

## **The Codes and Standards Evolution in Japan**

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Although Japan had participated in the international codes and standards activities for hydrogen technology through ISO/TC197 for a long time, it could not sufficiently contribute to establish the international codes and standards in comparison with positive contribution by USA, Canada and Europe. Despite this, Japan had made a tremendous effort to develop various proto-type equipment and infrastructures related to the hydrogen energy and fuel cell technology.

Recent efforts of the Hydrogen Energy Systems Society of Japan (HESS) such as implementation of demonstration project and construction of infrastructures, that involve the international hydrogen community has required Japan to positively act to establish international codes and standards. Thus, Engineering Advancement Association of Japan (ENAA), the coordinating agent for ISO/TC197, is establishing various task committee groups consisting of academia, institution and industries in order to positively commit to working draft, committee draft and NWIP for each ISO/TC197 Working Group including dispatch of expert to international WG meeting.

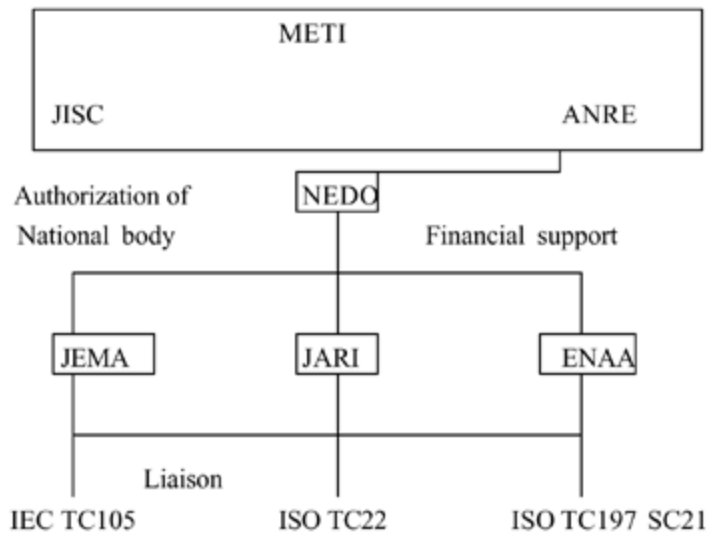
Additionally, ENAA has close contact with liaison groups such as Japan Electrical Manufacturers' Association (JEMA, dealing IEC/TC105□Fuel cell technology), Japan Automobile Research Institute (JARI, dealing ISO/TC22 SC21 Fuel Cell Vehicle), the High Pressure Gas Safety Institute of Japan (KHK, dealing ISO/TC58, Pressurized Cylinders) on promoting each activity for standardization.

Japan recently proposed NWIP for ISO/TC197 – fuel cell vehicle hydrogen fuel-product specification based on the long term laboratory research and development by JARI.

Before submitting the NWIP, internal meeting for hearing with various parties concerned such as car industries, industrial hydrogen gas suppliers, reformer manufacturers, professionals of hydrogen fuel etc., has been held and reflected to the final NWIP.

In view of the fact that Japanese Government, METI/NEDO's new year project, □R&D project for Hydrogen Safety and Utilization Technologies expresses the reflection and cooperation with international codes and standards activity, concerned parties (academia, institutes and industries) in Japan will make an effort to contribute in this direction.

### **International Codes and Standards Activities in Japan**



METI - Ministry of Economy, Trade and Industries

ANRE - Agency of Natural Resources and Energy

JISC - Japanese Industrial Standards Committee

NEDO - New Energy and industrial Technology Development Organization