Correspondence of the author
with James F. Undén and Lars Lind,
Department of Shipping and Marine Technology,
Chalmers University of Technology, Göteborg,
writing their master thesis at SSPA on the
'Implementation [of the ISO 15016 method] and
comparison of methods for sea trial analyses'.

From: "Michael Schmiechen" <m.schm@t-online.de>
To: "James F Undén" <unden@student.chalmers.se>
Cc: "Rickard Bensow" <rickard.bensow@chalmers.se>;
"Klaus Wagner" <IKWAG@web.de>
Sent: Saturday, November 27, 2010 4:28 PM
Subject: Re: Master Thesis Report

Dear young friends,

many thanks for finally sending me your thesis. And here is my short
comment.

As I already concluded from our correspondence, you were not really
interested in my innovative, rational approach. In your thesis you just
followed the task assigned and stuck to ISO 15016: 2002, without referring
to its shortcomings and my simple way to overcome them. I do not know what I
am more impressed with, the lack of curiosity, the lack of imagination or
the lack of ambition?

Both, shortcomings and solutions, I have explicitly demonstrated already ten
years ago, while the standard was still under discussion, and published
later in great detail on very many occasions, as documented on my website.
Your thesis confirms my observation that most naval architects are still not
aware of and do not understand the 'real' problems to be solved. Already ten
years ago Korean colleagues falsely argued that more fancy seakeeping
theories were required.

In this sense I shall refer to your master thesis in the pertinent section
on my website and I shall include, for purposes of documentation, our
complete correspondence (all orthographical errors hopefully corrected),
which you missed to mention, forget about discussing my arguments. Being
currently concerned with other problems I refrain from re-analysing one or
the other of your test cases as I did convincingly in case of MARIN's
STA-JIP. It is a pitty that you did not have the time to do that yourselves
and thus provide a 'real' comparison.

With best wishes for your future success and for the Advent and
Christmas, time beginning right now,
yours, Michael Schmiechen.

PS. Please forward this mail with my best regards to your supervisors at

MS 28. Nov. 2010

SSPA you have mentioned in your thesis. All model basins protect their
researchers from direct mails by high barriers.

From: "Klaus Wagner" <IKWAG@web.de>
To: "Michael Schmiechen" <m.schm@t-online.de>
Sent: Thursday, November 25, 2010 6:32 PM
Subject: Fw: Master Thesis Report

Lieber Herr Professor,

ich habe mal diagonal hineingesehen, wieder nur konventionelle
Flickschusterei! ...

Es grüßt Ihr Klaus Wagner

From: "Michael Schmiechen" <m.schm@t-online.de>
To: "Klaus Wagner" <IKWAG@web.de>
Cc: "Horst Linde" <linde@naoe.tu-berlin.de>;
"Gerd Holbach" <gerd.holbach@naoe.tu-berlin.de>;
"Arne Dombrowski" <arne@dombrowski.eu>
Sent: Friday, November 19, 2010 1:52 PM
Subject: Fw: Master Thesis Report

Lieber Herr Doktor,

nach sehr umfangreicher Korrespondenz mit den jungen Kollegen von der
Chalmers University of Technology in Göteborg habe ich die anhängende
Diplom-Arbeit schon lange erwartet.

Und was finde ich jetzt? Die beiden Diplomanden und ihre Betreuer haben
überhaupt nichts verstanden von den Problemen und Lösungen, die ich ihnen
ausführlich beschrieben habe.

Trotzdem hätten sie unsere Korrespondenz und meine vielen Arbeiten und meine
Argumente zitieren müssen. Ich überlege mir meine Antwort noch. Aber die
werden die Burschen auch nicht verstehen.

Übrigens kenne ich die Diplom-Arbeit bei Prof. Linde und das daraus
hervorgegangene Buch immer noch nicht. Auf meine mail habe ich keine Antwort
erhalten. Hoffentlich kennt Herr Dombrowski die Arbeit!

Das alles verbuche unter 'der neue Stil des net-working'.

Mit freundlichen Grüssen
Ihr Michael Schmiechen.

From: "James F Undén" <unden@student.chalmers.se>
To: <m.schm@t-online.de>
Sent: Friday, November 19, 2010 9:32 AM

MS 28. Nov. 2010

Subject: Master Thesis Report

Dear Professor Schmiechen,

5   I was just reading through our master thesis report and remembered that I
had promised to send you it once it was done, I apoligize for the delay! I
hope you find it interesting, you are of course very welcome to comment on
our results.

10   Best regards,
James Undén

From: "James F Undén" <unden@student.chalmers.se>
15   To: "Michael Schmiechen" <m.schm@t-online.de>
Sent: Thursday, June 10, 2010 10:11 AM
Subject: RE: A numerical example

Dear Professor Schmiechen,
20
we are currently finishing our report, it should be ready for printing
sometime during the coming week, as soon it is done we will send you an
electronical copy so you can read about our findings!

25   Best regards,
James Undén

From: "Michael Schmiechen" <m.schm@t-online.de>
30   To: "James F Undén" <unden@student.chalmers.se>
Sent: Saturday, May 15, 2010 11:11 AM
Subject: Re: A numerical example

Dear young friends,
35
how did your 'story' end? Together with my wife I just returned from Florida
and I wonder what your results and your conclusions are!

With my best wishes for Whitsun
40   yours, Michael Schmiechen.

From: "James F Undén" <unden@student.chalmers.se>
To: "Michael Schmiechen" <m.schm@t-online.de>
45   Sent: Tuesday, March 23, 2010 10:29 AM
Subject: RE: A numerical example

Dear Professor Schmiechen,

50   I just thought of you and realized I had forgotten to answer your last mail,
we took a quick look at the example (with Google Translate) and it seems

very interesting and comprehensive, but right now we are concentrating on
finishing the program according to ISO 15016, we will however be finished
quite soon, probably within 2 weeks, and after that we will most likely
spend a week or 2 evaluating your method, then we will see what SSPA think

5   about it.

Best Regards,
James Undén

10

From: "Michael Schmiechen" <m.schm@t-online.de>
To: "James F Undén" <unden@student.chalmers.se>
Cc: "Klaus Wagner" <IKWAG@web.de>
Sent: Sunday, March 14, 2010 3:59 PM

15   Subject: A numerical example

Dear young friends,

my colleague Dr.-Ing. Klaus Wagner of Rostock in his lectures and

20   publications is promoting my method of analysing data of traditional trials.
And he tends to demonstrate the method by way of simple numerical examples
everybody can follow. Attached please find a recent example teaching you
many lessons.

25   With best regards to your supervisors and to my colleagues at SSPA
yours, Michael Schmiechen.

From: "Klaus Wagner" <IKWAG@web.de>

30   To: <m.schm@t-online.de>
Sent: Sunday, March 14, 2010 2:45 PM
Subject: Beispiel Meilenfahrtanalyse

Lieber Herr Professor,

35

meine elektronische Post wird die Dampfpost gewiss überholen. In der
Dampfpost sind mir beim Abschreiben noch 2 Fehler aufgefallen, die ich
gütigst zu berichtigen bitte: In der "Analyse und Umrechnung..... " auf S.1
muss das letzte Glied natürlich mit "p2" (statt p1) gebildet werden und auf

40   S.3 muss es oben heißen "Pi = ..." (statt Pi/VHi).

Ich habe das Beispiel nochmal sauber und übergabefähig als Datei (s. Anlage)
abgeschrieben, allerdings als.odt-Datei (Open Office Writer). Das Umwandeln
in eine .doc-Datei (Microsoft Word 6)ist mir leider nicht gelungen, die

45   Indices und Exponenten rutschten sonstwohin. Ich hoffe Sie können
.odt-Dateien öffnen.

Mit freundlichen Sonntagsgrüßen
Ihr Klaus Wagner

50

MS 28. Nov. 2010

From: "Michael Schmiechen" <m.schm@t-online.de>
To: "Klaus Wagner" <IKWAG@web.de>
Sent: Thursday, March 11, 2010 7:47 PM
Subject: Meine Geduld

5

Lieber Herr Doktor,

wieviel Geduld denn noch? Ich hatte und habe damit schon immer ein Problem.
Jetzt wieder bei meinem kleinen paper. Ich stehe im Moment, wie der Mensch
10 beim 'Ärgere Dich nicht', gerade wieder einmal ganz am Anfang! Aber das
Spiel ist unglaublich spannend!

Ihr Schmiechen.

15

From: "Klaus Wagner" <IKWAG@web.de>
To: "Michael Schmiechen" <m.schm@t-online.de>
Sent: Thursday, March 11, 2010 6:09 PM
Subject: Re: Fw: ISO 15016 Example

20

Lieber Herr Professor,

das ist ja ein interessanter Briefwechsel und zum Haare-Ausraufen (wenn man
noch welche hat). Sie haben doch ganz klar den Algorithmus für Wind- und
25 Seegangseinfluss auf die erforderliche Antriebleistung angegeben und sogar
eine Lösung für die numerisch lästige Korrelation von Wind und Windsee
vorgeschlagen. Ich verstehe die Konfusion nicht. Man muss eben mal selbst
ein Beispiel nachrechnen.

30 Mit freundlichen Grüßen und Geduld, Geduld, Geduld
Ihr Klaus Wagner

From: "Michael Schmiechen" <m.schm@t-online.de>
35 To: "James F Undén" <unden@student.chalmers.se>
Sent: Thursday, March 04, 2010 5:48 PM
Subject: Fw: ISO 15016 Example

Dear young friends,

40

I have been out to train my (!) muscles and here I am back to train your (!)
brains. I do not give up my firm belief, that someday some smart young
students will resist the traditional brain washing and understand what the
problems in evaluating traditional trials are.

45

Henk van den Boom has invited me twice to Wageningen for whole day
discussions. But he and his colleagues understood only half the story I told
them. If you start talking in terms of resistance you are lost! Forget it as
soon as possible!

50

And further, my method to reduce the performance to the condition of no wind

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and no waves has the dramatic advantage that it does not need any prior
information and (!) that it accounts for systematic errors in the wind
measurement without calibration (!) and accounts for the crude guesses, not
estimates (!), of the sea state.

Think about my remarks! I have to disrupt here again, my family wants me.

Yours, Michael Schmiechen.

From: "Michael Schmiechen" <m.schm@t-online.de>
To: "James F Undén" <unden@student.chalmers.se>
Sent: Thursday, March 04, 2010 2:07 PM
Subject: Re: ISO 15016 Example

Dear young friends,

you got something terribly wrong! Have not you read and understood my St.
Petersburg paper? I do not use 'values already calculated' of added power
(!!!) in waves, but I am identifying the parameter in question under trials
conditions!

This is absolutely different from all other approaches and is in my view the
only rational, transparent and thus acceptable approach for both, ship
builders and owners at the same time!

Many thanks for forwarding the correspondence with Henk van den Boom. When he
refers to the 'rational' procedure he refers to my way of identifying the
current speed.

With kind regards yours,
Michael Schmiechen.

From: "James F Undén" <unden@student.chalmers.se>
To: "Michael Schmiechen" <m.schm@t-online.de>
Sent: Thursday, March 04, 2010 1:21 PM
Subject: RE: ISO 15016 Example

Dear Professor Schmiechen,

I'm sorry but I think we've misunderstood your material, the reason for us
wanting to see the Mathcad files was that we wanted to see how you
calculated the resistance increase due to waves etc. You have however used
the already calculated values in the example.

We have been looking into other models for calculating the added resistance
due to waves, and quite obviously, they all involve strip theory, which may
not even be possible in most cases as SSPA will not have access to the ship
geometry. Yesterday I sent a mail to Henk van den Boom at MARIN regarding
their "JIP" project for sea trials, you can read his reply below.

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Right now it's looking like we will use model tests performed here at SSPA
which are performed for many different wave directions, periods and ship
speeds, and interpolating them. We are also currently looking into the
possibility of getting empirical formulas for head and following waves,
obviously MARIN will not give us their equations.

We are glad that you are interested in our project and will keep you
updated!

Best Regards,
James&Lars

From: Boom, Henk van den [h.v.d.boom@marin.nl]
Sent: den 3 mars 2010 14:52
To: James F Undén
Subject: RE: Regarding ISO 15016 (JIP)

Hello James,

I am afraid that your request opens a tin of worms for you.

ISO 15016 is not a standard for sea trials; it is a collection of methods
and old data sets where people can choose from and you can derive many
different results for your speed trials. ISO 15016 has been developed based
on input of mainly Japanese ship yards but is not acceptable to most ship
owners.

For this reason in the STA-JIP in 2006, MARIN in close co-operation with a
large group of leading ship owners and major ship yards we have developed a
industry standard; the "STA-method".
STA consists of:
1.   Recommended Practice for Speed Trials (Public document attached)
2.   Recommended Analysis of Speed Trials
3.   QSTAP software for onboard analysis and reporting.

The method has been published (SNAME Greece, 2008) however the exact
formulations and software are distributed by MARIN to STA members only to
ensure the quality of the standard and maintain a single version.
 It has been decided to provide easy access to STA through internet in
future.

 STA is considered as the best available method today as it is based on a
rational approach and recent insight and data sets. We have developed this
on the basis of existing and new methods taking advantage of CFD, wind
tunnel tests and systematic model tests.

For added resistance in waves existing methods such as given in ISO 15016
showed an unacceptable spreading of results when compared to the various
model tests we have conducted for more than 10 ship types.(See SNAME paper).

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Numerical models such as strip theory (Gerritsma) and diffraction require
substantial input such as ship geometry which is often not available. For
these reasons we have restricted ourselves to head and following waves only
(this is common practice in speed trials) and developed two empirical models

5   STAWAVE1 and STAWAVE 2 based on the above mentioned model tests and
verified with dedicated large scale model tests conducted in our Sea keeping
basin. The exact formulations we can not provide for the above reasons.
STAWAVE1 can be applied in short waves and requires 3 input variables i.e.
shipbeam, length of bow section and wave height . In swell conditions where

10   the vessel heaves and pitches we use STAWAVE2 which requires 7 input
parameters.

I trust this information is of assistance to you; do not hesitate to contact
me if you have any further question.

15

Best regards also to our friends in SSPA who are not our competitors in this
field.

Henk van den Boom

20

From: James F Undén [mailto:unden@student.chalmers.se]
Sent: Wednesday, March 03, 2010 1:51 PM
To: Boom, Henk van den

25   Subject: Regarding ISO 15016 (JIP)

Dear Mr Van Den Boom,

my name is James Undén, I am a Naval Architecture student at Chalmers

30   University of Technology. Me and a colleague are currently doing our Master
Thesis at SSPA Sweden, our task is to implement the new ISO standard 15016
for the procedure of Sea Trial corrections in Matlab.

During the last few weeks we have been having trouble with the added

35   resistance due to waves. The proposed method in the standard for calulating
the added resistance due to radiation is Maruo's theory, but we haven't
found any information on how to determine the Kochin functions, and we seem
to have found a few errors in the section on Maruo's theory. We are
seriously considering using Gerritsma's theory instead as it seems simpler

40   and also gives good predictions, the negative side of Gerritsma is that it
is only for incident wave angles of up to 60 degrees.

I just found your web page regarding JIP, and we are very curious of how you
have decided to solve the added resistance due to waves? Are you going to

45   base all predictions on model tests or are you going to use one of the many
theoretical methods, if so, which one?

We would be deeply grateful for some help, we understand that SSPA is a
competitor of MARINs, but we hope you decide to give us some hints anyway.

50

yours sincerely,

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James Undén

From: "Michael Schmiechen" <m.schm@t-online.de>
5   To: "James F Undén" <unden@student.chalmers.se>
Sent: Tuesday, March 02, 2010 10:18 AM
Subject: Fw: ISO 15016 Example

Dear young friends,
10
how is your work progressing? Any questions? Can you still use my old
Mathcad files? Or do you have to rewrite the statements in a new
environment?

15   Clearly I am not your supervisor, but I am very interested in the outcome
of your project. And as formerly at the model basin, I am still used to work
intensely on my problems as you will note on my website, still frequently
updated and amended.

20   With best regards to your supervisors yours,
Michael Schmiechen.

From: "Michael Schmiechen" <m.schm@t-online.de>
25   To: "James F Undén" <unden@student.chalmers.se>
Sent: Tuesday, February 23, 2010 4:15 PM
Subject: ISO 15016 Example: Mathcad files

Dear young friends,
30
please note that I have no ready made standard for the evaluation of trials,
but I have shown already very early, in my proposal of 1998 and a later
update, how such a standard must look like. Please note my later
papers, in particular the one presented in St. Petersburg 2001.
35
One of the basic problems is that only power measurements can routinely be
taken. Accordingly my whole approach is solely based on and phrased in terms
of power data. And the first, most fundamental problem I have solved
rationally is the identification of the current velocity.
40
This is where the traditional approach 'of our grandfathers' is hopelessly
error prone and as a consequence of missing the fundamental quantity you can
safely forget the rest. For this reason HSVA and MARIN finally adopted my
approach.
45
In view of the importance of a reliable solution I have performed an
invariance test in my evaluation of the ISO example. The results demonstrate
that the data are consistent, after correction of the misprint! I strongly
suggest to apply this technique routinely for scrutiny of the data.
50
And a final remark. My Mathcad file attached concerning the evaluation of

Correspondence with James Undén and Lars Lind, Chalmers University / SSPA, Göteborg
10   concerning the evaluation of ship speed trials according to
ISO 15016: 2002

the ISO example is by now 'historical'. In the meantime I had the chance to
evaluate other data. Please do not forget the experience I have reported:
Never, never!, try to test your procedure using simulated data, unless for
checks of the numerical correctness.

5

With best wishes and regards
yours, Michael Schmiechen.

PS. I have attached not only the locked file shown on my website, but the
10   latest I found, unlocked, maybe experimental!!! So you will have to use the
latter, but be careful!

From: "James F Undén" <unden@student.chalmers.se>
15   To: "Michael Schmiechen" <m.schm@t-online.de>
Sent: Tuesday, February 23, 2010 11:25 AM
Subject: RE: Regarding ISO 15016 Master Thesis

Hello,
20

yes, could you possibly send the Mathcad files that you have used to
evaluate the ISO 15016 standard? And if it's no trouble, send the method
that you propose? SSPA are considering changing the theory as we are finding
it almost impossible to implement the wave resistance equations.

25

Regards,
James&Lars

30   From: "Michael Schmiechen" <m.schm@t-online.de>
To: "James F Undén" <unden@student.chalmers.se>
Sent: Monday, February 15, 2010 4:04 PM
Subject: Re: Regarding ISO 15016 Master Thesis

35   Dear young friends,

here is my quick and short response.

'Of course' I do not own the expensive final version of ISO 15016, but only
40   early drafts, in particular the Committee Drafts ISO/CD 15016 dated
1998-12-11, Reference ISO/TC 8/SC 9 N 11, and dated 1999-07-29, ... N 18.

Misprints in the standard are not unusual. As mentioned at length in my
papers there was a misprint in the data of the ISO Example and it took me an
45   extended correspondence before the Japanese Convener admitted, that there
was such an error.

Further, as mentioned in my paper presented last year at Trondheim, I heard
about a fundamental sign error in the algorithm underlying the evaluation of
50   the ISO Example. But on request the German standards office informed me that

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11   concerning the evaluation of ship speed trials according to
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no update and correction of the ISO 15016 has been undertaken.

Concerning all my work on the problem please inspect the first section 'On
the evaluation of ship speed trials' under 'Papers on propulsion' on my
website, concerning my procedure in particular please check the evaluation
of the ISO Example, providing any (!) detail. I am 'afraid' this will keep
you busy for some time, teaching you quite a lot and will raise new
questions.

With best wishes and regards
yours, Michael Schmiechen.

From: "James F Undén" <unden@student.chalmers.se>
To: "Michael Schmiechen" <m.schm@t-online.de>
Sent: Monday, February 15, 2010 2:29 PM
Subject: RE: Regarding ISO 15016 Master Thesis

Dear Professor Schmiechen,

Thank you for your reply and taking your time to consider our problems, we
sincerely appreciate it.

It seems like you have a different version of the ISO standard which seems
to be more correct than ours. Our version was downloaded by our supervisor
from the ISO store, in October 2009. It is very strange that they publicize
and sell a copy for $100 that isn't updated and corrected! Another example
of the differences between our versions is that our Appendix B only has 7
pages, not 12 like yours! May I ask you where you found your copy? If you
have it in PDF, could you send it to us?

Can we purchase your full method of conducting sea trial corrections? If so,
where?

Thank you again for taking time from your busy schedule to help us,

regards,
James&Lars.

From: "Michael Schmiechen" <m.schm@t-online.de>
To: "James F Undén" <unden@student.chalmers.se>
Sent: Sunday, February 14, 2010 7:55 PM
Subject: Re: Regarding ISO 15016 Master Thesis

Dear young friends,

many thanks for your mail. Pondering your remarks on walks through the fresh
snow in Tiergarten it occurred to me that you have to distinguish a number of
aspects on quite different levels.

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12   concerning the evaluation of ship speed trials according to
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1. In the first place these are the problems of evaluating traditional
trials under real live conditions, i. e. only few runs and rather crude
observations of the environmental conditions.

5

I think I have made a proposal, meeting current professional standards, how
to solve these problems in a transparent fashion satisfying (!) and
acceptable to (!) both parties, rationally resolving their conflict. You see
this is not a matter of physics.

10

2. In the second place there is the ISO standard, a convention as well,
again not primarily a matter of physics, which is 'in force' since about
2002. To my knowledge nobody is 'forced' to apply the standard in the format
published. Check the standard for the exact wording!

15

Any other procedure accepted by the parties concerned is permitted. As I
have mentioned, the procedures of HSVA and of MARIN are both essentially
following my approach after I have convinced both groups in charge. But in
both cases details have not been disclosed. So contrary to the 'idea' of MARIN
20   they cannot be 'industry standards'.

I do not know what ship-builders and ship-owners agree upon, if the are not
relying on the HSVA and MARIN Trials Groups. But in view of the 12 (in
words: twelve!) indigestible pages of Annex B in ISO 15016 in the draft
25   before me I can hardly believe that yards are using the seakeeping theory in
question, which they have opposed to from the beginning, and which you have
problems to get going!

3. In the third place I have explained over and over again, that the
30   inventors of theory have started to solve the problem from the wrong end.
How are they dealing with all the parameters in view of the crude guesses,
forget about estimates or even oberservations of the sea states?

If you have questions concerning the theories of added resistance in waves,
35   why don't you ask your mentors and supervisors or Professor Faltinsen at
Trondheim and in particular, even better, the inventors in Japan? As I have
mentioned I do not know anything about such theories and will not think
about them.

40   4. In the fourth place you are asking me about numerical problems concerning
the Kochin functions in particular. I remember having used these functions
in connection with the motions of vortex streets many decades ago. At present I
do not have any reference at my finger tips.

45   So I checked some text books, but not the last book of Professor Faltinsen,
which I do not own, and the internet, and finally I came back to the ISO
15016. According to the drafts I have in hand the problem you mention does
not exist. In Appendix B it is explicitly stated that both Kochin functions
are in metre^3/second! How did you come up with different dimensions?

50

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I have checked the definition and came up with the same result. The
intensities of a source and a doublet are both measured in metre^3/second.
So you must have seen a misprint.

5   5. In the fifth place you mention: 'otherwise we will not pass our master
thesis'. I do not see a problem, if you describe the problems you ran into.
I agree that you may not have the time to go through many comparative
exercises. Mine took considerable effort and time.

10   But I can tell you that the German Navy had comparative evaluations made and
came up with the conclusion that the results according to ISO 15026 are
error prone, i. e. are not reliable, as I have demonstrated many years
before. Further, a study similar to yours, initiated by the German industry,
is underway at the Technical University here in Berlin.

15
So much, as always in a hurry, and
with best wishes for your success
yours, Michael Schmiechen.

20
From: "James F Undén" <unden@student.chalmers.se>
To: "Michael Schmiechen" <m.schm@t-online.de>
Sent: Friday, February 12, 2010 3:57 PM
Subject: RE: Regarding ISO 15016 Master Thesis

25
Dear Professor Schmiechen,

I apologize for not answering earlier.

30   We fully understand why you are angry if what you say is true, but
unfortunately we do not have any choice but to try to understand and
implement the methods proposed in the ISO standard, because it has been
chosen as a standard for now, and we have to create a program for it despite
it being problematic and possibly wrong, otherwise we will not pass our
35   master thesis.

We will however analyze the results when the program is finished and compare
with the data available to us here at SSPA, so if it is wrong it will be
published in our report, and the reasons for the inconsistencies will be
40   investigated if we have enough time.

We are still having trouble with the "resistance increase due to radiation
of waves" according to Maruo's theory, we found the reference which it is
based on (SNAJ, Vol.108, 1960), however, only the title and abstract are in
45   English, the rest is in Japanese. Do you know if there exists a translation
of this report?

One thing that is extremely strange in the ISO 15016 report on wave
radiation, (see the attached word document), the units for the two Kochin
50   functions are different (cubic metres/second VS. metres/second), and in the

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equation they are added together. There must be some explanation as the
formula has been around since 1960, but we cannot imagine one, do you know
anything about this? Is it just a misprint in the explanation?
This is the main reason why we want to see the reference.

5

Also, we do not know how to solve the Kochin functions, do you know of any
good literature or web page for solving this type of function? We would be
very grateful for some help!

10   Sincerely
James & Lars

From: "Michael Schmiechen" <m.schm@t-online.de>
15   To: "James F Undén" <unden@student.chalmers.se>
Sent: Friday, February 12, 2010 2:34 PM
Subject: Fw: Regarding ISO 15016 Master Thesis

Dear young friends,
20
I guess you have not received my mail, else I would have received some
response, indicating whether my response to your request has been of any
help.

25   Yours, Michael Schmiechen.

From: "Michael Schmiechen" <m.schm@t-online.de>
To: "James F Undén" <unden@student.chalmers.se>
30   Sent: Friday, February 05, 2010 2:45 PM
Subject: Re: Regarding ISO 15016 Master Thesis

Dear young friends,

35   many thanks for your kind interest in my work and its results, which are
finally beginning to be acknowledged and to be utilised.

As you know from the documents on my website I have been opposed to ISO
15016:2002 from its inception. Two young Japanese professors wanted 'to
40   sell' their seakeeping theory and happened to consider trials as their first
application, I think without knowing anything about the problems of trials
and their evaluations.

Although shipbuilders in Japan and all over the world were opposed to the
45   seakeeping theory promoted in particular, the 'bodies in charge' finally
came up with the standard, which I had demonstrated in detail to produce
wrong results, and all of them agreed except the Korean group.

They wanted 'to sell' their own, even more fancy seakeeping theory, without
50   noticing that both theories are of no use for the purpose at hand as I have

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explained over and over again. If you are asking me concerning these theories I confess that I do not know anything, in other words: I know strictly nothing about them.

5   My approach is completely different. I have pragmatically set up two extremely simple models, for the power delivered and the power required, respectively, with only as few parameters as can be identified! And I am identifying these few parameters from the few data available under trials conditions. The parameters include: those of the current and the propulsor

10   characteristic in behind in the first model, and those of the required power, not resistance (!), in water, in wind and in waves in the second model.

In the meantime HSVA and MARIN are following my procedure, starting with the

15   fundamental problem, the identification of the current velocity versus time. Of course they have further developed details, but they are selling 'their' methods using my words, without quoting the source. This is the most stupid plagiarism I have ever heard of.

20   I am sure that in future all trials will be evaluated my way. The first chance to promote my procedure is the forthcoming re-evaluation and update of the ISO standard. I really wonder what happens, after everybody knows that the ISO procedure as it stands is error prone even if you do not use the seakeeping theories mentioned.

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A final remark concerns the do-it-yourself algorithms. My evaluation permits to break the identification of parameters down into the solution of two systems of linear equations. And my remark concerns these systems. They are ill conditioned 'by any standard', that is they are very nearly singular,

30   and you have to be very careful in solving them.

A Japanese group at Kyushu told me, that my method does not work. And it took me two years to find out what their problem was. The student asked to study my method tried to solve the linear equations following his elementary

35   textbook! I still wonder whether he committed Hara-kiri.

'Such much', as always in a hurry, with kind regards to all colleagues at Chalmers and SSPA
yours, Michael Schmiechen.

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From: "James F Undén" <unden@student.chalmers.se>
To: <m.schm@t-online.de>
Sent: Thursday, February 04, 2010 4:33 PM

45   Subject: Regarding ISO 15016 Master Thesis

Dear Professor Schmiechen,

my name is James Undén, I am a Naval Architect student at Chalmers

50   University of Technology, me and a colleague are currently writing our

Correspondence with James Undén and Lars Lind, Chalmers University / SSPA, Göteborg
16   concerning the evaluation of ship speed trials according to
ISO 15016: 2002

masters thesis at SSPA.

The goal of the project is to create a program in Matlab with a GUI, which will perform according to ISO 15016:2002(E). I have been reading on your
5   homepage and have found it very interesting.

We are currently having a lot of trouble with writing the code for the resistance increase due to waves. As you surely know, the methods used are quite troublesome, and you even state in one of your presentations that we
10   have "no chance to solve the equations with do-it-yourself algorithms".

We are having the most problems with the response function for radiation, delta r_1. Here the m3, and m4 values will in almost all cases be imaginary numbers as tau will be larger than 1/4.
15

It does however state that m3 = m4 for tau>1/4. But shouldn't it state m3=m4=0? If we have m3=m4 we still have the same problem, and integrating between m2(which is a real number) and m3 is impossible. We haven't been able to find the references for this theory, and we are having trouble
20   finding anybody here at SSPA familiar with this theory which is why we are asking you!

I really hope you can help us, we would be extremely grateful!

25   Sincerely,
James Undén

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