

ITER Public Information

There has been steady demand for the ITER Brochure in both English and Japanese language versions. At the request of the RF Party, a Russian language version has now been published.

A new WWW Home Page for ITER (<http://www.iter.org>) has been released and has received favourable comment. A guiding policy has been to ensure that all parts of the ITER Home Page provide unrestricted public access to up to date information and that all initial links from the Home Page (e.g. to Home Teams or other fusion institutions) are to public sites.

The ITER Home Page is intended to represent the Project as a whole; the Parties and Home Teams are invited to assist in keeping it up to date, for instance by providing illustrated updates on the progress of the large projects.

CHANGE OF JA CP

by Dr. M. Roberts, Chair, CPs

As of April 1, Akio Kitsunozaki, JA CP, will become Director, Department of ITER Project in JAERI at Naka. In taking up his new position, Akio will bring to an end his long-standing role as the JA CP. Hideyuki Takatsu, also of JAERI, will now become the new JA CP.

I know I can speak for all the CPs and the Point of Contact with the Director in saying that we have all appreciated working with Akio during the five plus years of the ITER EDA to date. As Chair, I especially appreciated the many times when Akio would provide a thoughtful straw plan or position or statement of issues for us all to consider as a starting point. Each of us has enjoyed Akio's positive approach, his increasingly skilled representation of the JA Party positions and his consensus-building efforts, characterized by honesty and clarity, supporting ITER progress, all of which have made a significant contribution to our collective work. These attributes as well as his 'outside' skills in languages, arts and crafts have helped us to turn many long intense days into well-remembered and satisfying as well as productive experiences.

While we will obviously miss working with Akio at first hand, we are delighted that he will still be working with ITER in his new position.

At the same time, it is my pleasure to welcome Hideyuki Takatsu as the new JA CP. Hideyuki joined us on an informal basis at our last working session and we look forward to continued good works with him in our group.



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FIFTH TECHNICAL MEETING ON QUALITY

by Dr. A. Girard, ITER Joint Central Team

The 5th Technical Meeting on Quality was held on 20-22 October 1997 at the ITER San Diego Joint Work Site (JWS) and was attended by representatives of the Home Teams (HTs), of the Joint Central Team (JCT) and of manufacturers currently involved in the Large R&D projects.

The meeting made progress towards:

- the finalization of the ITER Quality Manual document for inclusion in the Final Design Report (FDR);
- the definition of the quality necessary for ITER procurement and construction.

The current Action Plan (see page 7) was updated to reflect the progress made by the HTs and the JCT in the implementation of the Action Items.

ITER Quality Manual

Prior to the meeting, each HT circulated its review report on the draft Quality Manual prepared by the JCT for inclusion in the FDR.

The Quality Manual currently focuses on the specification of the assurance for quality to be provided by suppliers as part of procurement contracts. It includes the following ITER EDA documents:

- “QID 003 - Quality Classification” establishes four quality classes;
- “QID 004 - Quality Requirements in Procurement Specification” describes, for each of the Quality Classes, the minimum quality requirements to be specified in procurement contracts. It refers to the following documents where detailed requirements can be found:
 - ◊ “QCD 001 - Procurement Quality Specification”
 - ◊ “QCD 002 - Implementation Plan”
 - ◊ “QCD 003 - Documentation Schedule”
 - ◊ “QCD 004 - Procurement Schedule”
 - ◊ “QCD 005 - Work Schedule”
 - ◊ “QCD 006 - Deviations and Non-Conformities”
 - ◊ “QCD 007 - Release Note”

The participants considered the Quality Manual to be suitable for the purpose of the FDR, subject to:

- the addition of a Quality Program to be developed by combining the two proposals presented during the meeting, and
- inclusion of improvements agreed upon during the meeting,

It was recognized that the Quality Manual is a living document that will need to be further enhanced when more detailed information will be available, in particular, regarding the ITER organization for construction, in order to cover all aspects of the ITER Project.

Discussions showed that contrasting views still remain regarding the selection of the key factors (such as safety, machine availability, complexity and maturity) to be considered to establish quality classes. It was, therefore, agreed not to exclude the relevant Action Item of the Action Plan to allow further work on this issue.

Quality Requirements of Regulatory Bodies

The HTs reviewed the quality requirements which may be imposed on the ITER Project by regulatory bodies which will be responsible for granting licenses to construct and operate ITER. The approach taken on this subject has been limited to the examination of publications from national regulators and informal contacts with individuals having experience in license applications for nuclear construction projects.

All four HTs have found that regulatory bodies require the applicant to produce a comprehensive management and procedural system for all matters concerning safety of the plant, and this system must either explicitly or implicitly be represented as a Quality System. The Quality System, in most cases, must be approved by the regulator, who will monitor its implementation for the entire life cycle of the plant.

In view of these requirements, the participants recommended that:

- a quality program be prepared in order to submit a case for the construction and operation of ITER to regulatory bodies;
- consideration should be given to providing information in order to enable the preparation of the quality program responding to the standards required by the regulators.

ISO 9000 and ITER Procurement

Presentations by HTs and JCT focused in two main areas:

- Status of ISO 9000 series certification world wide;
- Advantages and disadvantages of introducing ISO 9000 as a requirement.

Participants agreed that:

- the ITER quality program should be based on conventional quality principles as described in the ISO 9000 series of standards or IAEA Code 50-C-QA;
- ITER contractor should implement a quality system based on a recognized quality standard (e.g. ISO 9001).

Procurement Technical Specification

HTs and JCT proposed formats and contents to be used as guidelines for the preparation of procurement specifications. Agreement was reached that a standard approach was required, and that of the four proposals the one of the JA HT was the most suitable. The JA HT agreed to develop their proposal to include explanations for each of the topic headings, with the aim of expanding the document into the required guide.

Action Plan

At the 4th Technical Meeting on Quality, a discussion of the most urgent needs led to the definition of seven objectives requiring short-term action (see box).

It was then agreed that the subsequent Action Plan would ensure that the schedule of activities to be undertaken by the JCT and by the HTs can achieve these objectives (Action Items).

Objectives of the Action Plan

- Establishment of a quality classification scheme to provide a basis upon which a stepwise hierarchy of quality requirements can be developed;
- specification of the quality requirements applicable to ITER procurement;
- identification of the extent to which the ISO-9000 series of quality standards should be used in ITER procurement specifications;
- production of guidelines for the preparation of procurement technical specifications;
- exploratory investigation of the quality requirements which regulatory bodies may specify for ITER;
- preparing proposals for the quality organization that might be required within the project during the construction phase;
- compilation of available experience regarding the control of procurement that could be beneficial to ITER.

The Action Plan, as it stands now, specifies actions, responsibilities and deadlines regarding the following issues:

- graded approach to quality;
- use of ISO 9000;
- production of guidelines for the preparation of procurement technical specifications;
- exploratory investigation on the quality requirements regulatory bodies may specify for ITER;
- quality organization which will be required within the project during construction.

At this meeting, Action Item sheets were updated to reflect the progress made in the implementation of the Action Plan.

The two following Action Items, having achieved their objectives were closed out:

- Specification of the quality requirements applicable to ITER procurements;
- Compilation of available experience regarding the control of procurement that could be beneficial to ITER.

Three new Action Items were adopted:

- Preparation of the ITER Quality Program for the purpose of the FDR;
- Control of documents and records;
- Compilation of experience gained and lessons learned on quality matters during EDA.

Visit to Lockheed Martin

During the 4th Technical Meeting on Quality (16-18 April 1997, St. Petersburg, Russia) its participants visited Izhorskiye Zavody steelworks, which provided an opportunity to observe the quality controls which are in place for the manufacture of components - the structural steel of the CS Model Coil Inserts - for one of the L7 R&D projects.

This time, the US HT hosted a half-day visit to the nearby Lockheed Martin facility (plant 19) which provided an opportunity to observe the quality assurance program which is in place for the manufacture and assembly of components of the Central Solenoid Model Coil (CSMC), L1 project.

Visitors were presented the documentation system used to control manufacture, inspection and test. Operators are supplied with documents listing the sequence of operations to be performed with indication of the applicable acceptance criteria. On this same document:

- operation completion is dated and signed-off by the performer or his direct supervisor;
- acceptance status and changes are recorded as necessary.

During the tour of the facility, used for the manufacture of the CSMC components and of Titan/Aries rocket fuel tanks, visitors were impressed by:

- the high standard at which calibration of equipment such as jigs and fixtures is maintained;
- the quality of welding.

Overall, the visit demonstrated:

- the benefits of use of a documentation system;
- the kind of quality approach needed for the manufacture of critical ITER components;
- the value of training, workshop practices (e.g. clean conditions, maintenance of equipment), use of approved procedures and record keeping;
- that quality documentation in the workshop can be effective while reasonably simple.

Meeting Participants

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| EU HT: | L. Baker, N. Pawsey (NNC) |
| JA HT: | Y. Ozawa |
| RF HT: | P. Chaika |
| US HT: | G. Miyata, F. Southworth (both Lockheed Martin), K. Sowder |
| ITER JCT: | J. Dietz, A. Girard, Y. Shimomura |

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