

Balto electricFwd: Ex-M/V Suunta propulsion

milos@icetramp.com <milos@icetramp.com>

Mon 2024-02-19 2:08 PM

To: Jarle Rasmussen | Vestland Marine <jarle.rasmussen@vestlandmarine.eu>

Cc: Marco Coppola | Vestland Marine <marco.coppola@vestlandmarine.eu>

Begin forwarded message:

From: Viktor Lemmetty <vilemm47@gmail.com>

Subject: Re: Ex-M/V Suunta propulsion

Date: February 19, 2024 at 6:47:42 AM EST

To: "milos@icetramp.com" <milos@icetramp.com>

Dear Milos,

Yes, this is true, unfortunately the older generation is leaving and the younger ones do not fully understand the effect of old devices. The propulsion system installed on Saaristo and Suunta are prototypes of modern Finnish icebreakers. Therefore, they prototypes are quite difficult to operate.

I'll try to contact those Finnish guys who were going to come to Balto last summer. But it's school season now and I don't know what they will answer. I remember they were ready to look at the control system on Balto, but did not guarantee that they could find and fix the problem.

As I understand it, you definitely need to get this ship underway, but things are not in the best order with the funds.

Sorry, but I'm going back to what's more profitable. If the original control chain from the control room is not reliable and the control from the engine room works flawlessly (as was noted in the reports), then the option that I proposed should be used. And when the season in Greenland is over, try, if you want, of course, to set up an original control system from the wheelhouse. But it's an expensive pleasure to change electronic cards on the bridge. You need to consult with the guys who set up the system, because they are the most in the know.

But let's see what the Finnish hot guys have to say.

Sincerely

Your Victor

PS. Presumably there is some small problem in the control system that appeared when the ship was in Africa and it exists, but how can it be detected? It aggravates the entire system more and more over time.

The ship, being in Africa, could not move under its own power, but somehow it still reached Europe under its own power. What was done or repaired there? When Aulis and I checked the system, it worked, but I remember well that there was a slight delay in the command for forward movement, I saw this in the engine room when I myself moved the control lever. Aulis wanted sea trials. Then, after some time, Chris discovered that there

was no forward movement again, although before that, according to him, everything worked and he had done this before periodically.

Last summer the ship went on a voyage, but again after a certain time problems began. If you find the cause of these problems, then everything will fall into place. It's a pity that the reason was never found.

But it doesn't have to be that way. If someone invented some kind of thing, then someone else will definitely figure it out and understand how this thing works.

ma 19. helmik. 2024 klo 12.16 milos@icetramp.com (milos@icetramp.com) kirjoitti:

Dear Viktor,

I agree with you. However since this side of job was headed by Chris, and now our new partner, I am not in charge and need to see if they are onboard to try set it up like this, write ER controls and telegraph.

I do not see it as a big issue.

However, we still need to make sure even this variant is stable and reliable, and make a provisions for any likely failure and resets needed. It would be extremely hard todo repairs in Greenland logistically.

I e mailed Jaime, and the Finish engineers he reffered me to. But I never got any reply from anyone.

It seems an ungrateful job and few people which could do it have no time to deal with it....

Yours,
Milos

On Feb 17, 2024, at 7:03 AM, Viktor Lemmetty <vilemm47@gmail.com> wrote:

Please forgive me dear Milos,
perhaps it is as you say. My memory is starting to fail me. I just remember well that it was necessary to conduct sea trials and it was not possible to do this then.

Indeed, if so much of the electronics has been replaced and repaired, then all that remains is to bring the settings and parameters of the electrical signals up to standard.

But if this is a very expensive and overwhelming job at the moment, then does it make sense to abandon electronic control from the wheelhouse? This is only the case if the control from the engine room is stable and without interference.

I return to the idea of the machine telegram. Since not all captains agree to this option, citing the safety of navigation, there is a cheaper option to temporarily put the ship underway. This means refusing to switch control of the propulsion system from the wheelhouse electronically, leaving control from the engine room.

And instead of electronics, use control from the wheelhouse using hydraulics, or even simpler, using an electric actuator, which will be mechanically connected to the control lever located on the control panel in the engine room. In both cases, you just need to install another remote control on the bridge and stretch either thin hydraulic tubes with hydraulic cylinders or an electric cable with an actuator from the wheelhouse to the engine room.

Of course, the electric version with an actuator is simpler, less work.

I have not yet contacted those guys from Finland who were interested in coming to Balto last summer.

And there was no news from them in my direction.

I think that if you can't get any help from them, then the option I proposed for parallel control via hydraulics or an electric actuator should be considered and worked out. This may be a plausible way out of this predicament, but only if the engine room controls work flawlessly.

Yours
viktor

la 17. helmik. 2024 klo 12.53 milos@icetramp.com (milos@icetramp.com)
kirjoitti:

Dear Viktor,

Since you and Aulis were last there, all generators have been replaced and rebuilt.

We have, as I mentioned, replaced and measured all of the control system currents, and it included replacing synchro receivers to the wheel house control.

It was all tested according to Chris and electricians, at dock but under strain and for prolonged times. The logic boards for FWD and ASTRN were made new and old ones fixed, as well. Perhaps not all are good, but there is quite a few now. All the switches have been rebuilt or changed. I would venture a thought that, what is wrong is the parameters values, which need to be reset after each such failure of magnetization etc.

No one seems able or willing to put effort and time in to this.

The vessel does have telegraph controls and signals, so yes, this was an option, but not sure why was it not utilized.

As Chris was in charge of this effort, my knowledge is only circumstantial at best.

Other work done onboard was enormous both mechanical, plumbing wise and the entire interior as well as ext yard work.

However we have little to show for it unless it moves.

Unfortunately, we are way past salvaging our efforts now fully, as we have missed the first year of our contract, subsequent to 3 years

postponements due to Covid etc.

But if we do not figure the solution to this control thing in the next month, we will not be able to even try to bring along the partner or sell the vessel to recuperate some debt.

Not sure how to go about it. But only viable solution possible seems finding someone with some knowledge to put some time in this. As all this has already been done, it is possible that with few small changes in settings it will go back to normal.

That is our only hope.

Yours,
milos

On Feb 16, 2024, at 6:06 PM, Viktor Lemmetty
<vilemm47@gmail.com> wrote:

Dear Milos,

When Aulis and I were last on Balto, the system worked when controlled from the engine room. But we did not test its operation from the wheelhouse.

Aulis really wanted to conduct sea trials to determine the parameters on the move and in different modes, but the auxiliary generators were not ready. Only a diesel generator with a General Motors engine worked. And the ship was not ready to go to sea. I remember that even then, with a reverse (astern) command, the propeller shaft motor turned immediately, but with a forward (ahead) command, there was some delay. However, then we did not pay attention to this because we decided that during running tests we would still have to fine-tune the system.

The report that I read also stated that when controlled from the engine room, the system is stable, but when switched to control from the wheelhouse, it goes into an unbalanced state, which clearly indicates that there is a failure in the circuit between the wheelhouse and the engine room.

The recommendation specifically mentions the instability of any electronic card in the control room. Therefore, you need to look for a problem there. It is possible that the cause of the control system failure is due to bad old switches in the engine room, but this was probably checked by the electrical engineers from the very beginning. Further, without preliminary sea trials it is impossible to see the full operation of the entire propulsion system and control.

Dear Milos, after such a huge amount of work done, there is no need to despair; all that remains is to find a solution to the problem, which is somewhere between the control lever in

the wheelhouse and the same lever in the engine room. If the system works properly from the engine room, then what prevents you from at least temporarily installing an engine room telegraph?

During maneuvers, the watch engineer can control the operation of the propulsion system from the engine room upon command from the wheelhouse.

In the past, motor ships sailed this way.

And nowadays, every ship has just such a backup system with a machine room telegraph or through voice commands using a walkie-talkie.

It's a pity that today's captains don't all know how to steer a ship using a machine room telegraph.

Of course, one of the Finnish specialists can certainly be invited, but after the setup that was done by three electrical engineers, it is unlikely that they will be more useful. But you can try, you never know.

On the other hand, one could make a claim against these three electrical engineers and ask them to check the operation of the system while the ship is underway. In fact, there may be some kind of malfunction, but they had to look for it at random.

So they had to check and change a lot.

Aulis used an oscilloscope for signal parameters, without which fine tuning was impossible. It's such a pity that he died before finishing the job.

But all the same, you need to somehow bring the matter to the end, you shouldn't give up, because all the work done is almost at the finish line.

Yours
viktor

pe 16. helmik. 2024 klo 18.49 milos@icetramp.com
(milos@icetramp.com) kirjoitti:

Dear Viktor,

Thanks for looking in to it. I agree that was the likely reason.

However, the issue is that we have gone and done the following:

1. cleaned all connections, replacing and rebuilding components where needed, we also searched with IR afterwards to find any possible areas of overheating etc...
2. With 3 electrical engineers (all with PhDs) we traced entire control system, measured all connections and replaced most of components and created new logic boards, etc. When completed and tested, this seemed stable.

Then (according to Chris as I understand, it all got out of whack again due to new synchro receiver being not properly screwed in the wheelhouse).
Since then the system can be working or not, but it is not reliable, and there is no person able to enter correct adequate values to all parameters.

Now, I have no idea if someone can go through this again and perhaps find another thing missed, or simply enter the correct values to all components, which would then stabilize the system. The whole thing worked when we sailed, and when you and Aulis were onboard, correct? Hence, it should work well with all new and replaced components.

The whole new system seems unaffordable, and no company would even consider re=building such old school thing without guarantees, so the proposals include replacing the whole electronic propulsion motor, etc. In any case it is all likely more than a new boat. Our only way forward is to find someone old=school familiar and willing to tackle the whole thing in old way. It seems like the whole thing is almost renewed but just needs a bit to tie it together.

Or I could be completely wrong, in which case it is just a pile of scrap with beautiful interior...

Yours,
Milos

On Feb 14, 2024, at 4:52 PM, Viktor Lemmetty
<vilemm47@gmail.com> wrote:

Dear Milos.

I have just read the report and I think that some of the problems described there began already while the ship was in Africa. Thanks to this report, I now understand more clearly why the problems were getting worse. The reasons are a hot climate for which the ship was not intended, a lot of dust, which also affects the operation of electronics, especially such old ones as on Balto, and incompetent maintenance of all electrical and electronic

equipment.

All this naturally influenced electronics.

In my not very competent opinion, I think the recommendations in the report are correct. Everything, of course, depends on the price of the issue and guarantees for the stability of the operation of the updated control system of the entire propulsion system. It is necessary to calculate and weigh the pros and cons and pay attention to the durability of the system. If it is reliable, then in the future less money will be spent on repairs compared to the old one, which will break down more and more often.

Yours,
viktor

ke 14. helmik. 2024 klo 22.37 Viktor Lemmetty
(vilemm47@gmail.com) kirjoitti:

Dear Milos,

Thanks for the immediate response.

I think I will be of little use for the simple reason that I am not very familiar with this system. But I still want to be useful in at least some way. Tomorrow I'm taking my wife to the Kuopio clinic, I'll be home in the evening. It's easier for me to communicate in writing; I have limited ability to understand English by ear, especially since my hearing has also deteriorated.

It seems to me that in order to find out the cause of the malfunctions, you need to know what exactly happened to the ship during its operation in Africa. Why did the propeller power plant control system fail? Since in all likelihood it is impossible to find out, it means that a lot of work remains to identify the cause of the failure by checking all components and the compliance of the wiring and connections of the units and blocks according to the electrical diagram. Indeed, we need someone who knows this old electronics well.

Perhaps you should actually contact Jarmo Viitanen. Perhaps he has some connections.

Yours,

viktor

ke 14. helmik. 2024 klo 19.45

milos@icetramp.com (milos@icetramp.com)

kirjoitti:

Dear Viktor,

I was just thinking how you are these past two days.

Thank you for thinking on this, and about us.

We got in real big trouble with this. What seemed like a small glitch turned entire vessel unusable and our whole investment of money and time useless.

I follow what you are saying, and as you know we had spend a lot of time tracing and replacing many or most components of the control system.

However it seems that no one got the parameters stable or in their correct values. Now, it does not seem we are able to find anyone who can or better is knowledgeable and willing to help find the exact cause and set it up.

Chris was the one in charge doing most of this, so he was supposed to be familiar, but it seems he could not follow it through. Andreas Hub, never drove the vessel, neither is he any electrical engineer beyond moderate home electric basics. He also exaggerates the truths a bit.

I am still hoping and trying to find someone from Finland familiar with similar older system who is willing to help. Perhaps we can start calling same people again.

I was going to start with Jarmo who sold the vessel than try the school again.

Below are two reports of last electrician who tried to help. I don't know what to do about it, but it makes some sense.

Lets talk if you have some time tomorrow.

Yours,

Milos

On Feb 14, 2024, at 9:39 AM,
Viktor Lemmetty
<vilemm47@gmail.com>
wrote:

Dear Milos, dear Chris.

I constantly thought about the problem of the propulsion system on Balto.

According to Aulis, the pulse generators that control the thyristors very, very rarely fail. In order for this device (I mean the pulse generator, which I carried for research and then sent by mail back to you) to break down, according to Aulis, a change in the operating parameters of the electronics is necessary.

I remember how Aulis, while we were checking and cleaning the panels with electronics from dust, several times drew attention to (in his opinion) some discrepancy in the connection of the wires of the electronic units. I don't know where exactly. I offered to fix it, but he objected, saying that if the system works, there is no need to change anything.

Now I thought. What was the reason for Balto when the ship was in Africa and was not running, how it was corrected and how long the ship was on the road during its passage to

Portugal. The fact that an electric generator was installed on deck to power the entire ship's network is one thing. But what was done to ensure that the ship could move?

I remember the last former owners called me from Africa, they could not find the cause of the malfunction, the electric propeller motor did not work. Now when Balto went on a voyage last year and suddenly returned, what happened? Has the pulse generator really failed again?

If so, then you need to look for the reason why this happens. One more thought. When I was on Togo in the summer of 2019, the captain, Anders Hubl, and I had a conversation regarding Balto. He said that he was driving Balto from Africa to Europe. He also said that by another profession he was an electrician. Perhaps he knows what and how was done to get the ship moving.

I could be wrong, but if the pulse generator fails after some time, then the obvious reason must be a change in the parameters of the signals supplied to it.

It would be nice if this assumption helps you in some way.

Yours viktor

Happy Valentine's Day!

ma 22. tammik. 2024 klo 13.39

milos@icetramp.com

(milos@icetramp.com) kirjoitti:

Dear Tomi,

I am reaching out to you again.

We have still not resolved the propulsion control issue on "Suunta/Balto.

The vessel is now in a colder, yet much closer location in Gdansk, and we are wondering if you have anyone available to take a look and propose a feasible solution. We can discuss any terms. While there is no ultra immediate urgency now, we need to get on the good side of this issue soon.

Many thanks for consideration and help.

Yours,
Milos
+1 917 698 2839

On Jun 22, 2023,
at 3:03 AM,
Korhola Tomi
<Tomi.Korhola@xamk.fi> wrote:

Hi Chris and
Viktor,

Thanks for the information and pictures you provided regarding the problems with your ship. I apologize for the delay in my reply. I have been in contact with my colleagues

about helping you and we have been looking for the most suitable person. One student from our institution has worked as an electrician on the Saaristo ship and could be a competent guy to help you, but he is currently working.

One of our teachers is currently on a business trip in Portugal and might be able to visit your ship. I haven't received more detailed information from him about his schedule for a couple of days now, but I will continue to find out.

Last night I also talked with our other teacher, who has a long work experience as a ship's electrician and he might be interested in coming to your help with me and wanted more information about your

schedule and
how the travel
costs would be
handled.

Your ship's
system is
somewhat
unknown to us,
but it seems that
you have
comprehensive
instructions that
should help us
get along well.
However, I still
do not dare to
promise that we
will fix the
system with
complete
certainty.

Best regards
Tomi Korhola

Lähetäjä:

milos@icetramp.com
<milos@icetramp.com>

Lähetetty:

Tuesday, June 20,
2023 4:45:35 PM

Vastaanottaja:

Korhola Tomi
<Tomi.Korhola@xamk.fi>

Kopio: Viktor

Lemmetty

<vilemm47@gmail.com>; William van
Nes

<cvn28@hotmail.com>; Kim Smith
<mrkim300@gmail.com>

Aihe: Ex-M/V
Suunta propulsion

Hello Tomi,
This is Chris van
Nes, a friend of
Viktor. I am the
one working on
this Sunnta
propulsion
system.

Most recently we
left from Lisbon
with good
results. There
was one relay in
the bank of pm n
protection relays
that was suspect
but it ran for 5
hr. Before it
tripped the mag
fell out. Our
Captain decides
to head back to
Lisbon.

The system ran
us back ok.

There was an
electrical
engineer helping
me with the
procedure to
adjust this
system
according to
these sheets
from our books.
The engineer
had to leave on
another job.

I have taken
pictures of these

sheets for your
reference below.

Starting the
adjustments with
the synchros and
putting them in
the zero
condition
jumping voltage.
I started to go
through the
procedure but
found places
where there was
no output to
measure or
adjust.

I have stopped
because I do not
want to make
anything worse.

Here are the
pictures, maybe
you can see
through this
better than me. I
was able to
Many many
electro
mechanical fixes
and did have her
going nicely for
a time but I am a
little bit over my
head on this last
setup stage.

<image0.jpeg>

<image1.jpeg>

<image2.jpeg>

<image3.jpeg>

<image4.jpeg>

Sent from my
iPhone

