

Group Discussion 4

ITTC Guidelines and Procedures

Session Chairman: Prof. Gerhard Strasser

1. PRESENTATIONS

1.1 By Prof. Gerhard Strasser, Schiffbautechnische Versuchsanstalt in Wien, Austria, on ITTC Recommended Procedures and Guidelines

In the following a short review of the introduction to the Group discussion on ITTC Guidelines and Procedures (based on the power point presentation) is given

Items of Concern.

1. Publishing,
2. Numbering,
3. Big amount of failure in updating and producing new procedures,
4. Adoption of Procedures by Full Conference (Practically not existent).

Publishing.

- a) Printed Form,
- b) CDs,
- c) Internet.

The ITTC Reports should also further on be published in printed form (still the safest way to store).

The ITTC Quality Systems Manual can be published on CDs.

Databases should be published on the Internet.

All other publications should also be made available on the internet.

Numbering. The numbering of the ITTC Recommended Procedures and Guideline originates in ISO 9001. Below there are some excerpts from ISO 9000 showing where the procedures and the control of the documents belong.

ISO 9001, Page 8:

0. Introduction,
 1. Scope,
 2. Normative reference,
 3. Terms and definitions,
 4. Quality management systems,
 5. Management responsibility,
 6. Resource management,
 7. Product realization,
 8. Measurement, analysis and Improvement.

Numbering acc. to ISO 9001:

4. Quality management system:
 - 4.1 General requirements,
 - 4.2 Documentation Requirements,
 - 4.2.1 General,
 - 4.2.2 Quality Manual,
 - 4.2.3 Control of documents,
 - 4.2.4 Control of records.
7. Product realization:
 - 7.1 Planning of product,

- 7.2 Customer related processes,
- 7.3 Design and development,
- 7.4 Purchasing,
- 7.5 Production and service provision,
- 7.6 Control of monitoring and measuring devices.

Failure in updating and producing new procedures. The Advisory Council has reviewed the ITTC Recommended Procedures which have been submitted by the Technical Committees.

Conclusions from the review of ITTC Recommended Procedures by the Advisory Council:

- 31 procedures were reviewed, (100%),
- 16 accepted, (52%),
- 3 accepted as guidelines, (10%),
- 12 were not accepted, (39%).

If in a company 39 % of the work was futile, what would you do?

Potential reasons for the failure:

- The Committees are not competent enough to do the job.
- The reviewers are either too rigorous or not competent enough to do the job.
- The Committees and/or the reviewers do not know exactly what is meant by "procedure".
- The Committees are not getting enough information, about what they are supposed to do.

Reactions of Advisory Council:

1. Introduction of Guidelines (now it is "ITTC Recommended Procedures and Guidelines" as had been suggested by the Quality Systems Group of the 21st ITTC from the very beginning of the Quality Systems Manual).
2. Much more effort in the formulation of the tasks for the Technical Committees.
3. More information on what a recom-

mended procedure should be.

4. Not asking for the impossible (Sometimes we would like to get a solution by somebody else as we do not have any ourselves!).

In order to clarify what a procedure could be and which criteria should be fulfilled several definitions of "procedure", "guideline" are given.

Procedure, general definitions:

- A manner of proceeding or acting. The method of conducting a course of action.
- A process or series of acts especially of a practical or mechanical nature involved in a particular form of work.
- The steps in a process and how these steps are to be performed for the process to fulfil customer's requirements.
- A particular way of accomplishing an objective; generally refers to the method rather than the result. Procedures are usually developed to describe the methods for implementing policy.
- A listing of the rules and instructions associated with a task.

Guideline, general definition:

- Any indication of the limits or scope of an undertaking,
- A statement of desired, good or best practice,
- A written statement or outline of policy, practice or conduct. Guidelines may propose options to enable a user to satisfy provisions of code, standard regulation or recommendation.

Procedures acc. to ISO 9001:

7.5 Production and service provision: The organisation shall plan and carry out production and service provision under controlled conditions. Controlled conditions shall include, as applicable.

1. the availability of information that describes the characteristics of the product,
2. the availability of work instructions, as necessary,
3. the use of suitable equipment,
4. the availability and use of monitoring and measuring devices,
5. the implementation of monitoring and measurement,
6. the implementation of release, delivery and post delivery activities.

Controlled conditions include too:

- Documented procedures which should define:
- the qualifications required for the person carrying out the procedure, if any special qualifications are required,
- the preparatory steps to be taken to prepare the product for processing,
- the preparatory steps to be taken to set up any equipment,
- the steps to be taken to process the product;
- the precautions to observe,
- the settings to record.

ITTC Recommended Procedures and Guidelines: A procedure or a guideline which has been adopted by the Full Conference as an "ITTC Recommended Procedure or Guideline". A guide for a manner or method of proceeding, testing or calculation recommended by ITTC to the member organisations.

ITTC Interim Recommended Procedure: A procedure which has been suggested by a Committee or Group and which needs some time for confirmation as the conference is not sure whether it can be recommended without modifications. If there are no objections from ITTC members the interim recommended procedure then becomes a recommended procedure if it is adopted by the next Full Conference. (Here we have a problem with the adoption!)

- Comment: a procedure is nothing final, it reflects the state of the art at the present

time.

- In case an update (also when it is quite small) is not accepted, the previous version stays in the QS manual, unless the Full Conference decides to dismiss it.
- ISO 9001 asks for continual improvement.

Criteria for ITTC Recommended Procedures and Guidelines:

- The description in a procedure should principally contain only methodology, instructions or use of physical laws or parameters etc. about which the Conference is able to decide.
- The formulation of the procedures should be concise, clear, comprehensive, and should not contain explanations of physical laws or symbol terminology unless absolutely necessary for the understanding.
- The descriptions in the procedure may contain alternatives. However, in such case criteria should be given. It is not acceptable that there are given several alternatives without reflection and without validation results.
- It is not acceptable that the procedure simply consists of the working instruction of one single institution which is the only one able to fulfil the requirements of that particular procedure. A procedure should be general enough to be applied by several member institutions.
- General statements like "the accuracy should be sufficient" must be avoided. Instead, it should be stated what is considered to be sufficient; criteria should be given which have to be achievable and reasonable or even better, based on physical laws.

Adoption of Procedures by the Conference.

1. Procedures are adopted by the Full Conference. Normally this is on the last day with everybody sitting on his/her luggage ready to leave or some have already left. Sometimes the adoption of the procedures is simply forgotten. It is a formal act.

2. Up to now there was no action with concern to "Interim Recommended Procedures". They either should be confirmed or dismissed.
3. Maybe there should be some change?

2. DISCUSSIONS

2.1 Comments to the 24th ITTC Group Discussion on ITTC Guidelines and Procedures by Richard Anzböck, Schiffbautechnische Versuchsanstalt in Wien, Austria

Concerning "missing feedback" from the Member Organisations of the ITTC, to the Conference, to the published Procedures, it seems reasonable that this feedback is rather small, as many of the Member Organisations use their own methods to reach their aims, which may not be included in the Recommended Procedures.

The accepted procedures usually reflect the state of the art how to carry out tests and perform calculations and although the various methods in use differ, they reflect more or less the state of the art.

As far as it concerns "validation", full-scale measurements and respective publication is required. In this context the question arises if it is correct to require procedures which include validation from Specialist's groups, when it is well known that such publication does not exist.

For instance the procedure concerning measurements on Pods was rejected because of one area where there were four different methods proposed how to calculate (or estimate, or measure) the drag of the pod-casing. Everybody who is involved in the work with and for Pods knows that full-scale data are kept secret and are not allowed to be published. Would it not be much more appropriate to accept a procedure which includes the state of

the art but can not recommend one of the various methods, than reject a procedure completely and make the 3 years' work of a Specialist Group forgotten?

2.2 Discussion to the 24th ITTC Group Discussion on ITTC Guidelines and Procedures by In-Young Koh, Naval Surface Warfare Center, Carderock Division, USA

How can ISO9001 be utilized as the ITTC Quality process. Is it proper and feasible?

2.3 Comments to the 24th ITTC Group Discussion on ITTC Guidelines and Procedures by Manfred Mehmel, Schiffbau-Versuchsanstalt Potsdam, Germany

I would like to make a proposal for preparation of the Conference. The invitation for the Conference should contain a list of all decisions of the Conference which means a change of rules, fee, budget and budget plan as well as the procedures to be adopted or changed.

The Procedures should be an annex to the invitation or information where they could be found.

For interim procedures I propose that they should be followed up by the next responsible Committee.

2.4 Contribution to the 24th ITTC Group Discussion on ITTC Guidelines and Procedures by Anthony Molland, University of Southampton, United Kingdom

Having listened to the discussion thus far I feel I must make a few comments. Professor Strasser has made the point already but it still does not seem clear to all here present that

when developing procedures one has to differentiate between quality process and quality level. ISO standards are, for example, concerned mainly with the process and the implementation of chosen levels of quality but not necessarily with the level of quality itself.

My next point is that I believe that Members may be losing sight of what rôle ITTC Procedures are meant to play. To me, at their simplest level, they are meant to represent common good practice between the various towing tanks and research establishments. I say this because one of my first jobs when working for a shipping company back in the 1960s was to investigate and analyse why the power estimates were so very different for the same ship in tenders from different shipyards across Europe and Japan. It was discovered that the reasons resulted from the use by the test tanks [providing test results to the shipyards] of different extrapolation methods, possible use of form effects, correlation factors and scaling of appendages, to name but a few. Very confusing to the potential customer. We have moved a long way since those times and we of course now have a good set of ITTC procedures representing common good practice.

I believe Professor Strasser is a little too pessimistic about the actual use of ITTC procedures and feedback from test tanks. I would refer him, for example, to the Report of the current Propulsion Committee, presented earlier in the week, where it can be seen that feedback from the tanks indicate that they are using many of the procedures and would not call (at present) for any changes or updates to those particular procedures.

On the matter of processing proposed Procedures, I believe it is important that new and/or updated procedures should be available before each Conference so that their development, outcomes and proposals can be discussed at the Conference. This would overcome much of the present confusion and misunderstanding arising about the Procedures. I also suspect that Committees are not carrying

out enough iterations to obtain feedback from all the tanks, for example those not represented on the Committee, before finalising proposals for Procedures. This is a method used with some success by the past three Committees on which I have served. Such an approach quickly identifies any dissenting Members and also shows that levels of quality such as tolerances and errors have to be very much a compromise between the various tanks, but without compromising the search for common good practice.

In closing, I should like to say that the ITTC community should be extremely grateful to Professor Strasser for his stamina and continuing efforts in pursuing an acceptable and up to date set of ITTC Recommended Procedures.

3. GROUP DISCUSSION REPLIES

3.1 Reply of the 24th ITTC Group Discussion on ITTC Guidelines and Procedures to Richard Anzböck

As mentioned before, a Procedure should not necessarily go into each detail and should allow you to follow your own way as long as you do not compromise the generally accepted criteria for the state of the art. This means that Procedures can contain choices.

The problem of the validation came up during the Conference several times and it should be pursued with respect to testing, full scale measurements and also CFD. Especially validation measurements in full-scale are not an easy task and we all know are expensive and this is a reason for not having too many useful data. In future we will not be able to do without, also for the judgement of the quality of computer codes.

I myself had to sign a contract with a supplier of Pods, which included a phrase forbidding me to mention or publish any results,

model-scale or full-scale. I consider this as kind of immoral, in case customers are harmed by this.

The Procedure on the model tests and extrapolation methods of pods however was rejected because of too many “un-reflected” or uncritical choices. This may be because the problem is not yet solved in a manner that it can be recommended: Obviously there is not enough agreement how to proceed and that was the reason that practically all possible methods were contained in the Procedure. One of the reasons could be the unsatisfying situation with regard to reliable full-scale results.

The Advisory Council has decided to proceed with this Specialist Group and hopes that they can base their work on the work of the present Committee so that this work will not be in vain or lost.

3.2 Reply of the 24th ITTC Group Discussion on ITTC Guidelines and Procedures to In-Young Koh

The ITTC Quality Systems Manual is based on the ISO 9001. You should be aware of the fact that ISO 9001 only deals with quality control and not the quality itself. If you use ISO 9001 in a reasonable way it can be useful for the quality control in your institution.

ITTC went one (huge) step further and tries to produce Procedures which are generally accepted by the Member Organisations and contain the state of the art. These Procedures deal with the quality itself. Depending on the standards of your institution this can be useful or less useful. The same applies for the feasibility. If your customers require ISO 9000 registration it will be more useful than if they do not ask for any quality control.

3.3 Reply of the 24th ITTC Group Discussion on ITTC Guidelines and Procedures to Manfred Mehmel

Thank you Dr. Mehmel, that is a good suggestion. The Advisory Council has to decide on how to proceed. I think it is obvious that something has to be changed and that new life has to be put into the decision process of the Conference. For sure this includes that the delegates get the information some time ahead of the Conference. We have to discuss that further in the Advisory Council.

3.4 Reply of the 24th ITTC Group Discussion on ITTC Guidelines and Procedures to Anthony Molland

Thank you for your nice comment; there is not much to add to this.