

Comments and Discussion

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This paper persuasively shows diffusion of energy-saving technology in the interwar period, introduction of heat control and deprivation of conditions on which heat control had been executed during the war, full-fledged development of heat control in rehabilitation era of the Japanese economy, the role of the Iron and Steel Institute of Japan (ISIJ) as an organizer of the collaborative researches, and the linkages of causes and effects in the developmental process of oxygen steelmaking in postwar period. It is valuable that discussion in this paper clearly distinguishes historical contexts between the 1950s and the following era.

According to the discussion in this paper, saving energy regulated by its scarcity resulted in the advent of a good basic unit for fuels, paradoxically making it possible of mass consumption of energy paralleled with the high-speed growth. When this type of growth based on mass consumption of energy faced to the limitation (the outbreak of oil crises), the Japanese economy needed the further improvement of basic unit for fuels. We would like to know how experiences of saving energy by the 1950s contributed to the moderation of crises. Could key terms such as heat control that totally included various efforts for saving energy exist after the 1970s? It is difficult to assume that discussion related to new energy and saving energy that emerged from the implementation of “Sunshine” or “Moonlight” projects conducted by the Ministry of International Trade and Industry could be a functional equivalent of heat control.

We could confirm the rise of collaborative researches that were exemplified oxygen steelmaking, which were composed of industry-government-academia partners in the rehabilitation era and the second half of the 1950s. What were the historical conditions that made the rise and diffusion of collaborative research possible? How the existence of the ISIJ, of small number of oligopolistic firms, positioning as a key industry compared with other industries effected the formation of various collaborative researches in the iron and steel industry? As is well known, we could see the development of collaborative researches in the shipbuilding industry by the end of the 1950s as well. Collaborative researches should be treated from the both sides of cooperation and competition. In the case of the shipbuilding industry, the latter started to outstrip the former in the 1960s. What is the case of the iron and steel industry?

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