

REPORT

ON THE CONFERENCE OF THE U.S.S.R. READERS OF THE INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, 20 FEBRUARY 1962, MOSCOW

THE First Conference of Readers of the *International Journal of Heat and Mass Transfer* and of the *Journal of Engineering Physics* was held on 20 February 1962 in Moscow. A great number of representatives of research and scientific institutes, enterprises, professors and teachers of educational Institutions from Moscow, Leningrad, Kiev, Rostov-on-Don, Minsk, Gomel, Sverdlovsk, Kuibyshev, Novosibirsk and other towns of the Soviet Union took part in the work of this Conference.

Academician A. V. Luikov, U.S.S.R. Editor of the *International Journal of Heat and Mass Transfer*, delivered a report on the work of the Journal. The following is a brief outline:

Within the latter years there has been a period of further development and consolidation of international contacts with scientists of various countries. The *International Journal of Heat and Mass Transfer*, recently organized, plays an essential part in the worthy cause of co-operation between scientists, and in the popularization of the Soviet science abroad.

Pergamon Press (England) began to publish this Journal in June, 1960. The spade-work on forming the Honorary Editorial Board, electing and appointing Editors of the Journal from various countries throughout the world preceded the publication of the Journal.

As a result of this long work the Honorary Editorial Board was formed, the Co-Chairman of which are Professors E. R. G. Eckert (U.S.A.) and Professor O. A. Saunders (England). The Honorary Editorial Board consists of fifty-five outstanding scientists in heat and mass transfer from various countries of the world. Professors P. K. Konakov, D. T. Kokorev, S. I. Kosterin, P. D. Lebedev, A. A. Pomerantsev, Z. F. Chukhanov and A. F. Chudnovsky are the U.S.S.R. Members of the Editorial Board.

The Editors of the Journal are Dr. A. J. Ede, Dr. Carl Gazley, Jr., Prof. U. Grigull, Prof. J. P. Hartnett, Prof. A. V. Luikov, Prof. T. Satō and Prof. D. B. Spalding.

The first issue of the *International Journal of Heat and Mass Transfer* included the Editorial of Prof. E. R. G. Eckert and Prof. O. A. Saunders where the basic aims of the Journal were given and, in particular, it was said that "Science thrives best when the exchange of ideas is furthered on a world-wide basis. It is our wish that beyond this goal the Journal, in its way, contributes also to a general improvement of understanding between the nations".

Whilst preparing the first issue, there appeared a number of questions, the solution of which delayed its publication. Firstly, since the Journal is international, the balance between countries of origin should be maintained as far as possible. Secondly, it was necessary to choose a working language for the Journal. English became, in the main, the working language and it was decided to publish abstracts to papers in four languages (English, French, German and Russian).

The first issue of the Journal appeared in June, 1960 and included papers from England, France, the German Federal Republic, the U.S.S.R., the U.S.A. and Sweden. In addition, a great bibliography of the latest works on heat and mass transfer as well as the contents of the All-Union Journal of Engineering Physics Nos. 8, 9, 10 and 11 for 1959 was published.

In order to acquaint a wide circle of U.S.S.R. readers with the new International Journal, the U.S.S.R. Editorial Staff dispatched about three hundred copies of the first issue to individual scientists as well as to all the libraries of research and educational institutions. For the purpose of popularizing the *International Journal of Heat and Mass Transfer* in the U.S.S.R. systematic reviews and contents of regular issues of it are published in the *Journal of Engineering Physics*.

The decision of the Publishing House was that the Journal should be published every two months. However, at first the schedule of publication was violated and the succeeding issues were published with great delay. This delay in publication was explained by delay in returning galley proofs by authors as well as by the fact that a technical editor did not have the right to change at his own discretion and to complete an issue with papers, the galley proofs of which had been checked and returned by authors. In order to obviate such a delay in future, Professor D. B. Spalding was elected as the new co-ordinating editor for a period of three years and Mr. A. R. Gunn as a new leading technical editor. After this the Journal began to be published regularly.

Editorial meetings played an essential part in improving the work of the Journal. The first editorial meeting was held in August, 1960 in London. This meeting dwelt on the problems of the co-ordinating editor, a working procedure for papers, the election of an Editor for Japan and the acceptance of new members for the Editorial Board. Regarding the contents of the Journal it was decided to publish from time to time short biographies of scientists in heat and mass transfer, book reviews on

heat and mass transfer, bibliographies, advertisements corresponding to the aims of the Journal and reports delivered at conferences. It was also agreed that the Journal should be published every two months, each volume to cover four numbers and should run to 350 pages, and each issue to consist of approximately 80 to 100 pages.

It was agreed that the next meeting of Board of Editors should take place at the Boulder Conference in August, 1961.

Since all editors of the Journal were invited to take part in the All-Union Heat and Mass Transfer Conference held in Minsk, there was opportunity to call a special editorial meeting on 7 June, 1961 where the U.S.S.R. Members of the Honorary Editorial Board were present.

Professor D. B. Spalding, co-ordinating editor, turned in a short description of the work of the Journal for a period after the editorial meeting in London. Then, as a result of a discussion on a number of points it was decided to publish regularly papers in Russian in the Journal, to consider the question of monthly publication of the Journal at the next editorial meeting, to consider it advisable to unify terms and symbols, to confine one issue of the Journal wholly to the Minsk Conference on Heat and Mass Transfer and to maintain business-like co-operation between the *Journal of Engineering Physics* and the *International Journal of Heat and Mass Transfer*.

The third editorial meeting was held at Boulder, Colorado, U.S.A. in September where it was again noted that the transition to monthly publication could be started only in case of regular publication of the Journal. The Meeting also wished to publish the Proceedings of the Minsk Conference on Heat and Mass Transfer in English and an Encyclopaedic Dictionary of Heat and Mass Transfer in two languages (English and Russian). On the suggestion of the U.S.S.R. Editorial Staff it was agreed that the following names should be added to the Honorary Editorial Advisory Board: Prof. S. R. de Groot (the Netherlands), Prof. A. Endrényi (Hungary) and Professor L. Hamburger (Rumania).

The next editorial meeting took place in London, January 12, 1962. At this meeting the Minutes of the last meeting of editors were accepted as a correct record and Mr. Gunn's Monthly Status Report was received and considered where it was underlined that some of the papers at present in hand would not be published until the end of 1962 if publication were at two-monthly intervals. The publisher undertook that if monthly publication were instituted, there would be no increase in yearly cost to individuals.

The suggestions of the U.S.S.R. Editor and Members of the Honorary Editorial Advisory Board were discussed:

- (a) To publish all the papers submitted by a regional editor in which heat and mass transfer in various processes and apparatuses are elucidated irrespective of their technical application. Each issue should as far as possible contain papers from the greatest number of countries.

- (b) To introduce into practice a mutual consultation between editors on advisability of publishing any paper in the Journal.
- (c) To consider it advisable that once a year national conferences of readers of the Journal be held with a summary report of a regional editor on it. Discussions held and decisions adopted should be published in the Journal.

Then Dr. Carl Gazley's suggestions regarding some practical questions and the contents of the Journal were discussed. In particular, Dr. C. Gazley suggested to confirm two-monthly publication of the Journal, to exclude advertisements of trade firms, to forbid the publication of serially numbered papers, to consider it inexpedient to enlarge the Board of Editors and to accept a uniform review procedure.

Taking into account Mr. Gunn's information on the stock of papers in hand, the Meeting decided to publish the Journal monthly. The remainder of Dr. C. Gazley's suggestions were accepted. It was agreed not to insist that editors should work to a uniform procedure but that they should keep each other informed about their practices and principles.

Since terminology and symbols in the field of heat and mass transfer used in the U.S.S.R. differ from those in the U.S.A. and other countries, it was agreed to prepare a list of equivalent English and Russian heat transfer terms. Such a list is now being prepared by Dr. and Mrs. Gazley and Professor Luikov's team, and their joint work will be published in the Journal.

Some other questions were discussed at the Meeting. It was agreed that anniversary dates of the outstanding scientists in heat and mass transfer should be observed.

After the discussion it was decided that election of the Co-Chairman should be arranged for a period of 3-5 years and that all other appointments, both of the Honorary Editorial Advisory Board and working Editors, should be made by the Co-Chairman.

Mr. Maxwell suggested that a medal should be awarded annually as a prize for an outstanding paper.

Academician A. V. Luikov gave a short review of the papers published for this period in the Journal, a short account of the work of the U.S.S.R. Editorial Staff of the *International Journal of Heat and Mass Transfer*, information on the stages of publication of the papers submitted to the Journal from the U.S.S.R. and directed the attention of those present to typical deficiencies in papers.

In conclusion the speaker said: "From our viewpoint the *International Journal of Heat and Mass Transfer* has proved its value since it makes available systematic information on the basic works on heat and mass transfer in various branches of science and technology. The Journal is an important text-book for scientists working in this field, it contributes to the establishment of contacts and to the developments of friendship and co-operation between scientists all over the world."

The work of the Journal was actively discussed by those present at the Conference.

In his speech Professor B. S. Petukhov (Moscow) expressed a wish, firstly, that the Journal should publish

a greater number of review papers prepared by distinguished specialists on the most current problems which would be prepared beforehand, and, secondly, that experimental methods of investigation should be given consideration. This question assumed even greater importance owing to various experimental methods available. To his mind it was extremely valuable that the Journal paid attention to heat and mass transfer terminology. However, he emphasized that Dr. I. T. Elperin's paper contained items open to questions.

Professor A. S. Ginzburg (Moscow) suggested that reviews on great and important problems should be published either in each issue of the Journal or as Appendices once or twice a year. In conclusion the speaker noted that the International Journal proved its value and the great spade-work done in building up the Journal resulted in an interesting and lively Journal at a high theoretical level.

Professor A. A. Gukhman (Moscow) suggested that reviews should be extremely critical while reviewing papers. Regarding reviews the speaker said that reviews dealing with analysis of ideas but not simply summarizing the results of an investigation in one of the branches of science were valuable. Since a review is a very serious historical and theoretical investigation on a definite range of problems, it cannot be short and it is therefore necessary to publish reviews as Appendices in order not to overload the Journal. Such review material should be prepared by outstanding specialists in their field as independent researches. The Journal should be a centre, round which definite opinions on difficult debatable questions were to be developed. Since there was much obscurity in heat and mass transfer, and opposing opinions existed, the speaker considered that it would be very useful to discuss these questions either through the pages of the Journal or orally. These discussions should be prepared by the Journal as a seminar, the material of which would be published in the Journal. In addition, it would be advisable to give short but extremely fundamental discussions at the end of a paper, when two or three authorities on this problem expressed their opinions and author's answers would be published in the following issue.

Professor P. P. Yushkov (Leningrad) noted that according to a detailed report by Academician A. V. Luikov on the work of the *International Journal of Heat and Mass Transfer* we might judge that the Soviet Union was so authoritatively presented in it that we might only welcome that work which was being carried out by the U.S.S.R. Editorial Staff in the Journal.

Doctor A. P. Prudnikov (Moscow) also expressed a wish to publish Appendices on definite subjects and references.

Professor A. S. Predvoditelev (Moscow) said that in physics type Journals theoretical papers were more numerous than experimental ones in all cases and whereas an experiment well conducted gave methods and solved those problems which gave correct and reliable data. Therefore Professor A. S. Predvoditelev did not agree with Professor B. S. Petukhov's words "give us methods and we will do the experiment" and considered that a

well planned experiment gave methods and itself gave rise to an idea for solving the whole problem. Moreover, Professor A. S. Predvoditelev considered that it was necessary to present new ideas and concepts in the Journal and to encourage them in every possible way. He said: "I, as a reviewer, never insist on being incognito. I endeavour to meet an author and to discuss his work, and, as a result of this we both benefit considerably. It often happens that a paper contains new concepts which should be clarified more exactly with the author". In connexion with the aforesaid, Professor A. S. Predvoditelev suggested that debatable papers should be published as discussions.

Professor S. S. Kutateladze (Novosibirsk) seconded Professor A. A. Gukhman and Professor A. S. Predvoditelev on the point that discussion material should be given greater scope. He suggested that once a year one or two issues should be dedicated to such important problems, for example, gas dynamics, investigations on physical problems at high temperatures, heat and mass transfer etc. according to a definite programme planned for one or two years.

Professor P. D. Lebedev (Moscow) suggested that all the authors should point out the field where the investigations published might be used. He said that galley proofs should be sent to authors for correction, He called on all the scientists working in the field of heat and mass transfer to submit papers to the *International Journal of Heat and Mass Transfer*.

Professor A. A. Pomerantsev (Moscow) sent the following suggestions on the work of the Journals to the Presidium of the Conference in a written form:

"It is necessary to popularize in the Journals investigations on the physical nature of thermal energetic substances, physical gas dynamics, physics of high temperatures and heat transfer with phase and chemical conversions".

In his closing remarks Academician A. V. Luikov answered a number of questions and thanked all present for attention and valuable suggestions regarding the work of the Journals. The following resolution was then unanimously adopted:

- (1) To consider it timely and advisable to build up the *International Journal of Heat and Mass Transfer* which contributes to co-operation of scientists all over the world and thus improves mutual understanding between nations.
- (2) To approve the work of the U.S.S.R. Editorial Staff of the *International Journal of Heat and Mass Transfer*.
- (3) To consider it advisable to publish the Journal monthly where the latest scientific investigations in the field of heat and mass transfer in various processes and apparatuses irrespective of their technical application should be presented. This will make it possible to become acquainted with the latest investigations on heat and mass transfer with minimum time expenditure.
- (4) To suggest to the U.S.S.R. Editorial Staff that the

question of regular publication of review papers on heat and mass transfer should be raised before the Board of Editors.

- (5) To suggest to the U.S.S.R. Editorial Staff that publication of papers about native pioneers in heat and mass transfer as well as about works of the

distinguished Soviet scientists in this field should be continued.

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