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ASSOCIATED PHASE DIAGRAM AND THERMODYNAMICS COMMITTEE: POLAND, BULGARIA, CZECH REPUBLIC, HUNGARY, SLOVAKIA AND YUGOSLAVIA

MIĘDZYNARODOWY KOMITET RÓWNOWAG FAZOWYCH I TERMODYNAMIKI: POLSKA, BUŁGARIA, REPUBLIKA CZESKA, WĘGRY, SŁOWACJA I JUGOSŁAWIA

Since the 70's, one has been able to observe in the world-wide forum organizational efforts going towards international co-operation between scientific and industrial centres dealing with experimental measurements of thermodynamic properties of alloys, modelling the phases, as well as intermetallic compounds, and phase diagram calculations from thermodynamic data basis. Within these trends, an international committee was formed in 1986, namely the Alloy Phase Diagram International Commission (APDIC). One of the main roles of APDIC is to coordinate the international activities for verification and phase diagram calculation. The review of ideas developed by APDIC and its achievements was presented more broadly in [1]. During the course of years, that "international thermodynamic family" has grown to include 17 member organizations from 15 countries.

In many Polish scientific centres the basic thermodynamic studies have been continued until now, with the aid of several experimental techniques. Also, a long-lasting international co-operation has existsed, resulting in joint publications and participation in many conferences devoted to thermodynamic studies of alloys and phase diagram calculations, like the Thermodynamics of Alloys, Calphad or IUPAC meetings. Due to these facts, the Polish Phase Diagram Committee (PPDC) was formed and finally accepted to APDIC in 1994. The history of the creation of PPDC was reported in [2]. In this manner, Poland became a partner of an international organisation, among the other leading institutes from all over the world, as well as Polish centres, universities and industrial institutes dealing with experimental thermodynamics, directed to phase equilib-

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ria which were finally properly oriented and represented. It was the recognition of the Polish contribution in this important area, both from the point of view of our basic research work and as a possibility of application of the knowledge of the phase diagrams in industry.

The problem of the representation of other European countries which have gone through political and democratic changes has been discussed many times within the period from 1995 to 1998, on each annual meeting of APDIC. It was mentioned that a variety of scientific centres exists in these countries, and experimental thermodynamics and phase equilibria are studied there. Scientists from that part of Central Europe, as well as from Southern and East-European countries participate in various international conferences and are invited to take part in international co-operation. Due to these facts, it was strongly recommended by APDIC and also by professor T.B. Massalski that the authorities of Polish Phase Diagram Committee should give the impulse towards the integration of partners from these countries. In view of these tendencies we have started with searching and renewing previous contacts with the scientists from universities and Academies of Sciences from such countries as the Czech Republic, Hungary, Bulgaria, Slovakia and Yugoslavia.

At the end of 1999, Polish Phase Diagram Committee organised in Krakow a one-day seminar with the representatives of the mentioned countries, devoted to open discussions on the activities, exchange of experience and some co-operation possibilities of further joint application in projects financed by European Union. The Polish role in this action, our experience and joint interests have been properly evaluated by the participants of the meeting, and finally it was decided to create a committee with the temporary name: Central Europe Phase Diagram and Thermodynamics Committee (CETPDC). It was pointed out that the future of this new committee is directly connected with joint research, the exchange of our experience and scientific information in three directions:

1. Thermodynamic and phase diagram calculations of the systems with different types of phases, separate studies of intermetallic compounds, important not only for the modelling of new materials, but also being of increasing interest in industrial application.

2. Thermodynamic studies on high temperature alloys of special industrial application, and due to growing interest, more advanced application of methods based on ab-initio calculations.

3. All the mentioned countries, including Poland, are on the way to be accepted to the European Union community, and to achieve this, various conditions have to be fulfilled. As an example, environmental problems are classified as the most important ones, and the elimination of lead and cadmium from all products has to be resolved until 2008. In this area joint research on Pb-free soldering materials has been initiated in addition to participation in European COST 531 project.

It became also profitable to take the organizational example of Calphad conference, which is combined with the annual APDIC meetings – to follow this way and organize similar annual seminars or conferences, along with the meetings of the new committee.

According to this idea, in 2000, the Polish members of Central Europe Phase Diagram and Thermodynamics Committee organised in Kraków a 3-day international conference "Discussion Meeting on Thermodynamics of Solutions" (see Introduction in [3]). About 50 participants from 12 countries gave lectures during the conference, including the members of the new committee and Vice Chairman of APDIC, prof.Reiner Schmid-Fetzer. On the second day of the conference, the committee CETPDC held a meeting, which provided an opportunity to consider various scientific problems. The name of the committee was strongly called into question by Vice Chairman of APDIC because in the opinion of the scientists from Germany and France, the definition "Central Europe" was adequate to these countries, but not to Poland, the Czech Republic etc.

The discussion of the name was continued, but not finished, during APDIC meeting in May 2001, in United Kingdom, when the "Activities" not only of the Polish Phase Diagram Committee, but also of the other members of CETPDC were presented (by prof. Z. Moser). The document "Activities" consists of the list of the scientific topics which were experimentally studied or calculated in all the scientific centres of the country in the particular year.

In order to find a compromising solution of the problem of the name of "Central Europe Committee", intensive consultations were conducted between the authorities of APDIC and CETPDC in the subsequent months. As the final step, prof. Tetsuo Mohri (Japan), the Chairman of APDIC visited Institute of Metallurgy and Material Science PAS in Krakow, where CETPDC is located. The new, neutral-type version (without geographic references) of the name was formulated: "Associated Phase Diagram and Thermodynamics Committee (Poland, Bulgaria, the Czech Republic, Hungary, Slovakia and Yugoslavia)" – to be recommended for the consideration on the nearest meeting of the CETPDC.

The 2001's meeting of CETPDC was held in Masaryk University, Brno (Czech Republic), together with the conference "Seminar on Thermodynamics of Materials", organized by Institute of Physics of Materials – Academy of Sciences of the Czech Republic, the Czech Chemical Society – Professional Group of Thermodynamics, CETPDC, and Metal Science Society of Czech Republic. During the conference, about 20 lectures were given by scientists from 7 countries (Bulgaria, Czech Republic, Hungary, Japan, Poland, Slovakia, and Yugoslavia). It should be pointed out that a special guest of the meeting of CETPDC was prof. Tetsuo Mohri (Japan), the Chairman of APDIC. The participants of the meeting discussed the proposal of the new name and unanimously decided that from then, the committee would be called "Associated Phase Diagram and Thermodynamics Committee (Poland, Bulgaria, the Czech Republic, Hungary, Slovakia and Yugoslavia)" and would be open to participants from other countries.

Prof. Tetsuo Mohri (Japan), the Chairman of APDIC was impressed that the authorities of Polish Phase Diagram Committee, going towards closer co-operation and integration with scientific centres in the nearest and the next-neighbour-countries gathered in the new committee, were ready to agree that in the list showing the structure of APDIC, the committee PPDC would be substituted for Associated Phase Diagram and Thermodynamics Committee.