

WG-4 Summary

Challenges of international hardware exchange

(1) Tuning machine

(2) High pressure gas regulation

Tuning machine

- Comparison between the regulation
 - DESY must follow **European Rules for Machine Manufactures** in case the operation by company staffs.
 - Need the European certification process (**CE certification**)
 - Electrical safety aspect
 - Mechanical safety aspect
 - General risk assessment of the machine
 - Detailed documentation of the machine
 - **The process is required for the machine from abroad.**
- KEK has a regulation system but it is not rigid like DESY.
 - For the installation and operation of the tuning machine
 - The licenses of AC power cabling and crane operation
 - Application to the director
 - These processes are done by the contact person in KEK.

Commercial software
SEVE EXPERT

High pressure gas regulation

- Comparison between the regulation
 - **DESY**
 - Pressure Equipment Directive PED 97/23/EC: CE-certification
 - Applicable codes for the CE certification: EN13445 (European harmonize code)
 - » Test pressure : max. pressure $\times 1.43$
 - **KEK**
 - High Pressure Gas Safety Act (Act No. 204)
 - ASME Standards were added as the technical standards
 - » Test pressure : max. pressure $\times 1.25$ (with room temp. gas)
 - **FNAL**
 - Governing Codes:
 - Pressure vessels: ASME Boiler and Pressure Vessel Code
 - Pressure piping: ASME B31
 - Fermilab ES&H Manual (FESHM)
 - » Test pressure : max. pressure $\times 1.25 \times 1.2$



Fermilab Proposed Plan

1. Form Fermilab working group and encourage that TTC form a global working group
2. Define topics of compliance issues for SRF systems
3. For each assigned topic, develop measures and criteria for consistent peer review
4. Where it is known that direct compliance with code is currently impossible, solutions based on best engineering practice should be provided
5. The deliverable should be a referenced checklist of essential parameters for each topic