



**TOGETHER**  
*for a sustainable future*

## OCCASION

This publication has been made available to the public on the occasion of the 50<sup>th</sup> anniversary of the United Nations Industrial Development Organisation.



**TOGETHER**  
*for a sustainable future*

## DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

## FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

## CONTACT

Please contact [publications@unido.org](mailto:publications@unido.org) for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at [www.unido.org](http://www.unido.org)



04877



United Nations Industrial Development Organization

---

Distr.  
LIMITED

ID/WG.146/66  
23 May 1973

ORIGINAL: ENGLISH

Third Interregional Symposium  
on the Iron and Steel Industry  
Brasilia, Brazil, 14 - 21 October 1973  
Agenda item 2

THE ROLE OF TECHNICAL ASSOCIATIONS IN  
THE EXTENSION OF INTERNATIONAL CO-OPERATION AND KNOW-HOW

Submitted by  
the Secretariat of UNIDO

We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.

## SUMMARY

The paper begins by classifying the technical associations connected with the iron and steel industry into three groups: technical/professional associations, technical associations with research facilities, and techno-economic associations. Each group is discussed, with detailed treatment of specific examples.

The role of technical associations in the transfer of know-how is then discussed. This is seen to be primarily in the fields of conferences, technical publications, and documentation services.

International co-operation between technical associations is largely in the field of conference organization, and is on an ad-hoc or bilateral basis. There is also one example of international co-operation in the publication of abstracts of metallurgical literature.

In the developing countries, there are metallurgical associations in Argentina, Brazil, and India, and two regional associations, in Latin America and South East Asia respectively.

Finally, the paper discusses possible development and extension of the activities of technical associations. The priorities are the establishment of national or regional metallurgical associations in those developing countries or regions where they do not already exist and the establishment of an international federation of associations, which would facilitate and extend co-operation and transfer of know-how between developed and developing countries.

There are two appendixes. The first is a list of technical associations in the iron and steel field, with addresses and an indication of their activities, and the second is a short account of the establishment and operations of the South East Asia Iron and Steel Institute.

\*

Technical associations connected with the metallurgical or iron and steel industries exist in most of the developed countries and a number of developing countries; there are also two regional associations. Details of some of these organizations are given in Appendix 1.

1. Types of Association:

These associations vary considerably in constitution and function. The reasons for this are partly historical (Jernkontoret, for example, was founded in the 18th century, the Verein Deutscher Eisenhüttenleute in 1860, The Iron and Steel Institute in 1869), and partly politico-economic. Broadly, they can be classified into the following groups:

1. Technical/professional associations
2. Technical associations with research facilities
3. Techno-economic association

The best example of the technical/professional association is The Iron and Steel Institute (ISI). This London-based association draws only two-thirds of its membership from the United Kingdom; its large overseas membership is drawn from most countries in the world, developed and developing. The qualification for membership (at present some 5,000) is a simple one: members are "persons practically engaged in works where iron or steel is produced or worked" or "persons of scientific attainments in metallurgy, or specially connected with the application of iron and steel". There is no provision for company or institutional membership.

The work of the Iron and Steel Institute is essentially concerned with know-how transfer and communications within the iron and steel industry. \*) It organizes meetings and conferences, both in the UK and

---

\*) From 1 January 1974, however, The Iron and Steel Institute will be amalgamated with the Institute of Metals (non-ferrous), to form the Metals Society.

overseas, publishes a monthly journal and conference proceedings, and operates an extensive documentation service (abstracts, translations, bibliographies, etc.). The Institute has no research facilities, nor does it exercise any research function: the joint research committee of the Institute and the British Iron and Steel Federation, which carried out such important work from the early 1920's onwards formed the basis for the foundation in 1945 of the British Iron and Steel Research Association (BISRA), now the Corporate Research Laboratories of the British Steel Corporation.

Another important organization in this group with a purely iron and steel affiliation is the Pittsburgh-based Association of Iron and Steel Engineers (AISE). Like the ISI, AISE has only individual membership - at the present time nearly 12,000 (of whom only 550 are not US residents.) Its monthly technical journal, "Iron and Steel Engineer", is one of the leading publications in the field, with a world-wide circulation. The AISE Annual Convention is notable for the high standard of papers presented at it. AISE has certain indirect research activities, largely in the fields of standardization, in such fields as heavy-duty cranes, ladles, mill motors, and operating procedures.

The other association in this group that is specific to iron and steel is the small Verein Eisenhütte Österreich (VHO), based in Leoben, membership of which is restricted to those employed in the Austrian iron and steel industry.

There are associations with membership available to those working in all the metallurgical industries in a number of countries, both developed and developing, - Sociedad Argentina de Metales, Australian Institute of Metals, Associação Brasileira de Metais, Canadian Institute of Mining and Metallurgy, Société Française de Métallurgie, Hungarian Mining and Metallurgical Society, Indian Institute of Metals, Associazione Italiana di Metallurgia, Norsk Metallurgisk Selskap, American Society for Metals, and the Metallurgical Society of AIME (American Institute of Mining, Metallurgical and Petroleum Engineers).

The Indian Institute of Metals (IIM), with a total of 3,100 members (including 182 company or institutional members) is an excellent example of a technical-professional institution in a developing country. Founded in 1948, IIM publishes a bi-monthly Transactions and organizes technical conferences and symposia on subjects of current metallurgical interest; the latter have included several important international meetings. IIM also exercises an educational function: refresher courses are held periodically, and the Institute also conducts an examination equivalent to a degree in metallurgy. The importance of the role played by IIM is evidenced by the fact that its office-bearers help the Government of India by providing expert advice on metallurgical and allied subjects.

The Hungarian Mining and Metallurgical Society (OMBKE) extends its coverage into the mining, oil and gas, and foundry industries, but is essentially similar in its field of activities to IIM. Its senior members exercise a similar consultative function vis-à-vis the Hungarian Government.

The technical-research association is best represented by the Centro Nacional de Investigaciones Metalúrgicas (CENIM) in Spain. The technical association is one of the activities carried out by CENIM, which has a large research and development establishment at the Ciudad Universitaria in Madrid. Membership is nearly 2,000 (324 company members), of which about 300 are non-Spanish residents. The technical association activities comprise a four-yearly general assembly and periodical meetings and seminars, periodical journal and non-periodical publications, and documentation and information services.

The Verein Deutscher Eisenhüttenleute (VDh), based in Düsseldorf, has as its objective the production of technical and scientific work in the field of iron and steel and related materials. Its membership of nearly 11,000 (85 company members) is worldwide, some 1,600 of the members being resident abroad. In addition to its well known periodical publications, "Stahl und Eisen" and "Archiv für das Eisenhüttenwesen", the VDh publishes a series of authoritative textbooks and monographs through its associated publishing house, Verlag Stahleisen mbH. The annual Eisenhüttenstag in

November is complemented by a large number of smaller meetings, seminars, and colloquia. The research activities of the VDEH are carried out through two organisms: the Betriebsforschungsinstitut - BFI (Institute for Operational Research) and the Max-Planck-Institut für Eisenforschung, which is sponsored jointly by the Verein and the Max-Planck-Gesellschaft.

The BFI, which was set up in 1969, carries out semi-industrial research and development work for the steel industry and bridges the gap between basic research and industry. Its fields of activity are plant technology, operational methods, measurement and control techniques, energy, and industrial management. The Max-Planck-Institut is concerned with fundamental research into steel and its production.

Jernkontoret (the Swedish Ironmasters' Association) is not a technical association in the same sense as the others so far discussed, since it has no provision for individual membership: However, its fields of activity are similar, in that it publishes periodical journals (in Swedish and English), organizes conferences, seminars, and study tours, and maintains a library and documentation service.

The Metallurgical Research Plant at Luleå<sup>o</sup>, which was opened in 1965, is administered by the Foundation for Metallurgical Research, of which Jernkontoret is a sponsor. The work of the Research Plant, which is essentially pilot-scale research and development in fields of common interest to the whole industry, is closely integrated with the co-operative research programme carried out in Swedish iron and steel companies under the auspices of Jernkontoret.

The Iron and Steel Institute of Japan (Nippon Tekko Kyokai), with a membership of nearly 11,000 (213 company members) also performs the range of functions common to most of the associations under review - publications (in Japanese and English), conferences, and documentation services. Although it has no research facilities of its own, the Institute has sponsored research in a number of fields - the utilization of nuclear energy, continuous steelmaking, development of heat-resisting alloys, basic research on iron and steel and their production, establishment of standards etc.



Techno-economic associations as such do not exist at a national level (although Jernkontoret does carry out studies on the production, consumption, export, and import of steel). In most countries there are trade associations for the iron and steel industry, such as the Chambre Syndicale de la Sidérurgie Française, the Wirtschaftsvereinigung Eisen- und Stahlindustrie, the Japan Iron and Steel Federation, the American Iron and Steel Institute, etc., that exercise this function. However, there are two regional organizations - the Latin American Iron and Steel Institute (Instituto Latinoamericano del Hierro y el Acero) and the South East Asia Iron and Steel Institute (SEAISI) - whose function can be described as techno-economic. Membership of ILAWA is restricted to companies, whereas SEAISI provides for individual membership. The activities of the two societies cover the organization of conferences and technical meetings, publication of periodicals and reports, information services, and statistical and economic studies. A short background description of the development of SEAISI is given in Appendix 2.

## 2. The role of Technical Associations in Transfer of Know-how:

As organizations with what is essentially a communications function, technical associations play a very important role in the transfer of know-how in the field of iron and steel.

This is best exercised through the medium of conferences, symposia, and other meetings. Most of the associations listed in Appendix 1 have technical and/or programme committees, who are responsible for the planning of specialist meetings. The general practice is for a theme to be selected and for papers to be invited from organizations or individuals with special expertise in that field. It is increasingly common for such papers to be invited not only from the country in which the association is based, but from wherever the best and most up-to-date information can be obtained. The Iron and Steel Institute and the Association of Iron and Steel Engineers have a long record of meetings of this kind, which have attracted audiences from all over the world, and the Société Française de Metallurgie has recently set a high standard for meetings on technological subjects, in association with IRSID. The papers and discussions at such meetings are either published in the respective association journals or in separate volumes of proceedings.

Such meetings, both in their formal proceedings and by virtue of the opportunity that they afford for experts and those interested in new technologies and processes to meet informally, provide a very valuable means of know-how transfer. It is recognised that the participation of one of its specialists in a meeting of this kind enables a company to acquire a great deal of up-to-date information and to make many valuable contacts in a short time and with the minimum of correspondence and travelling. The increasingly large attendance at meetings and conferences in recent years testifies to the importance now being attached to this type of activity by iron and steel producers, plant manufacturers, consultants, and others.

In a number of cases, especially in the USA, technical conferences are associated with an exhibition: the annual ASM Metals Show is probably the best known example of this kind. This is another very valuable activity in the field of know-how transfer, since it provides the opportunity for new technologies to be studied and discussed with specialists on an individual basis.

Technical journals and publications also represent another important method of know-how transfer. The effectiveness of this medium is, however, limited to some extent by the fact that technological authors do not always go into their subjects in great detail in formal papers for reasons associated with patent and licensing restrictions. The coverage given to technological developments is also a function of the editorial policy of the organization concerned. Some associations adopt a passive role in this area, only considering for publication material that is submitted to them; others, however, adopt a more positive policy, inviting and commissioning papers from specialists in new and important areas of technology.

Another effective area of know-how transfer is that of documentation services, notably the preparation of abstracts. ASM (in association with the Institute of Metals, UK) publishes the very comprehensive Metals Abstracts. The Iron and Steel Institute also operates an extensive abstracts service, available either in index card form (ABTICS - Abstracts

and Book Title Index Card Service for a number of years, covering selected technological areas (ISI - Iron and Steel Industry Institute). Abstracts services are also provided by the VDEh (Vortschriften und Eberschau), ISI of Japan, ILAWA (Boletín Documental de Ingeniería), and CONIM.

### 3. International Co-operation:

Unlike several other metallurgical industry sectors, such as welding and the foundry industry, the iron and steel industry does not have a central co-ordinating organization and secretariat. International co-operation between the national and regional associations is essentially carried out on an ad-hoc or bilateral basis.

However, the Iron and Steel Institute began convening some ten years ago annual meetings of the representatives of metallurgical associations, and these are now held twice yearly: in London in May and in Düsseldorf in November. These meetings are designed to enable associations' representatives to discuss problems of mutual interest, principally in the fields of documentation and conference planning.

The Iron and Steel Institute may be said to have pioneered international meetings and study tours. Within a few years of its foundation in 1869, the Institute began its long series of overseas meetings, consisting of technical sessions and plant visits, that took its members to all the European steel-producing countries as well as the USA, India, and Australia. These were usually organized in association with the Institute's "kindred society" in the host country.

This type of meeting was never wholly adopted by the other associations, although there was a memorable joint ASM/AIME visit to Europe in 1958 and an ILAWA group visited India in 1967. Increasing financial and business pressures have resulted in the abandonment of this type of leisurely meeting by the ISI in recent years. However, study tours on a less ambitious scale are continuing, and are recognized as being of immense value to both hosts and visitors.

International co-operation between metallurgical associations is perhaps best illustrated at the present time by the series of Journées Internationales de Sidérurgie that have been held in Europe since 1958. These major international conferences are usually organized by one or sometimes two of the metallurgical associations or research institutes, who undertake the detailed planning, conference arrangements, publication, etc. They are supported, particularly in obtaining papers and expert participation, as well as in publicity, by a number of other associations. For example, the conference on electric arc steelmaking, held at Cannes in June 1971, was organized by IRSID (Institut de Recherches de la Sidérurgie Française) and SEM, with the collaboration of AIME, AIM, ILAFA, ISI, ISIS, Jernkontoret, and VDEh. The subjects covered in these conferences have been very wide - ironmaking, prereduction, oxygen and electric steelmaking, automation, tribology etc.

Co-operation hardly extends into fields other than meetings. As mentioned above, there is Anglo-American collaboration in the production of Metals Abstracts, but this is a rare exception. Publications activities are entirely run on a single-association basis, with the exception of the publication occasionally by one association of a translation of a work published by another. The VDEh has also produced a series of authoritative bi-lingual iron and steel dictionaries, in collaboration with its British, French, and Spanish counterparts.

#### 4. Metallurgical Associations in the Developing Countries:

The list of associations given in Appendix 1 includes three from developing countries (Argentina, Brazil, and India) and two regional associations (ILAFA and SFAISI). ILAFA is a well established and highly successful organization which has secured a unique place for itself in Latin America and carries out much valuable work. SFAISI is a more recent foundation, but its early successes indicate that it will in due course come to play in South East Asia the role of ILAFA in Latin America.

Of the national associations, the IFF and ISB have both developed steadily to their present positions as major organizations. Their publications, meetings, educational courses, and other activities have made them an essential and integrated part of the iron and steel industries of their respective countries, India and Brazil. The Argentine society, after a somewhat modest start, is now beginning to increase in importance.

It is not surprising that most of the other developing countries do not possess comparable associations since, with a few exceptions, their iron and steel industries either comprise a number of small manufacturing units or a single integrated plant. Nevertheless, it is unfortunate for those working in countries such as these that they do not have access to the valuable services provided in the developed countries.

Where a country's steel industry cannot economically justify setting up a national metallurgical society, there is a place for a regional grouping. An obvious case would be the Arab states. The Union Générale Sidérurgique Arabe is already in existence, but it is a federation of steel companies rather than a metallurgical association. A purely technical association of metallurgists and others working in the iron and steel industries could facilitate the exchange of technical know-how at all levels, especially if it were organized on the basis of chapters (on the US model) in the individual states.

It is difficult to propose a model for the organization of a technical association that could be applied in every developing country. Those countries such as Chile or the Arab Republic of Egypt that already possess central metallurgical research organizations might well utilize these bodies as a nucleus for an association, since they already possess an administrative infrastructure which it would be uneconomic to duplicate for a technical association. The Spanish experience suggests that a clear distinction between the technical association and the research organization activities is to be preferred: there are dangers in a combined organization of clashes of interest.

For countries without a central research organization and with a small iron and steel industry there are two courses open. The technical association can either be linked directly with the industry (through the major producing company or through the industry's trade association) or with an existing general technological association, such as an engineering institution. The degree of autonomy offered by the latter alternative is to be preferred. This permits freer participation by representatives of consumer and supply industries, whose contribution to the activities of a technical association can be very important.

#### 5. Future Development of Technical Association Activities:

The fields of know-how transfer covered by the existing associations - conference organization, publication, and technical documentation - probably represent the optimum combination at the present time. Extension into the fields of research and commercial and economic affairs is not desirable, since these are essentially the spheres of interest of corporate bodies rather than individuals.

The first priority is the establishment of technical associations for the iron and steel or metals industries in those countries or regions that do not already possess them. For this, expert advice should be sought among the senior permanent executives of the well established associations in the developing countries.

It is not enough, however, to establish such associations in isolation: to derive the maximum benefit for their members, these associations need to establish from the outset close links with the equivalent bodies in the developed countries. There is a pressing need, therefore, for a world federation of metallurgical associations, whose role would be to co-ordinate the activities of its members in the fields of meetings, publications, and documentation. At present, the participation of representatives of the developing countries in the activities of associations in the developed countries, as well as the availability of specialists from the developed countries to address meetings in the developing countries, operates on a hit-and-miss basis. The secretariat of the world federation (which need be only very small) would act as a clearing house for information

and enquiries. The federation should also, through an executive committee comprising representatives of all its member associations, endeavour to set up a world meetings cycle, taking into account technological and geographical factors, so as to make it possible for representatives of the developing countries to attend either conferences in their own regions.

The federation could also play an important role in the publications and documentation fields. For example, books and papers published in one language could be made available through this mechanism for translation and publication in other regions. Similar arrangements might be made in the documentation field, especially that of abstracts services, where there is considerable duplication of effort at the present time.

It is not suggested that the secretariat of the proposed federation should be large, since its role would essentially be that of a clearing house and co-ordinating body. It might well be housed by one of the larger existing associations and financed by a small levy on member associations. There is no case for this federation to be sponsored or operated by an existing international organization. The need for such a body has already been indicated by the informal meetings organized by the ISI and the VDEh twice-yearly, and the responsibility for the policy and operations of the federation should remain with the associations themselves.

APPENDIX 1

---

Technical Associations in the Metals Field:

Australian Institute of Metals (AIM)

|   |   |   |
|---|---|---|
| Federal Office<br>Ian Clunies Ross House<br>191 Royal Parade<br>Parkville 3092<br>Australia | Membership (1971)<br>.<br>Publications<br>Branches<br>Conferences | Individual 2,063<br>Corporate 306<br>Journal (quarterly)<br>3 (incl. New Zealand)<br>Annual Conference<br>Branch Meetings |
|---|---|---|

Technisch - wissenschaftlicher Verein "Eisenhütte Österreich" (EHO)

|   |            |  |
|---|------------|--|
| Montanistische Hochschule<br>Eisenhütteninstitut<br>A-8700 Leoben (Steiermark)<br>Austria | Conference | Annual (Österreichischer<br>Eisenhüttenstag) |
|---|------------|--|

Associação Brasileira de Metais (ABM)

|  |  |   |
|--|--|---|
| Praça Coronel Fernando<br>Prestes, 110<br>P.O. Box 3503<br>01000 São Paulo, SP<br>Brazil | Membership<br>.<br>Publications<br>Conferences | Individual 2,023 (28 foreign)<br>Corporate 304 (22 foreign)<br>Metalurgia (monthly)<br>Specialist books<br>Annual Congress<br>Meetings<br>Courses for technicians<br>(in different centres) |
|--|--|---|

Canadian Institute of Mining and Metallurgy

|  |  |  |
|--|--|--|
| 906 - 1117 Ste. Catherine<br>Street West<br>Montreal 110<br>Quebec<br>Canada | Membership<br>.<br>Publications<br>Conferences | Individual 8,706<br>Corporate 223<br>(Canadian 7,500)<br>(Foreign 1,400)<br>Canadian Mining and<br>Metallurgical Bulletin<br>(monthly)<br>Canadian Metallurgical<br>Quarterly<br>Journal of Canadian<br>Petroleum Technology<br>(quarterly)<br>Annual General Meeting<br>Annual Western Meeting<br>Conference of Metallurgists<br>Occasional Regional Meetings |
|--|--|--|



Société Française de Métallurgie (SFM)

47, rue Boissière  
75116 Paris  
France

Membership Individual 1,600  
Corporate 52  
(French 1,532)  
(Foreign 218)

Publications Revue de Métallurgie (monthly)  
Mémoires Scientifiques de la  
Revue de Métallurgie (monthly)

Conference Journées Métallurgiques de  
l'Automne  
Monthly meetings  
Occasional conference on metallurgical subjects

Verein Deutscher Eisenhüttenleute (VDEh)

Breite Strasse 27  
Postfach 8209  
4 Düsseldorf  
Federal Republic of  
Germany

Membership Individual 10,900  
Corporate 85

Publications Stahl und Eisen (every 2 weeks)  
Archiv für das Eisenhüttenwesen  
(monthly)  
Occasional technical books

Conferences Eisenhüttenstag (Annual Conference)  
Technical and scientific meetings  
Study tours

Education 50 educational courses per year

Research activities Technical Committees  
Betriebsforschungsinstitut (BFI)  
Max-Planck-Institute für  
Eisenforschung GmbH

Documentation Zeitschriften und Bücherschau  
(every two weeks)  
Bibliographies on request

Economic and statistical studies "Statistik" and "Wirtschaftliche  
Rundschau" (in Stahl und Eisen)

Országos Magyar Bányászati és Kohászati Egyesület (OMBKE)

(Hungarian Mining and Metallurgical Society)

Anker köz 1-3  
1368 Budapest, VI  
Hungary

Membership Individual 7,000  
Corporate 60

Publications Bányászati (Mining) - monthly  
Kohászati (Metallurgy) - monthly  
Otóde (Foundry) - monthly  
Kőolaj és Földgáz (Oil and Gas)  
- monthly

continued:

Országos Magyar Bányászati és Kohászati Egyesület (OMKE)  
(Hungarian Mining and Metallurgical Society)

|                        |   |
|------------------------|---|
| Conferences            | 6-7 international conferences per year<br>Study tours   |
| Educational activities | Courses in mining, oil and gas industries, non-ferrous and ferrous metals, foundry technology |

Indian Institute of Metals (IIM)

2 Sambhunath Pandit Street  
Calcutta 700020  
West Bengal  
India

|                        |  |
|------------------------|--|
| Membership             | Individual 2,918<br>Corporate 182                              |
| Local chapter          | 26   |
| Publications           | Transactions (alternate months)                                |
| Conferences            | Annual Symposium<br>Technical conferences<br>Chapter meetings  |
| Educational activities | Qualifying examinations for metallurgists<br>Refresher courses |

Associazione Italiana di Metallurgia (AIM)

Piazzale Rodolfo  
Morandi 2  
20100 Milano  
Italy

|                        |  |
|------------------------|--|
| Membership             | Individual 2,077<br>Corporate 57<br>(15% foreign members)  |
| Publications           | La Metallurgia Italiana (monthly)<br>La Fonderia Italiana (monthly)  |
| Conferences            | Annual Conference<br>Regular conferences on metallurgical subject (spectrochemistry, non-destructive testing, heat treatment, powder metallurgy etc.)<br>Study tours |
| Educational activities | Courses on metallurgical subjects  |

The Iron and Steel Institute of Japan (Nippon Tetsu Kyokai)

|  |                     |   |
|--|---------------------|---|
| 3rd floor<br>Keidanren Kaikan<br>9-4, Otemachi 1-chome<br>Chiyoda-Ku<br>Tokyo<br>Japan | Membership          | Individual 10,558<br>Corporate 213<br>(Japanese 10,214)<br>(Foreign 344)  |
|  | Publications        | Tetsu-to-Hagane (monthly - in Japanese)<br>Transactions of the Iron and Steel Institute of Japan (bi-monthly - in English)  |
|  | Conferences         | Biannual ISIJ Meeting<br>Nishiyama Memorial Lecture (4 times yearly)  |
|  | Research activities | Utilization of atomic energy<br>Experimental blast furnace<br>Continuous steelmaking<br>Sintering, gas desulphurization<br>Heat-resistant alloys<br>Iron and steel production<br>Creep testing<br>Standardization |

Instituto Latinoamericano del Hierro y el Acero (ILAFSA)

|                                    |               |   |
|------------------------------------|---------------|---|
| Casilla 14303<br>Santiago<br>Chile | Membership    | Corporate 172   |
|                                    | Publications  | Latin American Steel Journal (monthly)<br>Annual Congress Reports<br>Technical and economic reports and surveys |
|                                    | Conferences   | Annual Latin American Steel Congress<br>Technical Meetings (3-4 per year)                                       |
|                                    | Documentation | Boletín Documentación Siderúrgica (half-yearly)   |

Norsk Metallurgisk Selskap (Norwegian Metallurgical Society)

|  |             |   |
|--|-------------|---|
| Rosenkrantsgatan 7.III<br>Oslo<br>Norway | Membership  | Individual 410<br>Corporate 33  |
|  | Conferences | Annual two-day conference or plant tour<br>Evening meetings in Oslo and Trondheim |

South East Asia Iron and Steel Institute (SEIASI)

|   |   |   |     |  |
|---|---|---|-----|--|
| Killiney Road<br>Post Office Box 189<br>Singapore 9 | Membership  | Corporate   | 171 |  |
|   |   | Individual  | 19  |  |
|   |   | Foreign   | 24  |  |
|   | Publications  | Monthly Bulletin<br>Quarterly Journal                     |     |  |
|   | Conferences   | Annual General Meeting<br>and Seminar<br>Annual Symposium |     |  |
| Statistical<br>work                                 | Import, export, and production<br>statistics for region in<br>course of preparation |   |     |  |

Centro Nacional de Investigaciones Metalúrgicas (CENIM)

|   |                           |  |        |
|---|---------------------------|--|--------|
| Ciudad Universitaria<br>Madrid 3<br>Spain | Membership                | Individual   | 1,628  |
|   |                           | Corporate  | 321    |
|   |                           | (Spanish   | 1,691) |
|   |                           | (Foreign   | 261)   |
|   | Publications              | Revista de Metalurgia (bi-monthly)<br>Revista de Soldadura (quarterly)<br>Monographs, handbooks,<br>specifications, etc. |        |
|   | Conferences               | General Assembly (every 4 years)<br>Technical meetings<br>Seminars<br>Conferences  |        |
|   | Educational<br>activities | Training of research personnel<br>Long and short courses on<br>various technologies                                      |        |
|   | Research<br>activities    | Applied research and development<br>Basic research<br>Technical assistance to industry                                   |        |
|   | Documentation             | Technical and scientific<br>information services<br>Abstracts services (monthly)   |        |

Jernkontoret

Box 1721  
S-111 87 Stockholm  
Sweden

|                          |   |
|--------------------------|---|
| Membership               | Corporate 40  |
| Publications             | Scandinavian Journal of Metallurgy (6 times per year)<br>Jernkontorets Annaler (4 times per year)<br>Open reports (25-30 per year)            |
| Conferences              | 10 conferences and seminars per year<br>5-6 study tours per year  |
| Research activities      | Iron and steelmaking<br>Mechanical working<br>Physical metallurgy<br>Powder metallurgy<br>Plant engineering<br>Combustion and fuel technology |
| Economics and statistics | Production, consumption, export and export of steel   |

The Iron and Steel Institute (ISI)

1 Carlton House Terrace  
London SW1X 5DB  
United Kingdom

|               |  |
|---------------|--|
| Membership    | Individual (1972) 4,821<br>(United Kingdom 3,124)<br>(Foreign 1,697)   |
| Publications  | Journal (monthly)<br>Steel in the USSR (monthly)<br>6-10 technical books annually<br>World Calendar of Forthcoming Meetings - Metallurgical                      |
| Conferences   | Annual and Autumn General Meetings<br>10-15 meetings and conferences annually  |
| Documentation | Abstracts and Book Titles Index Card Service (ABTICS)<br>Iron and Steel Industry Profiles (ISIP)<br>British Iron and Steel Industry Translation Service (BISITS) |

The Metallurgical Society of AIME

345 East 47th Street  
New York, NY 10017  
U.S.A.

|                     |   |
|---------------------|---|
| Membership          | Individual 12,485<br>(US 10,000)<br>(Foreign 2,485)   |
| Publications        | Journal of Metals (monthly)<br>Metallurgical Transactions<br>(monthly - joint with ASM)   |
| Conferences         | Seven conferences per year:<br>Mechanical Working and Steel Processing<br>Extractive Metallurgy<br>Open Hearth and Basic Oxygen Steelmaking<br>Ironmaking<br>Electronic Materials<br>Physical Metallurgy<br>Electric Furnaces |
| Educational courses | Short courses on technical economics and hydrometallurgy  |

American Society for Metals (ASM)

Metals Park  
Ohio 44073  
U.S.A.

|                        |   |
|------------------------|---|
| Membership             | Individual 30,918<br>Corporate 2,409<br>(USA 33,150)<br>(Canada 2,500)<br>(Foreign 1,509)   |
| Publications           | Metal Progress (monthly)<br>ASM News (10 issues per year)<br>Metallurgical Transactions<br>(monthly - joint with AIME)<br>Metals Engineering Quarterly<br>Materials Science and Engineering (monthly)<br>International Metallurgical Reviews (quarterly)<br>Metals Handbook and other technical books |
| Conferences            | Annual Metal Show and Materials Engineering Congress<br>Annual Western Metal and Tool Exposition and Conference<br>40-50 conferences and symposia annually<br>Regular chapter meetings  |
| Educational activities | Regular courses in metallurgy and metals technology organized by the Metals Engineering Institute and the Academy for Metals and Materials  |
| Documentation          | Metals Abstracts (jointly with the Institute of Metals, UK)<br>Computer-generated Bibliography series   |

Association of Iron and Steel Engineers (AISE)

Suite 2350  
Three Gateway Center  
Pittsburgh, Pa. 15222  
U.S.A.

Membership (1972)

Individual 11,935  
(USA 11,409)  
(Foreign 526)

Publications

Iron and Steel Engineer  
(monthly)  
Yearly Proceedings

Conferences

Annual Convention  
Iron and Steel Exposition  
(biennial)  
Rolling Mill Conference (annual)  
District Section Meetings  
(monthly)

Research and  
development

Research and standardization  
activities - heavy-duty  
cranes, hot metal ladles,  
mill buildings, d.c. motors,  
rolling technology, blast-  
furnace operation, mill  
rolls, generators, etc.

APPENDIX 11

The South East Asia Iron and Steel Institute (SEAISI)

Organization:

The establishment of such an Institute was initially proposed in a report of an expert group commissioned by the Asian Industrial Development Council of the United Nations Economic Commission for Asia and the Far East (ECAFE) in February 1963, which surveyed the prospects for developing the iron and steel industry in South East Asia. Subsequently, a Preparatory Meeting was held in Singapore in October 1970 at which initial decisions were taken. The Institute was incorporated in March 1971, following the first Board of Directors meeting. The Board comprises one director from each of the member countries, being from Indonesia, Malaysia, Philippines, Singapore, and Thailand, together with Australia and Japan as supporting member countries.

The Board of Directors is responsible for the outline of the policies and work programmes of SEAISI. The detailed procedures of the work programme are evolved by a technical committee consisting of member countries' nominees with the Chief Executive Officer. Each member country also has a national committee whose primary responsibility is for developing within their respective countries the common interest towards a regional co-ordination in the iron and steel industry.

At the Institute headquarters office in Singapore, the Chief Executive Officer is assisted by a Senior Technical Officer and Technical Officers for the work programmes of technical nature. The Institute's activities are designed to comply with the primary objective of contributing to the development of the iron and steel industry in South East Asia.

Activities and Services:

(a) Symposium and Seminars

In early September 1971, a Mini Mill Symposium sponsored by the Institute was successfully held in Singapore. It was not only the first of its kind being handled by the Institute, but also the first ever launched by the steel industry in this region. During the 31 days (with only 1 day for industrial visits), twenty technical papers were presented to the 89 delegates from 19 countries with lively discussions (see ID/WG. 146/5 for a summary).

In September 1972, the Institute held its second symposium on "Foundry Practice" in Bandung, Indonesia. This function attracted over a 100 delegates and showed that there was considerable interest in the ferrous foundry industry. The primary objective of organizing the symposium was to provide an opportunity for the dissemination of technical information on foundry techniques to an industry group which is the main still used traditional methods. The scope of the 18 technical papers presented covered a wide range of iron and steel foundry operations and related subjects.



Following a decision by the Board of Directors in September 1972, the Institute will in principle organize a symposium and seminar once each annually with the seminar in March in conjunction with the Annual General Meeting and the symposium in September. For the year 1973, the Annual General Meeting and Seminar on Electric Arc Furnace Steelmaking and Bar Mill Operations will be held in Bangkok, Chiang Mai, Thailand from March 2th to 16th. The papers to be presented will include descriptions of arc furnace steelmaking, continuous casting and bar mill operations in the member countries of SEAFI, and discussions on arc furnace refractories and reheating furnaces for bar mills.

In September 1973, it is planned to have a symposium in the Philippines on direct reduction and possibly tinplate or effective utilisation of oxygen in the iron and steel industry. The Institute welcomes participation in all its symposia and seminars from iron and steel industry personnel throughout the world.

#### (b) Publications

The Institute publishes a monthly bulletin and a quarterly journal. The monthly bulletin, reporting on the activities of member countries and describing specific news of interest in the steel industry first made its appearance in August 1971. It has been circulated to all members regularly each month and distribution of the bulletin is now restricted to Institute members. The quarterly journal is of a technical nature, and provides detailed information on the production technology and economy appropriate to the development of the steel industry in this region.

In addition, the Institute also publishes directories on iron and steel works in South East Asia. Directories for the Philippines, Singapore and Thailand have been issued. Preparation of the directories for Malaysia and Indonesia are in hand.

The preparation and publication of import/export statistics on iron and steel products based on official records from the Statistical Departments of member countries is also part of the Institute's activity. It is also endeavouring to establish its own collection system for data to enable the publication of regional production statistics of iron and steel products.

#### (c) Lectures

By maintaining contact with various kindred societies the Institute also attempts to arrange lectures by specialists passing through the SEAFI region.

It is hoped to extend the lectures by specialists in the forthcoming years whenever the opportunity arises. The Institute invites specialists in the iron and steel industry who may be passing through the SEAFI region, to make contact and to arrange any appropriate lectures.

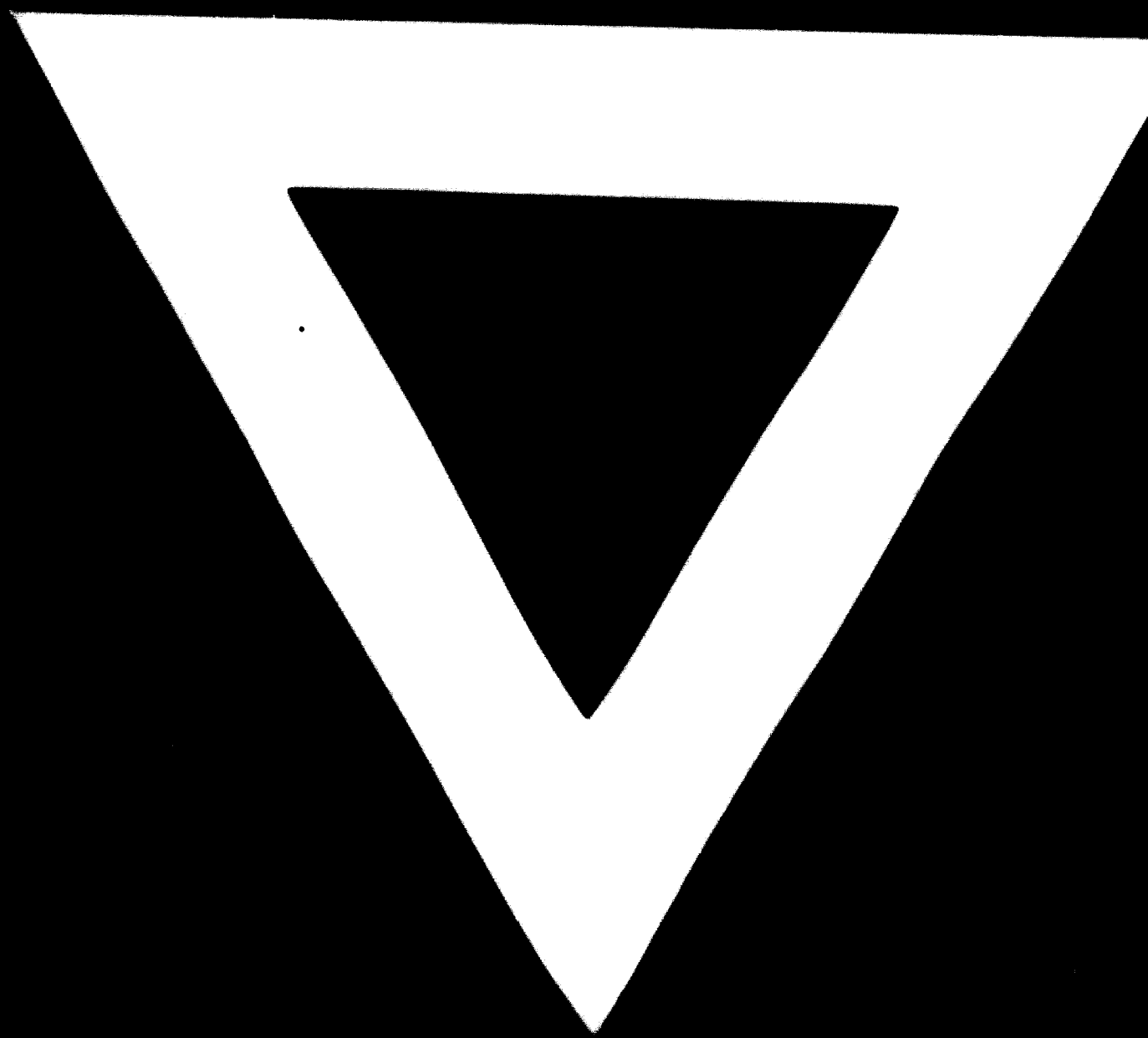
#### Technical and Information Services:

The Technical Service of the Institute is mainly for the benefit of members only. Several enquiries from members on problems have been responded with help by the Institute headquarters staff. In the event that the

Institute cannot solve the problem immediately or satisfactorily, help is sought from the supporting countries or other members.

The Institute has a comprehensive source of steel industry information. The information Service provides answers to enquiries from members as well as non-members throughout this region and elsewhere seeking general information about the iron and steel industry.





9 . 8 . 74