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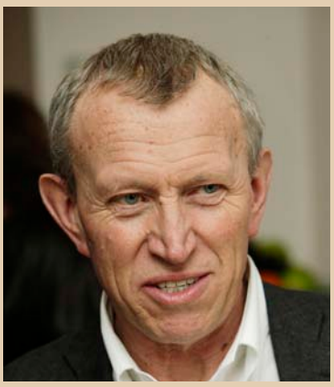
The Antenna

NEWSLETTER FROM ANT INTERNATIONAL

NETWORK CLOSE UP



Jan Kysela

Career History

I studied at the Faculty of Inorganic Chemistry at The Institute of Chemical Technology, Prague (ICT), where I graduated from the Department of Nuclear Chemistry with a MSc. in 1967. I did my doctorate at the same school at the Power Institute, where I received a PhD in 1981.

After finishing school, I started at NRI Rež, where I work to this day. I was first employed as a chemist on the LR-0 research reactor. I was responsible for heavy water coolant technology – its analysis, cleaning and overall management. At that time, the Czech heavy water nuclear power plant research programme was also under development, and I participated in a number of projects related to heavy water chemistry. After the heavy water programme ended and the light water programme started, I began working on using boric acid to manage VVER reactor reactivity.

I gradually transferred to the area of pressurized water reactor technology, and to issues around experimental programmes serving to support the development of technology and new water chemistries for VVER reactors. These programmes were concentrated on the 10 MW LVR-15 research reactor where an experimental loop was operated and gradually built for the study of water chemistries and corrosion. I was in charge of experimental programmes on these loops, and for construction of and programmes on new loops for pressurized water and boiling water reactor research.

A number of extensive experimental programmes were put in place, such as zinc injection for PWR reactors, corrosion cracking of internal BWR components, comparison of various VVER reactor water chemistries, etc.

Recently I made use of my past experience to also prepare facilities and an experimental programme for Generation IV reactors, specifically reactors cooled with supercritical water or helium.

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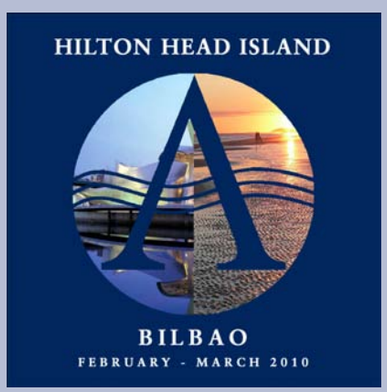
REMINDER ZIRAT14 & LCC5



REMINDER

Sign up for ZIRAT14 & LCC5 February – March 2010

Please remember to sign up for ZIRAT14 and LCC5

that takes place on Hilton Head Island, SC USA and in Bilbao, Spain

- Seminar Sign Up
- Agendas
- Hotel Reservations

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IZNA PROGRAM FEEDBACK

Experience at ENUSA

Cristina Muñoz-Reja Ruiz, Fuel Rod Technology Manager
ENUSA, Industrias Avanzadas S.A.
Spain

My company joined the IZNA Program in year 2003 starting with the IZNA1 and IZNA2. Since that year until now, products offered by ANT International have been one of the main source of information for the training of our new engineers.

IZNA Special Topic Reports often serve to our senior engineers as a starting point to face issues that are new for their area of competence. The Annual Reports, not only bring us the opportunity of being updated of all technical news in the nuclear field but, and what is more valuable, to have the news analyzed with a global perspective by the world-known ANT International Expert team. With reference to that, the high knowledge level, the accessibility and the fast answer capacity of the ANT International team are the basis for an efficient consulting service that I have often used.

This year, as every year since 2003, Peter Rudling conducted our tailored seminar. More than 30 engineers from nuclear and product engineering, commercial, quality and manufacturing areas attended the seminar that was focused on the current hottest topics as regulatory changes and industry acts to reach 2010 objectives of 0 leakers. This seminar is becoming more and more a discussion forum at high technical level thanks to the content of the materials, the qualification of the speaker and the cooperative spirit of the ENUSA engineers.

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Editor & publisher: Peter Rudling

Beginnings with ANT International

My first contact took place in the fall of 2007. I then participated in the LCC3 programme seminar on Malta, and subsequently took active part in the LCC4 programme and the 2009 Dresden seminar. I am trying to take advantage of experiences gained during the operation of the VVER reactor and the experimental programmes I have participated in that took place on the LVR-15 research reactor for PWR, BWR and RBMK reactors.

My view of VVER water chemistry

VVER reactors have a long history, and are now fully mature. It is not a very well known fact that the first commercial VVER reactor was commissioned in Rheinsberg, in what was then East Germany. This is also where the first water chemistry tests for this reactor type took place – back then water chemistry was ammonia-based without boric acid, but with Zr-Nb fuel cladding and stainless steel steam generators. Today, VVER reactors are operated in many countries of Central and Eastern Europe, Russia, China and are under construction in other countries, such as India.

How the LCC programme can help

Long-term operation of VVER reactors has brought significant experience that is a foundation for further operational improvements. There is, however, no platform where a regular exchange of experience and knowledge can take place. This is precisely where the LCC programme can be of benefit, enabling knowledge transfer not only among VVER reactor operators alone, but also between VVER reactor operators and PWR reactor operators.

In the very near future, the difficult task of extending the operating life of existing water-cooled reactors awaits us, because new nuclear power plants based on other coolants such as sodium or helium will come online later than was originally expected. In this respect, the area of water chemistries and corrosion can be of significant help in addressing reactor aging.

Free time

As far as my free time is concerned, I do not have much. Nevertheless, I like to hike in the mountains and keep up with what is happening in art and architecture both at home and abroad. An art gallery is a place where I gather new energy, and is like entering a cathedral for me, regardless of whether it is old, primitive or conceptual art.

Thank you Jan!

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”Excellent Material for Education”

Bernt Bengtsson
Senior Engineer & Chemistry Advisor
at Ringhals NPP,
Vattenfall AB, Sweden.

I’ve been with Vattenfall for over 30 years were I worked both as technician, supervisor and chemistry manager at the Ringhals site before becoming a senior chemistry specialist and advisor about 10 years ago. I came to Ringhals early in a period of pioneer spirit, which made it possible to make some career with hard work despite only having a technical senior high school as background. In my case, “learning by doing” together with a lot of reading has been a guiding-star in most cases. Ringhals is still the only site in Sweden with PWR:s and with exception of some work in foreign units during OSARTs- and Peer Reviews, I’ve been stuck to the site and the Swedish west-coast most of the time, a beautiful place from spring to autumn, but not very exiting during the windy and rainy winters.

My main areas of expertise and interest are PWR primary water chemistry related to radiation built up and fuel performance. Ringhals units have shown low dose-rates and good fuel performance for several years, partly explained by carefully controlled primary water chemistry. Another area of interest for me has been water management with demonstration of new purification technologies and the site lately spent some efforts in developing some new water treatment systems showing good experiences.
Since a few months, I belong to a small department for research and development (R&D) were I’m responsible for the “Chemistry & Radiochemistry” part. However, I will still be dealing with issues related to common chemistry problems and strategies for the site.

I’ve known ANT International and some of the experts since a long time and do regularly join the LCC Seminars as well as some of the ZIRAT Seminars. I find those very useful, not only for the presentations but also to meet the speakers and other colleagues for some fruitful discussions. Both the annual reports and specific technical reports provide good overviews of many actual topics and I’m sure that the LCC Program, which has been continuously expanded, will continue to draw more chemists to the program. Together with the different handbooks, ANT International provides excellent material for education, this supports the very important transfer of knowledge in times when alternation of generation becomes a problem in many nuclear power plants.

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