Attachment 9

MINUTES IAPWS PCC WG MEETING SEPT. 10-14, 2001 GAITHERSBURG, MD.

WG Chairman K. Daucik opened the meeting at 11:30 am.

The proposed agenda for the meeting was accepted

A. Banweg was elected the clerk of minutes for the meeting.

The minutes of the 2000 PCC WG meeting in Prague were accepted

D. Palmer and T. Petrova have suggested international research project collaboration on the topic of Lithium hydroxide/boric acid in nuclear plant primary water systems. After some discussion the WG recommended approval of the project.

The WG project priority list was reviewed:

1) Copper	J. Stodola
2) Organics	A. Zeijseink
3) Solubility of Impurities in Steam	O. Jonas
4) Nucleation and condensation in Steam Turbines	M. Stastny
5) Physical & Chemical Processes of Concentration & Deposition in the Power Cycle	K. Daucik
6) Interpretation of Potential Measurements	H. Pflug

(The above list is numbered only for reference to the comments below and not to indicate any priority ranking, the WG deems each of these subjects as equal high priority)

Status:

1) No ICRN, will be reviewed after the technical session
2) ICRN exists, needs update to add removal technologies for Water/Steam cycle and make-up
3) No ICRN, may exist in the "Atlas"
4) Two ICRNs exist (F. Sigon)
5) Two ICRNs exist solubility of sodium sulfate and spinels (closed)
6) Uniform standardized procedure is required in this measurement technology

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A joint workshop with the PCAS WG was held with the following topics presented:

1)	Development of High Temperature Pourbaix Diagrams for Cu-Ni-Zn Alloys in Water Ammonia Power Plant Environments	S. Lvov
2)	Fate of Copper in Water/Steam Circuits	G.J. Bignold
3)	Copper Transport in the Water/Steam Cycle	J. Stodola
4)	Solubility of CuO (and sodium salts) in Superheated Steam	J.P. Jensen
5)	Contribution of the effect of CuO on the Steam Turbine	M. Stastny
6)	High Temperature Zeta Potential Measurements	S. Lvov

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The following IAPWS certified research needs, expiring in Sept. 2001 were discussed:

1)	Evaluation of Binary Nucleation Models	1993	F. Sigon
	Rev 1	1998	
2)	Solubility of Sodium Sulfate in SH Steam	1993	K. Daucik
	Rev 1	1997	
5)	Origin, Behavior & Fate of Organics in the Power Cycle	1993	R. Gilbert
	Rev 1	1997	
13)	Surface Tension of Aqueous Solutions	1998	F. Sigon F. Gabrielli

The following actions will be taken on each:

1) F. Marsik will contact F. Sigon to evaluate the current status of model evaluation. It was recommended to extend this project for one year, for resolution next year since F. Sigon was not present.
2) K. Daucik recommended closing this project, some data has been gathered by J.P. Jensen and will be published in approximately 3 yr. due to contract limitations.
3) Revised by A. Zeijseink 1997. Progress has been made but more work is anticipated. Recommend that this ICRN be prolonged and change the responsible name to A. Zeijseink.
4) F. Sigon and F. Gabrielli were not present. F. Marsik will try to contact. Sigon for progress and status. Recommend prolonging or closing after contact.

As a general suggestion the WG recommended that all closed ICRNs have closure documentation. This closure statement, documenting final status, with an updated bibliography when available, status of work accomplished and the availability of results and commercial limitations.

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The following technical presentations were made:

1) The Influence of CO2 on Steam Turbine materials Corrosion	R. Svoboda
2) Silica in Steam	R. Svoboda.
3) Some Aspects of the Limitations of Oxidation-Reduction (ORP) Measurement in Plant Cycles	H. Pflug
4) Influence of Copper on SCC of 08Ch18N10T Stainless Steel	P. Sajdl
5) Status of Application of OT to Fossil Power Plants in Japan	H. Takaku

Forthcoming EBA Guidelines were discussed and it was decided to communicate with this group via an official letter from the executive committee similar to that with which the IEC guidelines were last year.

The IAPWS Website was discussed. There is much information on the website that is scanned material; it should be replaced with electronic format material where possible. It was also recommended that ICRNs should exist on the website in full text form, rather than just as titles.

The status of the "Atlas" was discussed. Follow up is required on the coordination of PCC WG assignments as contributors, by B. Dooley and reader assignments by J. Bellows.

Membership:

The following were proposed for membership:

A. Banweg	USA
H. Takaku	Japan
H.B. Hughes	UK
P. Sajdl	CZ

They were seconded and approved for membership on the WG.

The following were suggested for removal from the membership list:

L. Lepine	Canada
T. Mizuno	Japan
R. Riess	Germany
B. Stellwag	Germany

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The following were suggested requesting of membership confirmation

N. Kharitonova	Russia
P. Millett	USA
J. Izumi	Japan

We will ask the IAPWS chairman to write them for confirmation.

Election of officers:

K. Daucik has decided to retire as WG chairman, he was applauded for his work as WG chairman by the WG.

A. Zeijseink was nominated and elected as the new WG chairman.

R. Svoboda and M. Rziha were nominated and elected to the positions of WG vice chairman.

The suggested topic for next year's workshop was suggested to be "Monitoring and the impact of start-stop operation in Power cycles".