

PREFACE

LOW-TEMPERATURE NUCLEAR HEAT

The Topical Meeting on Low-Temperature Nuclear Heat was held in Otaniemi, Finland, August 21-24, 1977, under the sponsorship of the Finnish Nuclear Society, the European Nuclear Society, and the American Nuclear Society. The Finnish Nuclear Society was responsible for the practical arrangements. The initiative for organizing the Meeting came from Reino Ekholm, who gathered the Technical Program Committee to its first meeting in Düsseldorf in April 1976, where it was decided to hold the Meeting in Finland.

This first International Meeting on Low-Temperature Nuclear Heat was arranged to promote the application of nuclear energy for heat production in the low-temperature range (below $\sim 300^{\circ}\text{C}$). This area of energy consumption throughout the world represents a significant proportion of the total demand for primary energy and offers diversified possibilities to utilize nuclear energy. The increasing upward trend of oil prices and the decreasing future availability of oil make the exploitation of nuclear-based heat production attractive in district heating, process industry, desalination, agriculture, and aquaculture.

The large number of papers originating from 12 countries in western and eastern Europe and North America was evidence of the great international interest in this topic. Most of the papers dealt either with large dual-purpose power- and heat-supplying nuclear plants or with small single-purpose heat-producing nuclear plants. The focus was directed on those applications that can be realized in the near future on the basis of available proven reactor technology. Consideration was given to technical and economical aspects as well as to the market potential and to safety and siting. The viewpoints of heat pro-

ducers, power companies, reactor manufacturers, energy administration authorities, and research institutes were represented. The Meeting was attended by 320 participants from 21 countries. Most western and eastern European countries, the U.S., Canada, Brazil, and Japan were represented at the Meeting.

The endeavor of organizing the Meeting has been supported and encouraged by several organizations and firms both in Finland and abroad, which is acknowledged with gratitude. The authors of the invited and contributed papers deserve special recognition for their efforts and cooperation to make the Meeting successful. Special acknowledgment is due to the Technical Research Centre of Finland for their assistance and positive attitude during the preparatory work for the Meeting.

I am also grateful to Erkki Laurila, General Chairman of the Meeting, and to the members of the Technical Program Committee, named below, for their contributions:

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