



IEC/TC OR SC: TC90	SECRETARIAT: Japan	DATE: 2016-01-26
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Please ensure this form is annexed to the Report to the Standardization Management Board if it has been prepared during a meeting, or sent to the Central Office promptly after its contents have been agreed by the committee.

A. STATE TITLE AND SCOPE OF TC

Are there any new or emerging trends in technology that will impact the scope and work activities of the TC? Please describe briefly.

Do you need to update your scope to reflect new and emerging technologies? If yes, will these changes impact another TC's scope or work activities?

If yes, describe how these will impact another TC(s) and list the TC(s) it would impact

The present TC90 scope, that is "to prepare international standards (IS) related to superconducting materials and device", should remain as it is.

B. MANAGEMENT STRUCTURE OF THE TC

Describe the management structure of the TC (use of an organizational chart is acceptable) (should be integrated by CO automatically) and, if relevant (for example an unusual structure is used), provide the rationale as to why this structure is used.

Note: Check if the information on the IEC website is complete.

When was the last time the TC reviewed its management structure? Describe any changes made. When does the TC intend to review its current management structure? In the future, will the TC change the current structure, for example due to new and emerging technologies, product withdrawal, change in regulations etc. Please describe.

Make sure the overview includes:

- any joint working groups with other committees,
- any special groups like advisory groups, editing groups, etc.

The management structure of the TC90 has been unchanged.

- joint working groups with other committees: TC20/PT63075
- special groups like advisory groups, editing groups, etc. : IEEE

C. BUSINESS ENVIRONMENT

Provide the rationale for the market relevance of the future standards being produced in the TC.

If readily available, provide an indication of global or regional sales of products or services related to the TC/SC work and state the source of the data.

Specify if standards will be significantly effective for assessing regulatory compliance.

In the field of superconductivity, the most important technical, industrial, and economic aspects are the common "terms" describing the superconductor properties and measurement methods of the specific properties of superconducting material.

Low Tc superconductor (LTS) market is predominantly for magnets. The emerging market in High Tc superconductors (HTS) opens the possibility of other applications such as power cables, FCL's,

etc. Large-scale international projects need to purchase superconductors from a different of countries (ITER). Consistency the measurement of parameters and the definition of terms are important to facilitate the international fair trade.

D. MARKET DEMAND

Provide a list of likely customers of the standards (suppliers, specifiers, testing bodies, regulators, installers, other TC/SC's etc.). Do not specify company names, only categories of customers.

The customers of the standards:

- Superconducting wire/device manufacturers/developers
- Magnet manufacturers/developers
- Electric cable manufacturers/developers
- superconducting sensor/devise manufacturers/developers
- cryogenic system manufacturers/developers
- High energy/fusion
- health science
- IEC/TC20 (Electric cables)

E. TRENDS IN TECHNOLOGY AND IN THE MARKET

If any, indicate the current or expected trends in the technology or in the market covered by the products of your TC/SC.

Studies on equipment such as power cables, ship propulsion motors, generators, transformers, fault current limiters and many kinds of magnets are ongoing in very active ways.

Measurement technique of long wire uniformity for application, for example, superconducting magnet, HTS cable, SFCL, etc., is one of the trends in technology in superconductor.

Electrical insulation techniques for superconducting wires and its applications were also the important technique related to TC90.

F. SYSTEMS APPROACH ASPECTS (REFERENCE - AC/33/2013)

Does your TC/SC have a need for a systems approach?

If so:

- Will the Systems work be in a single TC or in multiple TCs?
- Will a Systems Evaluation Group (SEG), Systems Committee (SyC), or Systems Resource Group be required?
- Is your TC/SC work of relevance to ISO?
- Is or are there fora or consortia working in parallel to IEC? Is there a chance to integrate this work in your TC/SC?

This should not only be restricted to the customer/supplier relationships with other TC/SCs indicating types of co-operation (e.g. liaisons, joint working groups) but be of a more generic nature.

If there is no need for a systems approach as outlined in AC/33/2013, is it intended a TC would not be requested to report on general systems approach considerations such as customer/supplier relationships, liaisons, joint WGs, etc. as referenced in the system approach matrix illustrated in slide 14 of the presentation attached to AC/37/2006?

There are some system approach aspects in TC90 activity.

A liaison relationship with VAMAS has been already established for long time. A liaison relationship with CIGRE SC D.1 has been also established. The collaboration with TC20 has been

implemented for the standardization of testing of HTS cables.

For applications with making use of superconductivity that have conventional counterparts covered by an existing technical committee within IEC, TC90 will work with a liaison with the relevant committee to establish standards. TC90 also plans to make use of existing pre-standardization organizations and build upon their work wherever possible.

Possibly enabling technologies that have no existing technical committee and for which TC90 members typically have advanced expertise (cryogenic etc.). "Cryogenics" are closely related to superconducting technology. Investigation of terms about "Cryogenics" will be performed in TC90/WG1(Terms and definitions).

There is a consortium working of TC90/WG14 and IEEE about standardization of superconducting sensors/devices.

G. CONFORMITY ASSESSMENT

With reference to clause 6.7 of Part 2 of the ISO/IEC directives, are all your publications in line with the requirements related to conformity assessment aspects?

Will the TC/SC publications be used for IEC Conformity Assessment Systems (IECEE, IECEx, IECQ, IECRE)?

Will any of your standards include test specifications, reproducible test requirements, and test methods?

Are there likely to be special conformity assessment requirements generated by any standards projects? If yes, list which projects.

Many of TC90 standards include test specifications, reproducible test requirements, and test methods.

H. 3-5 YEAR PROJECTED STRATEGIC OBJECTIVES, ACTIONS, TARGET DATES

STRATEGIC OBJECTIVES 3-5 YEARS	ACTIONS TO SUPPORT THE STRATEGIC OBJECTIVES	TARGET DATE(S) TO COMPLETE THE ACTIONS
MgB2 wire characterization	Discussion about the final report of International Round Robbin Test in VAMAS	2018
Measurement technique of long HTS wire uniformity	Requirements of this measurement technique will be reported from each participating NC at the next TC90 meeting.	2018
Electrical insulation techniques for superconducting wires and its applications	Study with CIGRE SC D1. WG64	2018

Note: The progress on the actions should be reported in the RSMB.