Invigoration of the Iron and Steel Institute of Japan

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The iron and steel industry of Japan has achieved a marvellous rate of development since the end of World War II, and in 1961 attained the 4th place in world crude steel production. Recently, however, iron and steel enterprises were obliged to defer part of their investment in equipment owing to the Government's policy of superfluous investment suppression in the general industries. Nevertheless, from a long-range perspective, the Japanese steel industry is supposed to continue further development in future.

On the other hand, in concert with the increase of iron and steel production, technological fields too have achieved a wide-step development. At present, production equipment in Japan in the respective departments of iron- and steel-making and rolling, presumably has reached a technical level on a par with that of the world. Above all, in the postwar years, rationalization, modernization and gigantizing of equipment have been gradually instituted; and aided by the introduction of automation and new techniques, the productivity and the yield have been improved and the analyzed unit of material consumption has been cut down.

For example, the coke ratio as an index to blast furnace efficiency has been gradually improved from 700 kg in 1957 through 632 kg in 1959, 617 kg in 1960, to a world record 568 kg in August 1961. The pig iron ratio has been improved from the low figure of 0.852 ton in 1956, through 0.998 t (15% increase) in 1959, 1.000 t in 1960 to a high record of 1.160 t in the second half of 1961, which is very near to the world record 1.580 t of the U.S.S.R.

The Iron and Steel Institute of Japan is an incorporated organization that was established in 1915 for making a study and research on the sciences and techniques and other problems related to iron and steel, and to activate development of the iron and steel industry. During the 48 years since its establishment, the Institute has made strenuous efforts to achieve these purposes. At present, the members of the Institute number about 8,000 and research papers released in the bi-annual (spring and autumn) Grand Lecture Meetings reach nearly 400. The contents of the Institute's journal "Tetsu-to-Hagané" are equivalent to those of periodicals published by scientific societies in the more advanced countries. The Iron and Steel Institute of Japan has now been acknowledged as the most authoritative organization in Japan, both in Japan and in overseas countries, with regard to the science and engineering of iron and steel.

The Institute had held numerous lecture meetings and research meetings since its establishment, in order to facilitate the publication of studies made by investigators and engineers in the scientific and professional fields of the iron and steel industry, and to promote the exchange of knowledge. At the same time, the Institute has published the journal "Tetsu-to-Hagané" that contains the research results and various data relating to iron and steel and distributed it among Institute members and other interested parties. The Institute has also published the "Tetsu-to-Hagané Abstracts" annually since 1951, and in 1961 this magazine was enlarged into the "Tetsu-to-Hagané Overseas" for overseas readers. This new enlarged magazine is published quarterly and partially fulfills the role of technological exchange by its distribution to related regions overseas.

The development of the Japanese iron and steel industry after the War was really remarkable, and correspondingly, the Iron and Steel Institute of Japan presumably has made some contribution through its activities. In consideration of further progress of the Japanese iron and steel industry, moreover, the importance of evolution and consolidation of steel technology will be very great, and naturally therefore, the necessity of promotion, unification and exchange of techniques must be increased. The Iron and Steel Institute of Japan will presumably serve as a center for the wide development of the aforementioned activities, in consideration of its character.

Nevertheless, the Institute has been managed heretofore around the main activities of holding lecture meetings and publication of the journal "Tetsu-to-Hagané". Therefore, the organization has been on a small scale and there have been very few specialist engineers in the Secretariat office of the Institute. Subsequently, it is regrettable for the Secretariat office that it has been incapable of performing full activities. In Western countries activities of such scientific societies are very positive at present, and these activities become a prime mover of technological development.

Thus, the Iron and Steel Institute of Japan deeply feels a necessity for consolidation on a financial basis, invigoration of the structure, and expansion of its management, and is at present making strenuous efforts for realization of these activities. On the other hand, in cooperation with similar scientific societies in foreign countries, the Institute should intensify more exchange of techniques, contribute more to the progress and development of the sciences and engineering, and assume an attitude of the scientific society comparable to that of the first-grade steelmaking countries, in the fields of production, technology and exploitation.

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