## putting out to sea

Reactor design generally has undergone development, and a considerable number of marine reactors have been built. It is now possible to say that it appears a sound technological basis exists for embarking on the design and construction of new ships particularly suited for nuclear propulsion, including large submerged tankers and cargo ships to serve special routes and to carry out special missions.

But if nuclear power is to be widely used for ship propulsion much more work remains to be done — in relation both to technical aspects of reactor and ship design, and to the economics of nuclear propulsion, insurance, and the all-important question of ensuring safety. All this will require a great deal of international co-operation and agreement: a nuclear-powered cargo ship would be useless if it were not allowed to enter the ports it was intended to serve.

A new symposium on nuclear ships is therefore to be held, in Hamburg from 10 - 15 May next year. The object of this meeting will be to review the current status of and projected developments in technical and economic aspects of nuclear ships, and the special problems associated with their safety regulation and liability. The symposium could not only provide an opportunity for exchange of the latest information in the field, but pave the way for faster development of nuclear ships in co-operation between countries which are interested in the possibilities they offer.

This second symposium on nuclear ships is being organized by the IAEA, IMCO and the Government of the Federal Republic of Germany, in co-operation with the Studiengesellschaft zur Förderung der Kernenergieverwertung in Schiffbau und Schiffahrt e.V. (KEST), and the Gesellschaft für Kernenergieverwertung in Schiffbau und Schiffahrt mbH (GKSS).

The topics to be discussed include a review of national programmes and plans; special problems of nuclear ship design; criteria and special features for power reactors for nuclear ships; actual experience gained in the construction and operation of nuclear ships; safety and the question of entry into ports; liability for and financial cover of nuclear ships; and economics. In connection with the symposium a visit to the NS *Otto Hahn*, and a visit to the reactor centre at Geesthacht near Hamburg, are planned. It is hoped that the symposium will be reviewed in a later issue of the Bulletin. A little over ten years ago the IAEA, in co-operation with the Intergovernmental Maritime Consultative Organization (IMCO), sponsored a symposium on the use of nuclear power for ship propulsion. In the last decade, the technology available for the construction of nuclear plants for ship propulsion has made great advances.

The N.S. Otto Hahn, in harbour at Hamburg. Photo reproduced by permission of the Federal German Press and Information Office, Bonn.

