



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Efforts to Converge Codes and Standards: MDEP's Role

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Outline



- Background
- Accomplishments
- Next Steps

Background

MDEP Participation



Members of the Codes and Standards Working Group (CSWG)



- CSWG member states are: Canada, China, Finland, France, Japan, Korea, Russian Federation, South Africa, the United Kingdom and the United States
- The OECD Nuclear Energy Agency is the technical secretariat and IAEA takes part in the CSWG meetings
- In addition, the Standards Development Organizations (SDOs) are invited to attend the WG meetings

Primary Goal of the CSWG



Achieve convergence of regulatory requirements in the area of component design

Scope of CSWG



- Establish a database of the similarities and differences in codes and standards used in design of pressure boundary components (based on inputs identified by the SDOs)
- Together with SDOs, examine potential paths for reconciliation of the code differences

Codes and Standards under Consideration



The pressure boundary component design codes developed by:

- ASME (United States)
- AFCEN (France)
- JSME (Japan)
- KEA (Korea)
- CSA (Canada)
- the Russian Norms and Rules (Russian Federation)

Accomplishments

Code Comparison – Phase I Activities



- ASME code used as basis for comparison since most codes originate from ASME
- SDOs prepared comparison table of national codes for Class I - Vessels, against ASME Code, Section III requirements
- Comparison completed for French (RCCM), Japanese (JSME) and Korean (KEPIC) codes
- Canadian and Russian code comparisons in progress

Conclusions of Comparison Activities for Class I Pressure Vessels



- Full convergence (identical code requirements) of pressure boundary codes not feasible
- Harmonization (no substantial difference from safety perspective) of codes is feasible

Finalization of Phase I Activities



- Categorization of code differences:
 - those appropriate for convergence
 - those appropriate for harmonization
- Development work on the strategy and process to be used for harmonization
- Agreement to minimize further divergence of code requirements

Next Steps

Code Comparison – Phase II Activities



- Comparison of code requirements for Class I piping, pumps and valves (by SDOs)
- Expected to be simpler than Phase I since general requirements for Class I vessels also applicable to Class I piping, pumps and valves
- Refinement of strategy and process for harmonization of differences in the Class I vessel codes

Code Comparison – Longer Term



- Depends on success of Phase I and II reviews
- Appears that a comparison of Class II components has merit and can be completed relatively easily
- Benefits of Class III comparison not so clear at this point
- Ultimately, MDEP codes and standards harmonization effort to go beyond pressure boundary components



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