. NICOLAISEN: Last time I was inside that was -- was after the retubing in '99.

MR. ROTH-ROFFY: In '99, you were inside of it yourself?

MR. NICOLAISEN: Yeah.

MR. ROTH-ROFFY: Okay. Did you go in in conjunction with a complete boiler survey or what was your reason for going in there?

MR. NICOLAISEN: I was inside to check that

1 everything was clean and okay after a retubing.  
2 MR. ROTH-ROFFY: Okay. Was there -- was the  
3 Bureau of Veritas surveyor also doing his survey at  
4 that time? Do you recall?  
5 MR. NICOLAISEN: I cannot answer on that. I  
6 cannot recall.  
7 MR. ROTH-ROFFY: Okay. Do you recall the  
8 last time that welding was done inside of that -- that  
9 header?  
10 MR. NICOLAISEN: I never seen welding inside  
11 the header, only on the plugs.  
12 MR. ROTH-ROFFY: Only on the plugs?  
13 MR. NICOLAISEN: Yeah.  
14 MR. ROTH-ROFFY: Do you recall if anybody  
15 discussed any welding that had been done on the header  
16 with you?  
17 MR. NICOLAISEN: I never heard about that.  
18 MR. ROTH-ROFFY: Never heard of any --  
19 MR. NICOLAISEN: No.  
20 MR. ROTH-ROFFY: Any welding --  
21 MR. NICOLAISEN: No.  
22 MR. ROTH-ROFFY: -- having ever been done?  
23 MR. NICOLAISEN: Never heard of it.  
24 MR. ROTH-ROFFY: And just refresh our memory.  
25 You have been on board the Norway since when?  
26 MR. NICOLAISEN: 1989.  
27 MR. ROTH-ROFFY: 1989?  
28 MR. NICOLAISEN: Yes.  
29 MR. ROTH-ROFFY: That was when you first came  
30 aboard?  
31 MR. NICOLAISEN: Yeah.  
32 MR. ROTH-ROFFY: And how long have you been  
33 responsible for the maintenance of the boilers?  
34 MR. NICOLAISEN: I'd say for the last 10-11  
35 years.  
36 MR. ROTH-ROFFY: Were you on board last July  
37 --  
38 MR. NICOLAISEN: No.  
39 MR. ROTH-ROFFY: -- '02?  
40 MR. NICOLAISEN: I was home.  
41 MR. ROTH-ROFFY: 2002? You were home on  
42 vacation?  
43 MR. NICOLAISEN: Yeah, yeah. For vacation.  
44 Oh, no. Excuse me. I returned to the ship May 28,  
45 2002, I think.  
46 MR. ROTH-ROFFY: So, you were on board in  
47 July then?  
48 MR. NICOLAISEN: Yeah. I believe so.  
49 MR. ROTH-ROFFY: Do you recall the complete

1 boiler survey that was done in July 2002 on Boiler 23?  
2 MR. NICOLAISEN: No, I can't recall that.  
3 MR. ROTH-ROFFY: Do you recall when the last  
4 complete boiler survey was done on Boiler 23?  
5 MR. NICOLAISEN: Was in -- as I remember, it  
6 might have been done later, but the surveyor was inside  
7 of it in -- after the retubing and -- oh, no. In -- he  
8 was also inside in November 2001 during the drydock.  
9 MR. ROTH-ROFFY: So, you don't recall July  
10 2002 complete survey?  
11 MR. NICOLAISEN: No, I can't remember  
12 anything.  
13 MR. ROTH-ROFFY: Okay. The last time you  
14 were inside the header, you said, was 1999 on Boiler  
15 23.  
16 MR. NICOLAISEN: Yeah. On Boiler 23, yeah.  
17 MR. ROTH-ROFFY: Do you recall your  
18 observations? Did you see any abnormal conditions?  
19 Any --  
20 MR. NICOLAISEN: No, I didn't.  
21 MR. ROTH-ROFFY: Did you see any pitting or  
22 cracking or anything --  
23 MR. NICOLAISEN: No.  
24 MR. ROTH-ROFFY: -- like that?  
25 MR. NICOLAISEN: No. No.  
26 MR. ROTH-ROFFY: Did anybody else inspect the  
27 header at that time or was it only you? Do you recall?  
28 MR. NICOLAISEN: At that time, it was the  
29 same time during drydock. So, from -- the surveyor had  
30 been inside, too. I went in after him.  
31 MR. ROTH-ROFFY: Do you recall the surveyor's  
32 name?  
33 MR. NICOLAISEN: I can't remember now.  
34 MR. ROTH-ROFFY: And which port was that  
35 drydock?  
36 MR. NICOLAISEN: Bremerhaugen, 2001.  
37 MR. ROTH-ROFFY: Oh, okay. What about in  
38 1999? You say --  
39 MR. NICOLAISEN: It was also Bremerhaugen.  
40 MR. ROTH-ROFFY: Okay. The boiler was  
41 retubed in 1999?  
42 MR. NICOLAISEN: Yeah. May.  
43 MR. ROTH-ROFFY: Could you describe the  
44 extent of the retubing? Which tubes were retubed?  
45 MR. NICOLAISEN: All of the generating tubes  
46 was retubed on Boiler 22 and 23. The upper and lower  
47 economizer on Boiler 22 and 23 was retubed, and the  
48 preliminary and secondary superheater on Boiler 22 was  
49 retubed.

1 PARTICIPANT: Repeat that. I'm sorry.  
2 MR. NICOLAISEN: The superheater, the  
3 preliminary superheater and secondary superheater on  
4 Boiler 22, they was also retubed.  
5 PARTICIPANT: Thank you.  
6 MR. ROTH-ROFFY: Okay. Then again, for  
7 Boiler Number 23, it was just the generating tubes and  
8 the lower and upper economizer tubes?  
9 MR. NICOLAISEN: Yeah.  
10 MR. ROTH-ROFFY: The superheater tubes were  
11 not done on Boiler 23?  
12 MR. NICOLAISEN: No. That was done about 15-  
13 16 -- 16 months ago.  
14 MR. ROTH-ROFFY: On 23?  
15 MR. NICOLAISEN: Yeah. The secondary  
16 superheater.  
17 MR. ROTH-ROFFY: And where was that done?  
18 MR. NICOLAISEN: At sea.  
19 MR. ROTH-ROFFY: And who did that work?  
20 MR. NICOLAISEN: Company from Singapore,  
21 Sheba Marine.  
22 MR. ROTH-ROFFY: When you say the generating  
23 tubes, do you -- that includes the water wall tubes?  
24 MR. NICOLAISEN: Yeah, yeah.  
25 MR. ROTH-ROFFY: Are there any tubes in  
26 Boiler 23 that have not been retubed in the past couple  
27 of years?  
28 MR. NICOLAISEN: The primary superheater have  
29 not been retubed.  
30 MR. ROTH-ROFFY: Okay. But everything else  
31 has been retubed?  
32 MR. NICOLAISEN: Yeah.  
33 MR. ROTH-ROFFY: Okay. Do you recall -- I'm  
34 sorry, I have to go back to this again. I didn't get  
35 it. You said that the BV surveyor had gone into the  
36 header in 1999 and 2001 --  
37 MR. NICOLAISEN: Yeah.  
38 MR. ROTH-ROFFY: -- on Boiler 23?  
39 MR. NICOLAISEN: Yeah.  
40 MR. ROTH-ROFFY: Do you recall the name of  
41 the surveyor in either instance?  
42 MR. NICOLAISEN: No, I don't recall his name.  
43 MR. ROTH-ROFFY: In 1999 or 2001?  
44 MR. NICOLAISEN: No, I don't.  
45 MR. ROTH-ROFFY: Okay. When you take a  
46 boiler off, if you have, say, three boilers on and you  
47 want to take one boiler off, could you describe that  
48 process to us, how you would normally do that?  
49 MR. NICOLAISEN: The first thing we do is

1 change the fuel to a -- then I switch off the Burner  
2 Number 1, then I wait a few minutes and I switch off  
3 Burner Number 1, then I decrease the fuel flow --

4 PARTICIPANT: Decrease what?

5 MR. NICOLAISEN: Fuel flow. Then I reduce  
6 the fuel flow to about 1.5 ton an hour, then I switch  
7 off Burner Number 4, and I reduce the fuel flow to  
8 about one ton an hour. After a few minutes, I switch  
9 off Burner Number 2 which leave the boiler with only  
10 one burner left. Then I open starting line that is  
11 steam up to the --

12 MR. ROTH-ROFFY: And where does that steam  
13 come from?

14 MR. NICOLAISEN: It's coming from the  
15 superheater. Then we shut off the last burner and we  
16 start to close the vaults.

17 MR. ROTH-ROFFY: Okay.

18 MR. NICOLAISEN: And it will be changed to --  
19 and the air flow will be reduced to about 25 percent.

20 MR. ROTH-ROFFY: Okay.

21 MR. NICOLAISEN: It's also the drains to the  
22 oil pan, the cork drum, the superheater, superheater  
23 steam drain from the cook drum, and from the A-42, the  
24 main shut-off one.

25 MR. ROTH-ROFFY: Sorry. Could you name those  
26 drains again, please?

27 MR. NICOLAISEN: The drains from the D  
28 superheater, --

29 MR. ROTH-ROFFY: Right.

30 MR. NICOLAISEN: -- drain from the  
31 superheater, drain from the cork drum --

32 MR. ROTH-ROFFY: Copen valve?

33 MR. NICOLAISEN: No, no, no. Cook drum.

34 MR. ROTH-ROFFY: Cook drum.

35 MR. NICOLAISEN: No. It's the closing one.

36 MR. ROTH-ROFFY: Okay.

37 MR. NICOLAISEN: And then A-42 is shut off.

38 MR. ROTH-ROFFY: Okay.

39 MR. NICOLAISEN: Then during period of six to  
40 eight hours, the pressure will go down slowly until it  
41 reach zero.

42 MR. ROTH-ROFFY: Okay. Some of the other  
43 engineers mentioned that they -- they normally cool it  
44 off in about one or two hours from full pressure down  
45 to zero. Is that --

46 MR. NICOLAISEN: It takes longer than that.  
47 After you finish, it takes six to eight hours before it  
48 reach zero.

49 MR. ROTH-ROFFY: Do some engineers cool it

1 off faster than others or -- or do you do it one way  
2 and somebody does it a different way?

3 MR. NICOLAISEN: They're not able to cool it  
4 down faster because it will still be heating inside the  
5 boiler. Even after you shut down, it's still hot  
6 inside because of the brick work and everything. So,  
7 it takes six to eight hours before it reach zero.

8 MR. ROTH-ROFFY: During the time that the  
9 ~~forceur strapdraft~~ fan is running, are the registers  
10 open on the burners? The air ~~veinsvanes~~?

11 MR. NICOLAISEN: No, they are closed.

12 MR. ROTH-ROFFY: So, how does the air get  
13 into the furnace from the ~~four strapforced draft~~ fan if  
14 the registers are closed?

15 MR. NICOLAISEN: When you have a ~~steam-steel~~  
16 plate against ~~steam-steel~~ plate, there's always a leak.

17 MR. ROTH-ROFFY: You say it just leaks past?

18 MR. NICOLAISEN: Yeah.

19 MR. ROTH-ROFFY: And what is the reason that  
20 you keep your ~~four strap forced draft~~ fan running  
21 during this cool-down or dropping of pressure?

22 MR. NICOLAISEN: The reason is to have the  
23 cold boiler cool down at this same rate, same  
24 temperature. If you stop the fan and stop the air, one  
25 part may be very hot, the other a little bit colder,  
26 but you keep it evenly with the fan running. But just  
27 to say it's an easier way. You are transporting the  
28 heat out of the boiler with the fan.

29 MR. ROTH-ROFFY: And what is the reason to  
30 open all the drains?

31 MR. NICOLAISEN: To avoid water in the steam.

32 MR. ROTH-ROFFY: And why do you want to avoid  
33 the water in the steam? I mean, it seems very basic  
34 question, but I'm sorry.

35 MR. NICOLAISEN: It's not only for water,  
36 that's one reason, but also keep circulating the steam  
37 inside, so the tubes won't be damaged.

38 MR. ROTH-ROFFY: And the tubes would be  
39 damaged otherwise by?

40 MR. NICOLAISEN: If you're lighting and no  
41 circulating on the boiler, you burn down the tubes.

42 MR. ROTH-ROFFY: Yeah. And in this case, the  
43 fires are out --

44 MR. NICOLAISEN: Yeah.

45 MR. ROTH-ROFFY: -- and you're reducing the  
46 pressure, there's no fire, right?

47 MR. NICOLAISEN: No, but there is the danger  
48 of heating anyway. We have to play safe.

49 MR. ROTH-ROFFY: Okay. Okay. Brian, go

1 ahead.

2 MR. CURTIS: Good morning, Finn.

3 MR. NICOLAISEN: Good morning.

4 MR. CURTIS: Brian Curtis.

5 Regarding doing hydropressure testing, --

6 MR. NICOLAISEN: Yeah.

7 MR. CURTIS: -- have you ever been with the  
8 BV surveyor when he did a hydropressure test on the  
9 boiler?

10 MR. NICOLAISEN: No, I not been there.

11 MR. CURTIS: Do you know how high he hydros  
12 the boiler to pressure-wise?

13 MR. NICOLAISEN: The boiler tubes are minus  
14 60, maybe a kilo above, a kilo below.

15 MR. CURTIS: So, that's the pressure that he  
16 hydros it to as you understand it?

17 MR. NICOLAISEN: Yeah.

18 MR. CURTIS: During your time in the vessel,  
19 have you ever put the hardware on the safety valves, my  
20 terminology would be gagging the safety valves, to  
21 defeat it from opening and take the pressure above the  
22 normal lifting pressure of the valve for any reason?

23 MR. NICOLAISEN: That is done when the  
24 surveyor on board.

25 MR. CURTIS: Okay.

26 MR. NICOLAISEN: When they are surveying and  
27 testing the boilers, then we have to do it.

28 MR. CURTIS: Okay. Does -- does he gag or  
29 secure all three valves and go above the highest  
30 setting of the highest valve?

31 MR. NICOLAISEN: No. There will always be  
32 one safety valve that is not blocked, the one we are  
33 testing.

34 MR. CURTIS: Okay. So, you've never seen  
35 these boilers have all three gagged?

36 MR. NICOLAISEN: No, I never seen that.

37 MR. CURTIS: None of them?

38 MR. NICOLAISEN: No.

39 MR. CURTIS: From -- from other individuals,  
40 I understand there may have been some chloride problems  
41 in the plant recently, in the water. Are you aware of  
42 that?

43 MR. NICOLAISEN: It was a little bit high.

44 MR. CURTIS: And who would have told you  
45 about this -- this situation?

46 MR. NICOLAISEN: The tester of the boiler  
47 water.

48 MR. CURTIS: And he would be?

49 MR. NICOLAISEN: That is Trond Kristensen.



1 He's making the boiler tests every day.

2 MR. CURTIS: Do you recall when he first  
3 indicated to you that there was a problem with the  
4 chlorides?

5 MR. NICOLAISEN: He had not indicated to me  
6 that is a problem. Just told me it's a little bit high  
7 but that's no -- no problem because we can do skimming  
8 on the boiler. So, keep the level down.

9 MR. CURTIS: Did -- did he tell you where the  
10 chlorides are coming from? What piece of hardware?

11 MR. NICOLAISEN: It flows from the main  
12 condensers. Main condensers.

13 MR. CURTIS: Both?

14 MR. NICOLAISEN: Both of them.

15 MR. CURTIS: And was -- was the chloride  
16 still an issue right after the explosion or has that  
17 been taken care of?

18 MR. NICOLAISEN: That was still a problem  
19 when the accident happened with the boiler.

20 MR. CURTIS: Okay. He -- he didn't indicate  
21 to you the detail of part per million of the chloride?

22 MR. NICOLAISEN: No, he didn't say how much.

23 MR. CURTIS: How frequently do you -- do you  
24 have problems with chlorides in your water? What would  
25 you say the last time you had a problem with it?

26 MR. NICOLAISEN: It has been some problem  
27 this year, but last year, I can't remember when it was.

28 MR. CURTIS: So, is it a frequent problem or?

29 MR. NICOLAISEN: More or less. Can be okay  
30 for six-seven-eight-nine months and then suddenly start  
31 it, we have problem.

32 MR. CURTIS: That's all I have right now.  
33 Thank you.

34 MR. ROTH-ROFFY: I'm sorry. I neglected at  
35 the beginning of the interview to ask everybody to  
36 identify themselves. My name's Tom Roth-Roffy.

37 MR. CURTIS: Brian Curtis.

38 MR. LASALLE: Lt. Erik Lasalle, U.S. Coast  
39 Guard.

40 MR. LAMBERT: Michel Lambert.

41 MR. FARKAS: Dan Farkas, representing Mr.  
42 Nicolaisen.

43 MR. RILEY: John Riley.

44 MR. OLSEN: Ken Olsen, Coast Guard  
45 Headquarters.

46 MR. OELSCHLEGEL: Chris Oelschlegel, Coast  
47 Guard Headquarters.

48 MR. ROTH-ROFFY: Do you have any questions?

49 MR. OLSEN: No, I don't.

1 MR. LAMBERT: Just a question about the shut-  
2 off of the boiler.  
3 MR. NICOLAISEN: Yeah.  
4 MR. LAMBERT: Is there any special procedure  
5 for the level of the water?  
6 MR. NICOLAISEN: We are keeping the level at  
7 normal level.  
8 MR. LAMBERT: And decrease or increase? No  
9 special?  
10 MR. NICOLAISEN: No. We let it stay at  
11 normal level.  
12 MR. OELSchLEGEL: Question. Chris  
13 Oelschlegel with the Coast Guard.  
14 When there's a tube to be plugged in a  
15 boiler, --  
16 MR. NICOLAISEN: Yeah.  
17 MR. OELSchLEGEL: -- can you tell me who --  
18 who does the -- who does the work? Who actually does  
19 the work? You have a leaking tube.  
20 MR. NICOLAISEN: If we have a leaking tube,  
21 it's the Polish repairman is sent in to test which tube  
22 is leaking and then they are plugging it.  
23 MR. OELSchLEGEL: Okay. They plug the tubes?  
24 MR. NICOLAISEN: Yeah.  
25 MR. OELSchLEGEL: Okay. Do you know when  
26 they do that, is -- is the plugging done the same way  
27 for all the tubes? If you have, say, a tube in -- in  
28 the header, in the water drum, are they -- is all the  
29 plugging done the same way, to your knowledge?  
30 MR. NICOLAISEN: Yeah.  
31 MR. OELSchLEGEL: And can you -- do you know  
32 how the boiler is tested after the -- after a tube has  
33 been plugged?  
34 MR. NICOLAISEN: We hydro test it with both  
35 60 kilo and then we send people inside to check if  
36 there is any leaking.  
37 MR. OELSchLEGEL: Any leaking.  
38 MR. NICOLAISEN: Yeah. If there is any  
39 leaking, we do it again.  
40 MR. OELSchLEGEL: Okay. And to get the  
41 boiler -- to get that pressure, how -- how do you --  
42 how do you get that pressure?  
43 MR. NICOLAISEN: We use the P water, the P  
44 water pump.  
45 MR. OELSchLEGEL: You'll use the P water  
46 pump?  
47 MR. NICOLAISEN: Yeah.  
48 MR. OELSchLEGEL: Okay. Do you use one pump  
49 or two pumps?

1 MR. NICOLAISEN: No. We are -- that is  
2 normally one P water pump is running.  
3 MR. OELSCHLEGEL: Okay.  
4 MR. NICOLAISEN: And we only use that water  
5 from that pump.  
6 MR. OELSCHLEGEL: Okay. Okay. And after  
7 you've done a testing of the tubes that have been  
8 plugged, who gives the -- who gives approval to that  
9 after your testing is done?  
10 MR. NICOLAISEN: It can be me and the first  
11 engineer. We will tell the chief engineer we have been  
12 pressure testing for the -- the pressure have been 60  
13 kilo for the last 20-25 minutes and we cannot see any  
14 leak, so the boiler seems okay.  
15 MR. OELSCHLEGEL: So, that's reported up to  
16 the chief engineer?  
17 MR. NICOLAISEN: Yeah, yeah.  
18 MR. OELSCHLEGEL: Okay. Okay. That's all I  
19 have for right now. Thank you.  
20 MR. OLSEN: I've got a few questions. This  
21 is your boiler book notes. I don't know -- not yours,  
22 the ship's.  
23 MR. NICOLAISEN: Yeah.  
24 MR. OLSEN: And these are very good notes.  
25 There's a lot of detail in here.  
26 MR. NICOLAISEN: Hm-hmm.  
27 MR. OLSEN: And just -- this is this year's,  
28 starting with --  
29 MR. NICOLAISEN: Yeah.  
30 MR. OLSEN: -- 01.  
31 MR. OLSEN: There's a number of indications  
32 of welding that occurred without indicating Sheba  
33 Marine was involved, and I'd like to know more than  
34 that.  
35 MR. NICOLAISEN: Yeah.  
36 MR. OLSEN: Who is the primary welder on the  
37 boiler when the ship -- when the ship's crew does their  
38 own repairs?  
39 MR. NICOLAISEN: On outside of the shell of  
40 the boiler, it's the Polish repairmen, but they are not  
41 to weld on the drum or the tubes that is in operation.  
42 MR. OLSEN: So then, it's -- let me see here.  
43 There's -- here's a note here. "Plugged leaking  
44 generator tubes and welded the plugs, Boiler Number  
45 24." I'm talking about all the boilers here.  
46 MR. NICOLAISEN: Yeah. I know.  
47 MR. OLSEN: And a couple weeks later,  
48 "Plugged and welded three generating tubes." So, each  
49 time this occurred, we can find a receipt or something

1 that says Sheba Marine was on board or something like  
2 that? We need -- I'm curious about who was doing this  
3 welding.

4 MR. NICOLAISEN: Most likely, it have been  
5 done, the welding inside that, it have been done by the  
6 ship's crew.

7 MR. OLSEN: The ship's crew?

8 MR. NICOLAISEN: Yeah.

9 MR. OLSEN: I thought I -- I thought I heard  
10 you say that the ship's crew would not do the pressure  
11 welding. I thought I heard -- just heard you say that,  
12 but that's okay.

13 MR. NICOLAISEN: They are not allowed to weld  
14 on the drum.

15 MR. OLSEN: But they are on the tubes?

16 MR. NICOLAISEN: I would show you here  
17 something that makes it a little bit more easy to  
18 understand. You have the tube here and here if they're  
19 in the inside of the tube.

20 MR. OLSEN: Hm-hmm, hm-hmm.

21 MR. NICOLAISEN: Outside here, you have the  
22 drum.

23 MR. OLSEN: Hm-hmm.

24 MR. NICOLAISEN: You're fixing a plug here  
25 and they are welding here, not on the drum.

26 MR. OLSEN: Okay.

27 MR. NICOLAISEN: Only on the old tube that is  
28 not --

29 MR. OLSEN: Between the edge of the tube and  
30 the -- I got it. I understand it. It would be like  
31 here's the tube, the plug's inside, it's that seam --

32 MR. NICOLAISEN: Yeah.

33 MR. OLSEN: -- right there?

34 MR. NICOLAISEN: Yeah.

35 MR. OLSEN: Okay. Well, so, there was  
36 apparently a fair amount of welding going on on the  
37 different boilers. There's an event here, in here,  
38 that talks about replacing the skimming line on boiler.  
39 "Welded new pipe for skimming Boiler Number 24."

40 Isn't that drum pressure?

41 MR. NICOLAISEN: No.

42 MR. OLSEN: The skimming pipe?

43 MR. NICOLAISEN: Yeah. But this is repairing  
44 to after the main shut-off for the skimming line.

45 MR. OLSEN: Off the main. Well, we might  
46 like to see that down there. So, it's off the skimming  
47 line. Where's the skimming line go? Overboard?

48 MR. NICOLAISEN: It's going overboard on the  
49 port side.

1 MR. OLSEN: On the port side.  
2 MR. NICOLAISEN: Yeah.  
3 MR. OLSEN: So, you're saying after the stop  
4 check for that -- for that line?  
5 MR. NICOLAISEN: Yeah.  
6 MR. OLSEN: "Welded new pipe for skimming",  
7 and who did that welding?  
8 MR. NICOLAISEN: One of the Polish, I think.  
9 MR. OLSEN: One of the Polish. Now, could  
10 you tell us if -- if the -- the Polish repairmen have  
11 any certificates that -- that establish that they're  
12 certified welders or if you know any -- what are the  
13 requirements to weld?  
14 MR. NICOLAISEN: I'm not able to answer that  
15 because the one who knows might be the first engineer.  
16 MR. OLSEN: Might be the first engineer?  
17 MR. NICOLAISEN: Yeah.  
18 MR. OLSEN: Is there any special procedures  
19 that -- that need to be followed that you are aware of  
20 written down that the company requires for welding?  
21 For instance, this tube. Do they have to heat that  
22 tube up before they're welding or do they just go in  
23 there and weld around the plug?  
24 MR. NICOLAISEN: I can't -- I am not sure I  
25 know.  
26 MR. OLSEN: Okay.  
27 MR. NICOLAISEN: I have not been inside when  
28 they have been welding.  
29 MR. OLSEN: Okay. All right. So, we don't  
30 know if they're -- have you ever seen a -- an oxygen  
31 acetylene torch in -- in -- in the drum?  
32 MR. NICOLAISEN: No, I not.  
33 MR. OLSEN: Okay. So that, we don't know if  
34 they would have pre-heated with that oxygen acetylene?  
35 MR. NICOLAISEN: No.  
36 MR. OLSEN: When you test with the feed  
37 water, are you testing through the main feed check or  
38 are you testing through like the chemical line,  
39 something smaller or large?  
40 MR. NICOLAISEN: We are using the main feed  
41 line.  
42 MR. OLSEN: Just cracked or how --  
43 MR. NICOLAISEN: Yeah. Just -- just a crack  
44 open.  
45 MR. OLSEN: Okay. Okay.  
46 MR. NICOLAISEN: But we are also -- it goes  
47 from main feed line to the automatic wall and then to  
48 the chemical line. So, the pressure is going through  
49 the chemical lines.

1 MR. OLSEN: The small lines?  
2 MR. NICOLAISEN: Yeah.  
3 MR. OLSEN: Okay. Would you say to the best  
4 of your knowledge that Sheba Marine is the primary  
5 contractor for the major boiler repairs? Don't know?  
6 MR. NICOLAISEN: I don't know.  
7 MR. OLSEN: Okay.  
8 MR. NICOLAISEN: Because there have been both  
9 different people working on the boiler.  
10 MR. OLSEN: Okay.  
11 MR. NICOLAISEN: Both Sheba and another  
12 company.  
13 MR. OLSEN: All right. I -- I think that's  
14 it for now. I was mainly concerned about who was  
15 welding these plugs in, but it was often the Polish  
16 repairmen?  
17 MR. NICOLAISEN: Yeah.  
18 MR. OLSEN: Okay. All right. Thank you very  
19 much.  
20 MR. ROTH-ROFFY: John, did you have any  
21 questions?  
22 MR. RILEY: No, thank you.  
23 MR. ROTH-ROFFY: Okay. Just a couple of  
24 follow-ups. Regarding the -- the hydro testing and  
25 pressure testing of the boilers, --  
26 MR. NICOLAISEN: Yeah.  
27 MR. ROTH-ROFFY: -- you say you normally --  
28 you hydro test to 60 bar after you've --  
29 MR. NICOLAISEN: Yeah.  
30 MR. ROTH-ROFFY: -- done a --  
31 MR. NICOLAISEN: Yeah.  
32 MR. ROTH-ROFFY: -- plugging repair.  
33 MR. NICOLAISEN: Yeah.  
34 MR. ROTH-ROFFY: And you say that the BV  
35 inspector would typically have one of the safety valves  
36 gagged. Would -- would that be for a hydro test or for  
37 a steam lifting of the --  
38 MR. NICOLAISEN: Steam lifting.  
39 MR. ROTH-ROFFY: Okay. That's just to test  
40 that the valve will lift --  
41 MR. NICOLAISEN: Yeah.  
42 MR. ROTH-ROFFY: -- at its designed pressure?  
43 MR. NICOLAISEN: Yeah.  
44 MR. ROTH-ROFFY: Now what about hydro testing  
45 of -- of the boiler by the BV surveyor? What -- what  
46 pressure is that brought up to or have you seen any  
47 hydro testing by BV?  
48 MR. NICOLAISEN: No, only testing by steam --  
49 MR. ROTH-ROFFY: Okay. So, as far as you

1 know, --  
2 MR. NICOLAISEN: -- on those.  
3 MR. ROTH-ROFFY: As far as you know, the BV  
4 surveyor does not do a hydro test?  
5 MR. NICOLAISEN: No, not as far as I know.  
6 MR. ROTH-ROFFY: Where do you keep your --  
7 your gags? The boiler gags? Where are they kept on  
8 the ship? In a storeroom somewhere? In a box?  
9 MR. NICOLAISEN: Boiler spare parts and  
10 everything for the boiler is kept in the main central  
11 store.  
12 MR. ROTH-ROFFY: Including the gags for the  
13 safety valves? I don't know. What is your word for --  
14 for the -- the fitting that --  
15 MR. NICOLAISEN: Yeah. I know -- understand  
16 what you mean, but they are kept also in the central  
17 store.  
18 MR. ROTH-ROFFY: Okay. How many of those do  
19 you have in central store, if you know?  
20 MR. NICOLAISEN: Three or four, I think.  
21 MR. ROTH-ROFFY: And that's central store is  
22 located in the forward machinery room, is that correct?  
23 MR. NICOLAISEN: The forward boiler room.  
24 MR. ROTH-ROFFY: Okay. Does the ship have a  
25 hydro pump? A small air-operated pump or electric-  
26 operated pump for hydro testing of the boilers?  
27 MR. NICOLAISEN: If needed, we have one.  
28 MR. ROTH-ROFFY: Okay. Where -- where's that  
29 located?  
30 MR. NICOLAISEN: Off the starboard side.  
31 MR. ROTH-ROFFY: Is that an air-operated or  
32 electric or --  
33 MR. NICOLAISEN: Electric.  
34 MR. ROTH-ROFFY: And it's portable?  
35 MR. NICOLAISEN: No.  
36 MR. ROTH-ROFFY: It's -- it's mounted in  
37 place and you have --  
38 MR. NICOLAISEN: Yeah.  
39 MR. ROTH-ROFFY: -- a pipe going to the  
40 boilers?  
41 MR. NICOLAISEN: We have to use flexible  
42 hose.  
43 MR. ROTH-ROFFY: Where's the flexible hose  
44 located? Is that also near the --  
45 MR. NICOLAISEN: Right mounted above the  
46 pump.  
47 MR. ROTH-ROFFY: Have you ever been told  
48 about a crack -- cracking of the drums, historical  
49 problem in the past --

1 MR. NICOLAISEN: No.  
2 MR. ROTH-ROFFY: -- where --  
3 MR. NICOLAISEN: No.  
4 MR. ROTH-ROFFY: -- somebody had found any  
5 cracking --  
6 MR. NICOLAISEN: No.  
7 MR. ROTH-ROFFY: -- in any of the headers or  
8 drums?  
9 MR. NICOLAISEN: No, never heard about it.  
10 MR. ROTH-ROFFY: Have you received any  
11 training in boiler inspection?  
12 MR. NICOLAISEN: No.  
13 MR. ROTH-ROFFY: You haven't gone to a  
14 special school?  
15 MR. NICOLAISEN: No, never.  
16 MR. ROTH-ROFFY: Just the training that you  
17 received -- well, maybe you could give us -- tell us  
18 what your training is, your background. When did you  
19 start working and going to sea or working with boilers?  
20 MR. NICOLAISEN: I start as seaman in 1960 on  
21 a steam ship.  
22 MR. ROTH-ROFFY: And had you gone to  
23 engineering training before that or --  
24 MR. NICOLAISEN: No, no, no, no, no, no. Not  
25 before that.  
26 MR. ROTH-ROFFY: Okay. Then if you could  
27 kind of take --  
28 MR. NICOLAISEN: And then I went home, went  
29 into this multidimensional school, and I started  
30 sailing again and back to school a year later.  
31 PARTICIPANT: What kind of school did you  
32 say? I'm sorry. What kind of school?  
33 MR. NICOLAISEN: You have to go to your  
34 school to educate you to become an engineer.  
35 MR. ROTH-ROFFY: About how long is that  
36 school?  
37 MR. NICOLAISEN: It's six months for -- to  
38 become a second engineer. Then you have to do -- that  
39 was that time.  
40 MR. ROTH-ROFFY: Sure.  
41 MR. NICOLAISEN: Now, you have to go three  
42 years. After that time, been sailing on different  
43 steam ships. I also been in Oslo two times, special  
44 training on boiler -- chemical treatment for the boiler  
45 water.  
46 MR. ROTH-ROFFY: Have you ever performed non-  
47 destructive testing of steel?  
48 MR. NICOLAISEN: No, never done that.  
49 MR. ROTH-ROFFY: Are you familiar with --



1 with the -- the process or the term non-destructive  
2 testing? There may be a different term in Norwegian  
3 that you're familiar with. For example, dye penetrant  
4 testing? Have you ever seen that done?

5 MR. NICOLAISEN: No, I never seen that done.  
6 I've been reading about it but that's all.

7 MR. ROTH-ROFFY: Okay. Have you ever done or  
8 seen done x-ray testing or ultrasonic testing or --

9 MR. NICOLAISEN: I've been seeing x-ray  
10 testing on board SS Norway.

11 MR. ROTH-ROFFY: Okay. Where -- where was  
12 that done, x-ray testing?

13 MR. NICOLAISEN: Last time I -- when I was --  
14 that was on Boiler 23. After the retubing, a lot of  
15 the pipes was x-rayed.

16 MR. ROTH-ROFFY: And do you recall where they  
17 did the x-raying exactly?

18 MR. NICOLAISEN: Miami.

19 MR. ROTH-ROFFY: Okay. It was retubed in  
20 1999 in Bremerhaugen, correct?

21 MR. NICOLAISEN: The thing I refer to was in  
22 March-April, I think, in '99, and it was finished  
23 retubing on Boiler 23.

24 MR. ROTH-ROFFY: Okay. So, the x-ray was  
25 done on what part of the boiler?

26 MR. NICOLAISEN: On the economizers at that  
27 time.

28 MR. ROTH-ROFFY: Okay. I think I'm going to  
29 have to stop and -- and switch the tape. So, if we  
30 need to take a break?

31 MR. NICOLAISEN: Okay.

32 (Whereupon, a recess was taken.)

33 (End Tape 1, Begin Tape 2)

34 MR. ROTH-ROFFY: Okay. Good morning, again.  
35 It's about 5 minutes to 10, and we're -- we've turned  
36 over the tape, and we're resuming our interview of Mr.  
37 Finn Nicolaisen, Second Engineer on the Norway.

38 Sir, when we took the break, we were talking  
39 about non-destructive testing, x-ray and dipenetrant,  
40 and you mentioned that you have seen the x-rays of the  
41 economizers on Boiler Number 23.

42 MR. NICOLAISEN: Yeah.

43 MR. ROTH-ROFFY: Have you seen any other x-  
44 rays in the past, other than that -- that time?

45 MR. NICOLAISEN: I was in November-December,  
46 there was some people on board the ship and they did  
47 some testing on Boiler 24.

48 MR. ROTH-ROFFY: What year, sir?

49 MR. NICOLAISEN: 2002, November-December.

1                   MR. ROTH-ROFFY: And they did x-ray testing  
2 or --  
3                   MR. NICOLAISEN: I'm not quite sure because I  
4 was not down at the boiler with them.  
5                   MR. ROTH-ROFFY: And that was Boiler 22?  
6                   MR. NICOLAISEN: 24.  
7                   MR. ROTH-ROFFY: 24.  
8                   MR. NICOLAISEN: Yeah.  
9                   MR. ROTH-ROFFY: And what part of the boiler?  
10                  MR. NICOLAISEN: Steam drum, water drum, and  
11 the header.  
12                  MR. ROTH-ROFFY: And you say you were not  
13 involved in that at all?  
14                  MR. NICOLAISEN: No.  
15                  MR. ROTH-ROFFY: Did you -- while they were  
16 doing that testing, did you -- did you at least walk by  
17 and see the equipment or --  
18                  MR. NICOLAISEN: No. I was left out. I was  
19 on duty in the control room.  
20                  MR. ROTH-ROFFY: Okay. So, who would have  
21 inspected that or who would have worked with them  
22 during that time on the ship's crew?  
23                  MR. NICOLAISEN: I'm quite sure we was with  
24 them.  
25                  MR. ROTH-ROFFY: Would have been another  
26 second engineer, you think, or a first engineer or do  
27 you recall?  
28                  MR. NICOLAISEN: I understand they didn't  
29 need any help from the ship. They was doing all by  
30 theirselves. There was two guys.  
31                  MR. ROTH-ROFFY: Do you remember the  
32 company's name?  
33                  MR. NICOLAISEN: (Inaudible.)  
34                  MR. ROTH-ROFFY: And do you know what part of  
35 the -- the drums and headers they were testing?  
36                  MR. NICOLAISEN: No, I have no idea. I not  
37 seen what they did.  
38                  MR. ROTH-ROFFY: And do you know if it was x-  
39 ray or other type of testing or do you recall?  
40                  MR. NICOLAISEN: I can't answer that because  
41 I was not there.  
42                  MR. ROTH-ROFFY: You weren't there. Okay.  
43 Do you know why they were called down to do the  
44 testing? Who called them down, and why?  
45                  MR. NICOLAISEN: I don't -- I don't know who  
46 was calling them down or why. I don't know.  
47                  MR. ROTH-ROFFY: You didn't tell the chief  
48 about some kind of a problem that you -- you didn't  
49 recommend that the testing be done?

1 MR. NICOLAISEN: No, I didn't. But I was  
2 told in advance that Boiler 24 had to be opened and for  
3 checking by the people.

4 MR. ROTH-ROFFY: Okay. And was that in here  
5 in Miami that you did that?

6 MR. NICOLAISEN: Yeah.

7 MR. ROTH-ROFFY: And who told you to get the  
8 boiler -- boiler ready for checking?

9 MR. NICOLAISEN: The chief engineer.

10 MR. ROTH-ROFFY: And you mentioned it was  
11 November-December. Was it two events or just --

12 MR. NICOLAISEN: No. One. I not quite sure  
13 because it was in the last week of November or the  
14 first week of December.

15 MR. ROTH-ROFFY: Okay. Are you familiar with  
16 the sliding feet or the -- the foundations for this --

17 MR. NICOLAISEN: Yeah. I know that.

18 MR. ROTH-ROFFY: Do you periodically grease  
19 the sliding feet on the -- on the boilers?

20 MR. NICOLAISEN: Yeah. We normally -- there  
21 is -- it's in the maintenance system, which supposed to  
22 give us an order and we don't know whether three or  
23 four months to grease sliding feets.

24 MR. ROTH-ROFFY: And where are the sliding  
25 feet located on Boiler Number 23, for example? On the  
26 front side or the back side or do you know?

27 MR. NICOLAISEN: There are four feet on the  
28 boiler. Three of them, you have to grease standing  
29 stuck. It's not to move at all, but the other three is  
30 to move a little bit back and forth.

31 MR. ROTH-ROFFY: Okay. Which is the one  
32 that's -- that's fixed or stuck?

33 MR. NICOLAISEN: The one that is fixed, the  
34 one -- it's on starboard side and the aft one on Boiler  
35 23. The forward one on Boiler 21. The aft port side  
36 on Boiler 24 and the forward one on Boiler 22.

37 MR. ROTH-ROFFY: Okay. So, three of them  
38 have grease fittings and --

39 MR. NICOLAISEN: Yeah.

40 MR. ROTH-ROFFY: -- the fourth one does not  
41 have grease fittings?

42 MR. NICOLAISEN: No, do not have.

43 MR. ROTH-ROFFY: Is that correct?

44 MR. NICOLAISEN: Yeah.

45 MR. ROTH-ROFFY: Do you have to go down  
46 underneath the boiler? Do you have tubing coming up or  
47 how do you grease them?

48 MR. NICOLAISEN: That is on most of them,  
49 there is -- you get down on the floor on -- on the

1 boiler flat and get a grease gun and grease them, but  
2 some, you have to go down.

3 MR. ROTH-ROFFY: Okay. For Boiler 23, for  
4 the headers, would you have to go down underneath there  
5 to -- to grease those?

6 MR. NICOLAISEN: On the forward port side,  
7 forward and aft, on the side. On the forward, you have  
8 to go down, I believe.

9 MR. ROTH-ROFFY: Okay. So, as far as you  
10 know, the -- the feet on the drum -- on the header, --

11 MR. NICOLAISEN: Yeah.

12 MR. ROTH-ROFFY: -- on 23, are both of those  
13 sliding?

14 MR. NICOLAISEN: No. Only one of them.

15 MR. ROTH-ROFFY: Okay.

16 MR. NICOLAISEN: Only one.

17 MR. ROTH-ROFFY: And again, which one is  
18 sliding as far as you know on -- on the header?

19 MR. NICOLAISEN: The aft one on Boiler 23.

20 MR. ROTH-ROFFY: Is the sliding one? The aft  
21 one? Is that what you said?

22 MR. NICOLAISEN: No. I said that the aft one  
23 is that, this stays stuck. The forward one is the one  
24 that is moving.

25 MR. ROTH-ROFFY: Okay. And have you ever had  
26 occasion to look at the slots on that forward sliding  
27 foot? Do you know which way the slots go? The  
28 elongated hole?

29 MR. NICOLAISEN: No, I can't recall that.

30 MR. ROTH-ROFFY: Are you aware that there are  
31 elongated holes in the foundations of the -- of the  
32 feet where -- where it's bolted?

33 MR. NICOLAISEN: I'm not sure if I understand  
34 the question.

35 MR. ROTH-ROFFY: Okay. Maybe if we could  
36 just make a little sketch. I believe there are four  
37 bolts --

38 MR. NICOLAISEN: Yeah.

39 MR. ROTH-ROFFY: -- from the -- there's --  
40 well, there's -- okay. There's some bolts that hold  
41 the boiler --

42 MR. NICOLAISEN: Yeah.

43 MR. ROTH-ROFFY: -- header down to a  
44 structural --

45 MR. NICOLAISEN: Yeah.

46 MR. ROTH-ROFFY: -- that goes down to the  
47 shoe.

48 MR. NICOLAISEN: Yeah.

49 MR. ROTH-ROFFY: Under here, there's some

1 holes. Are you aware that some of them --  
2 MR. NICOLAISEN: You can't see the holes.  
3 MR. ROTH-ROFFY: You can't see the holes?  
4 MR. NICOLAISEN: No, you can't see because  
5 it's covered by a washer.  
6 MR. ROTH-ROFFY: Okay. What's that?  
7 PARTICIPANT: Reference the drawing to the --  
8 MR. ROTH-ROFFY: No. It was just -- the  
9 drawing was only to kind of clarify, but the idea -- I  
10 think the response is you can't see any --  
11 MR. NICOLAISEN: No, can't see the holes.  
12 You can't see the holes.  
13 MR. ROTH-ROFFY: Okay. Okay. I'd like you  
14 to have a look at this, your Maintenance and Repair Log  
15 --  
16 MR. NICOLAISEN: Hm-hmm.  
17 MR. ROTH-ROFFY: -- for the boilers. On Week  
18 Number 6, there's a new highlighted area. Could you  
19 read that, please? What that says? Is that your  
20 handwriting?  
21 MR. NICOLAISEN: No, it's not mine. It's not  
22 my handwriting, and I'm not able to read what it says.  
23 MR. ROTH-ROFFY: You can't read it?  
24 MR. NICOLAISEN: No.  
25 MR. ROTH-ROFFY: Which week did you come  
26 aboard? Do you recall? Could you maybe flip through  
27 it and see when your handwriting starts?  
28 (Pause to review document)  
29 MR. NICOLAISEN: It starts Week 12.  
30 MR. ROTH-ROFFY: Week 12 is when you came  
31 aboard?  
32 MR. NICOLAISEN: Yeah.  
33 MR. ROTH-ROFFY: And I think you've probably  
34 already said, but who did you relieve at Week 12, the  
35 name of the person?  
36 MR. NICOLAISEN: It was Arnal Nielsen.  
37 MR. ROTH-ROFFY: Arna?  
38 MR. NICOLAISEN: Arnal Nielsen.  
39 MR. ROTH-ROFFY: And is that the name of the  
40 person that is -- is relieving you this Sunday?  
41 MR. NICOLAISEN: Yeah.  
42 MR. ROTH-ROFFY: Same person?  
43 MR. NICOLAISEN: Yeah.  
44 MR. ROTH-ROFFY: Okay. Maybe we could talk  
45 with Mr. Nielsen.  
46 MR. NICOLAISEN: Yeah. He's on board.  
47 MR. ROTH-ROFFY: Oh, he's on board now?  
48 MR. NICOLAISEN: Yeah.  
49 MR. ROTH-ROFFY: Okay. That's all I have.

1 Brian Curtis?  
2 MR. CURTIS: I don't have anything now.  
3 MR. OELSCHLEGEL: I just have one -- one last  
4 question.  
5 When -- my understanding, you said you were  
6 in the shipyard in 2001?  
7 MR. NICOLAISEN: Yeah. I was.  
8 MR. OELSCHLEGEL: Okay. When you -- when  
9 you're in the shipyard and they open up the boiler for  
10 inspection, --  
11 MR. NICOLAISEN: Yeah.  
12 MR. OELSCHLEGEL: -- who on the engineering  
13 staff is responsible or -- or who on the engineering  
14 staff looks -- looks at the boiler while it's in the  
15 shipyard? In other words, inspects the parts that  
16 aren't normally opened up or when you're steaming?  
17 MR. NICOLAISEN: The engineer in charge of  
18 the boiler is supposed to go in there and check.  
19 MR. OELSCHLEGEL: Okay. And who would that  
20 be?  
21 MR. NICOLAISEN: Was me.  
22 MR. OELSCHLEGEL: Okay. Okay. Okay. And  
23 can you tell us just what you normally inspect? Say on  
24 any one of the boilers when they've been opened up,  
25 what -- what do you take a look at?  
26 MR. NICOLAISEN: Thing we normally check is  
27 the -- the funnel for the skimming of the boiler.  
28 MR. OELSCHLEGEL: Hm-hmm.  
29 MR. NICOLAISEN: We have to check that.  
30 MR. OELSCHLEGEL: Okay.  
31 MR. NICOLAISEN: That's the first thing we  
32 check. If it's thick, tight, if it's okay and the line  
33 is okay.  
34 MR. OELSCHLEGEL: Right. Okay. Do you look  
35 at things like the -- like the superheater? The  
36 superheater headers? The handholds? The --  
37 MR. NICOLAISEN: Yeah. We check if there is  
38 a leaking on the handholds.  
39 MR. OELSCHLEGEL: Okay. And you open up the  
40 drums? Do you open up the -- the water drum and the  
41 steam drum --  
42 MR. NICOLAISEN: Yeah. We open.  
43 MR. OELSCHLEGEL: -- for inspection?  
44 MR. NICOLAISEN: Yeah. Open everything.  
45 MR. OELSCHLEGEL: Okay. Do you go inside the  
46 drums?  
47 MR. NICOLAISEN: Yeah. Go inside.  
48 MR. OELSCHLEGEL: Okay. And you go inside?  
49 MR. NICOLAISEN: Yeah. Go inside and check

1 everything and the diesel superheater, too.  
2 MR. OELSCHLEGEL: And the diesel superheater,  
3 too.  
4 MR. NICOLAISEN: Hm-hmm.  
5 MR. OELSCHLEGEL: Okay. When you go inside  
6 the water drum, --  
7 MR. NICOLAISEN: Yeah.  
8 MR. OELSCHLEGEL: -- can you tell how -- how  
9 you would inspect the water drum or steam drum? Do you  
10 go in one end and do you go out the other end?  
11 MR. NICOLAISEN: No. You go in on the top,  
12 little bit in the front of the steam drum, the manhole,  
13 but you can go down.  
14 MR. OELSCHLEGEL: Okay.  
15 MR. NICOLAISEN: Then you have to go under  
16 some special plates laying there. You're looking at  
17 the part, see if you can see anything on the parts.  
18 MR. OELSCHLEGEL: Right.  
19 MR. NICOLAISEN: Looking at everything, see  
20 if it's okay.  
21 MR. OELSCHLEGEL: Okay, okay. So, if you  
22 were inspecting, say, the water drum, --  
23 MR. NICOLAISEN: Yeah.  
24 MR. OELSCHLEGEL: -- do you enter --  
25 MR. NICOLAISEN: You have to enter the same  
26 hole as you have to leave.  
27 MR. OELSCHLEGEL: I see. Okay. I  
28 understand.  
29 MR. NICOLAISEN: Hm-hmm.  
30 MR. OELSCHLEGEL: I understand. Okay.  
31 MR. FARKAS: Just for my clarification, when  
32 you say water drum, -- this is Dan Farkas -- do you  
33 mean the header? Are we all understanding -- are we  
34 using the same term?  
35 MR. NICOLAISEN: No. It's different.  
36 MR. FARKAS: Okay.  
37 MR. OELSCHLEGEL: This is Chris Oelschlegel  
38 with the Coast Guard asking these questions. Sorry. I  
39 meant to identify myself.  
40 MR. ROTH-ROFFY: Tom Roth-Roffy. Could we  
41 just for the record identify what we're talking about?  
42 There's a -- the upper drum is called the steam drum.  
43 MR. NICOLAISEN: Steam drum. The water drum  
44 is the big one down, and then the header is on -- on  
45 the Boiler 23. It's on the starboard side.  
46 MR. ROTH-ROFFY: Okay.  
47 MR. OELSCHLEGEL: Okay. Let's just back up a  
48 little bit.  
49 MR. NICOLAISEN: Hm-hmm.

1 MR. OELSCHLEGEL: For the steam drum, could  
2 you describe how you would enter and examine the steam  
3 drum?  
4 MR. NICOLAISEN: Yeah, yeah.  
5 MR. OELSCHLEGEL: Okay.  
6 MR. NICOLAISEN: Hm-hmm.  
7 MR. OELSCHLEGEL: Can you describe how you  
8 enter and examine the steam drum? How do you -- how do  
9 you do that?  
10 MR. NICOLAISEN: It was the steam drum I was  
11 talking about. You have to go in on the top and go  
12 under some plates in there and you check it, examine  
13 it. You check the bolts and you check the pipe. If  
14 you can see something there, you light up and check it.  
15 MR. OELSCHLEGEL: Okay. And in the water  
16 drums, what we've described as the two lower --  
17 MR. NICOLAISEN: Yeah. The two lower parts.  
18 If it's only for inspection, we open one side, go in,  
19 close to the water side and then back again, both the  
20 same.  
21 MR. OELSCHLEGEL: At the same end?  
22 MR. NICOLAISEN: Yeah.  
23 MR. OELSCHLEGEL: Okay.  
24 MR. NICOLAISEN: But if there is work to be  
25 done on the water drum, we open both ends.  
26 MR. OELSCHLEGEL: Okay. I understand.  
27 MR. NICOLAISEN: Hm-hmm.  
28 MR. OELSCHLEGEL: Okay. Thank you very much.  
29 That's all I have. Thank you.  
30 MR. RILEY: Can I just --  
31 MR. ROTH-ROFFY: Your name?  
32 MR. RILEY: John Riley. Can you just please  
33 repeat which are the fixed feet under the headers? I  
34 couldn't write fast enough.  
35 MR. NICOLAISEN: Oh.  
36 MR. RILEY: I have starboard side aft on  
37 Boiler 23.  
38 MR. NICOLAISEN: Starboard side.  
39 MR. RILEY: This is the fixed -- the fixed  
40 feet?  
41 MR. NICOLAISEN: Yeah. The boiler is like  
42 this. You have four of them like this. That is 21,  
43 23, 24, and 22. The fixed one is this one on 21, this  
44 one on 23, this on 24, and this on 22.  
45 MR. RILEY: Thank you. Let me just make a  
46 copy of that sketch.  
47 MR. ROTH-ROFFY: And actually, John, if you  
48 could verbally describe that sketch for the record?  
49 MR. RILEY: The second engineer's sketched



1 the location of Boilers Numbers 21, 22, 23, 24, and  
2 with a small circle on the rectangular outline of each  
3 boiler, put a small circle over the corner of the  
4 boiler indicating the fixed feet under the headers.

5 MR. ROTH-ROFFY: Okay. And for -- if you  
6 could describe the location of the small circle on each  
7 -- on each boiler?

8 MR. RILEY: On Boiler 21, forward end  
9 starboard side, and by forward, I mean the forward end  
10 of the vessel. On Boiler 22, the forward port corner  
11 of the boiler. Boiler 23, the aft starboard corner of  
12 the boiler. Boiler 24, the aft port side of the  
13 boiler.

14 Thank you.

15 MR. NICOLAISEN: Okay.

16 MR. RILEY: That's all. Thank you.

17 MR. OLSEN: Just curious. On this --

18 MR. ROTH-ROFFY: Ken Olsen.

19 MR. OLSEN: Ken Olsen. Can you -- we might  
20 have asked for this before, and if so, pardon me. Do  
21 you know if Harris Pie Repair Company has a Miami  
22 office or do the people come from Singapore or  
23 overseas?

24 MR. NICOLAISEN: It's an English company,  
25 operating from England.

26 MR. OLSEN: Okay. And it's Harris Pie?

27 MR. NICOLAISEN: Yeah.

28 MR. OLSEN: Okay. Okay. That's it. That's  
29 all I have. Thank you.

30 MR. NICOLAISEN: Okay.

31 MR. ROTH-ROFFY: You mentioned that -- I'm  
32 going to have to -- I'm sorry I have to ask the  
33 question again. Have you ever seen a BV surveyor in  
34 any of the headers on any of the boilers?

35 MR. NICOLAISEN: Not that I can recall.

36 MR. ROTH-ROFFY: Okay. And I believe you've  
37 also said that you've never observed a complete boiler  
38 survey by a BV --

39 MR. NICOLAISEN: No, never.

40 MR. ROTH-ROFFY: -- surveyor? In the 11  
41 years that you've been working as -- as a second  
42 engineer in charge of the boilers, you've never --

43 MR. NICOLAISEN: No.

44 MR. ROTH-ROFFY: -- participated --

45 MR. NICOLAISEN: Only if we see a wire, go in  
46 on the steam drum. What we have done later, I'm not  
47 able to tell because I have not seen it.

48 MR. ROTH-ROFFY: Okay. So, usually you don't  
49 -- you don't follow the -- the BV surveyor around the

1 boiler as he --  
2 MR. NICOLAISEN: No.  
3 MR. ROTH-ROFFY: -- performs --  
4 MR. NICOLAISEN: The chief engineer.  
5 MR. ROTH-ROFFY: Oh, the chief engineer?  
6 MR. NICOLAISEN: Yeah.  
7 MR. ROTH-ROFFY: Okay. Have you ever seen  
8 the chief engineer enter any of the drums on any of the  
9 boilers?  
10 MR. NICOLAISEN: No.  
11 MR. ROTH-ROFFY: Normally when the ship's  
12 force does a plugging of a tube, does the chief  
13 engineer normally come down and -- and look at that  
14 work after it's done or would that be you and the  
15 first?  
16 MR. NICOLAISEN: Me and the first engineer.  
17 MR. ROTH-ROFFY: Does the chief engineer ever  
18 come down to inspect that work after it's completed?  
19 MR. NICOLAISEN: I seen him down, but what he  
20 have been doing down, I -- I can't say.  
21 MR. ROTH-ROFFY: I'm sorry. Could you repeat  
22 that last part of that sentence?  
23 MR. NICOLAISEN: I cannot tell what he have  
24 been doing. I have seen him down when the boiler ave  
25 been open, --  
26 MR. ROTH-ROFFY: Right.  
27 MR. NICOLAISEN: -- but I'm not -- I'm not  
28 able to tell what he have been doing down there because  
29 I do not keep an eye on him all the time.  
30 MR. ROTH-ROFFY: Sure. He doesn't work for  
31 you, right?  
32 MR. NICOLAISEN: No.  
33 MR. ROTH-ROFFY: Has the chief engineer ever  
34 told you about any cracks on the boilers --  
35 MR. NICOLAISEN: No.  
36 MR. ROTH-ROFFY: -- and to watch --  
37 MR. NICOLAISEN: No.  
38 MR. ROTH-ROFFY: To pay attention or, --  
39 MR. NICOLAISEN: No.  
40 MR. ROTH-ROFFY: -- you know, to --  
41 MR. NICOLAISEN: Never. Never been  
42 mentioned.  
43 MR. ROTH-ROFFY: Okay. I'm going to pass it  
44 to Brian.  
45 MR. CURTIS: I'm good.  
46 PARTICIPANT: No questions.  
47 MR. RILEY: No questions.  
48 MR. OLSEN: Quick question. Just -- just to  
49 reaffirm. The only --

1 MR. ROTH-ROFFY: I'm sorry. I thought I was  
2 going to pass it to Brian and you're Ken Olsen. So, go  
3 ahead. Ken Olsen. Everybody kind of shook their head  
4 and -- and the transcriptionist might think that you're  
5 Brian.

6 MR. OLSEN: Ken Olsen.  
7 So, it -- it's right for us to think that the  
8 only people you've ever seen in that drum -- in the  
9 water wall header, rather, are the -- are the fitters,  
10 is that correct?

11 MR. NICOLAISEN: Yeah. Only seen them.

12 MR. OLSEN: No -- have you -- you've never  
13 seen anyone else in -- in that -- in those drums?

14 MR. NICOLAISEN: No, I never seen anybody  
15 else.

16 MR. OLSEN: Excuse me. Water wall headers.  
17 Did -- does your ship have a cadet? Do you carry  
18 cadets?

19 MR. NICOLAISEN: No.

20 MR. OLSEN: No cadets. Okay.

21 MR. NICOLAISEN: No.

22 MR. OLSEN: That's all.

23 MR. ROTH-ROFFY: And just to follow up on  
24 that, are you able to fit inside that header?

25 MR. NICOLAISEN: Oh, yes.

26 MR. ROTH-ROFFY: No problem? You're a fairly  
27 large person, right?

28 MR. NICOLAISEN: Yeah. But there's no  
29 problem.

30 MR. ROTH-ROFFY: About how tall are you, sir?

31 MR. NICOLAISEN: Six feet.

32 MR. ROTH-ROFFY: And you're over 200 pounds  
33 anyway, right?

34 MR. NICOLAISEN: Yeah. About 20 pounds.

35 MR. ROTH-ROFFY: And again, could you tell us  
36 again when the last time you've been in any of the  
37 headers on any of the boilers?

38 MR. NICOLAISEN: About Friday, the 22, this  
39 month, May, I was inside both the steam header and the  
40 steam drum and the header.

41 MR. ROTH-ROFFY: Of which boiler?

42 MR. NICOLAISEN: Boiler 21.

43 MR. ROTH-ROFFY: And that was -- the reason  
44 you were in that 21 is you had done some retubing or --  
45 I mean, plugging?

46 MR. NICOLAISEN: We had been doing some -- we  
47 have been plugging one tube, so I went inside to check,  
48 see if everything was okay.

49 MR. ROTH-ROFFY: Okay. And do you recall any

1 other previous times? Do you normally go into the  
2 headers when you -- when you plug --

3 MR. NICOLAISEN: Yeah. Normally, I do.

4 MR. ROTH-ROFFY: And that's to inspect the  
5 weld on the tube or for what purpose?

6 MR. NICOLAISEN: To check if everything is  
7 clean, if they have been removing everything. The  
8 tools and everything.

9 MR. ROTH-ROFFY: Do you also have a look at  
10 the weld?

11 MR. NICOLAISEN: Yeah. You -- you check if  
12 it have been welded. You check that, too.

13 MR. ROTH-ROFFY: Okay. That's about all I  
14 have. Anybody have anything before we let Mr.  
15 Nicolaisen go?

16 (No response)

17 MR. ROTH-ROFFY: All right, sir. Well, thank  
18 you very much for coming down and talking to us.

19 We'll now conclude our interview. It's about  
20 25 minutes after 10:00, and again, thanks very much.

21 MR. NICOLAISEN: Okay.

22 (Whereupon, at 10:25 a.m., the Investigative  
23 Interview of Finn Nicolaisen, Second Engineer, SS  
24 Norway, was concluded.)