



7th CNS Annual Conference Summaries

○日時 : 1986. 6. 9~10

○場所 : Canada, Toronto

本論文들은 「Innovation leads the ways」를 기조테마로 캐나다 토론토市에서 개최된 캐나다原子力學會(CNS) 年次大會에서 발표된 것들입니다. 資料가 필요하신 분은 當議會 企劃室로 연락하시기 바랍니다.

○ **Session A : Fuel and Fuel Channel Materials**

1. Slightly Enriched Uranium Fuel Cycle : Performance Aspects
2. Feast : A Finite Element Code for Estimating Stresses in Fuel Elements
3. Pressure Tube Elongation Rates CANDU Fuel Channels
4. Development of Failure Maps for Integrity Assessment of Pressure Tubes
5. Metallographic Examination of a CANDU Fuel Bundle Heated Under Severe Accident Conditions

○ **Session B : Reactor Physics and Radiation**

1. Selecting a Maple Core for 1~10MW Operation
2. Assessment of Beam Tube Performance for the Maple Research Reactor
3. Safety and Licensing Aspects of the Maple-X Reactor
4. A Non-Intrusive Neutron Method for Gadolinium Poison Concentration Monitoring
5. Comparison of Commissioning Test Results

- with Physics Simulations in a CANDU Reactor
6. A Review of Application of Radiolysis in the Absorbed State

○ **Session C : Safety and the Environment**

1. A Safety Review of the NRU Effluent Heat Recovery Project
2. Chalk River Area Seismicity and its Implications for Low-Level Radioactive Waste Disposal Facility Siting
3. A Systematic Approach to the Analysis of Waste Management Systems
4. Ra 226 and Pb 210 Concentration Ratios in Terrestrial and wetland plants in inactive and Abandoned Uranium Mill Tailings in CANADA
5. A Highly Selective Method for removing Natural Radioactivity from Drinking Water

○ **Session D : Fusion I**

1. Update on the Construction of the TOKAMAK de Varennes
2. The Potential in CANADA for Fusion by Polarized Nuclei

3. Concepts for Fusion Fuel Production Blankets
4. Irradiation of Lithium-Based Ceramics for Fusion Blanket Application
5. Two-Dimensional Model of Current Density and Temperature in the TF Coils of the TOKAMAK de Varennes During Long Pulse Operation

○ **Session E : Thermohydraulics I**

1. Experimental Investigation of Steam-Line Break Transients in a Recirculating U-Tube Steam Generator
2. STGEN Simulations of Top Blowdown Tests of RD-12 Steam Generator
3. Analysis of Fuel Element to Pressure Tube Contact Using the Mini-Smartt Code
4. Effect of Gas Flow in the Insulating Annulus on Fuel Channel Temperatures in a Severe Accident in a CANDU Reactor
5. Thermal Behaviour of CANDU Fuel Channel Under Steam Flow Conditions : An Alternative Solution
6. ATHENA Simulation of the WOLSUNG D₂O Spill incident of 1984 November 25.

○ **Session F : Economic and Social Issues**

1. The Role of R & D in Facilitating Industrial Use of Radiation Processing
2. An Energy: Energy Analysis of a Nuclear Generating Station
3. Innovative Design & Construction Methods to Reduce Nuclear Plant Construction Time
4. The Necessity for Nuclear Power the Oxygen-CO₂ Balance
5. Frightened at False fire Nuclear Energy, the NEWS Media and the Public

○ **Session G : Fusion II**

1. The CRNL Tritium Laboratory-A Canadian Resource
2. Tritium Handling Systems
3. Bulk Getters for Tritium Storage
4. Modelling of Tritium Dispersion in the Atmosphere
5. Critical Safety Issues in the Design of Fusion Power Facilities

○ **Session H : Thermohydraulics II**

1. Experimental and Analysis Studies in Support of Fuel channel Critical Power Improvement
2. The Onset of Subcooled Nucleate Boiling in Nuclear Fuel Bundles
3. Circumferential Drypatch Spreading on Fuel Elements in the Post-Dryout Heat Transfer Regime
4. Prediction of Void Fraction in Steady Horizontal Stratified Flow
5. Air-Water Flooding in an Elbow Between a Vertical Pipe and a Slightly Inclined Pipe
6. Numerical Simulation of Confined Jet Under Suction and Counter-Momentum for Canadian Maple Research Reactor

○ **Session I : Operations**

1. Load Following in Central Nuclear embalse : Operating Experience and Analytical Summary
2. Steam Generator Level Controllability
3. Use of Acoustic Emission to Locate the Garter Springs of a CANDU Fuel Channel
4. Leakage from Biological Shield Cooling System
5. The Use of the Hydrolaser in the Decontamination of the GENTILLY-1 Station