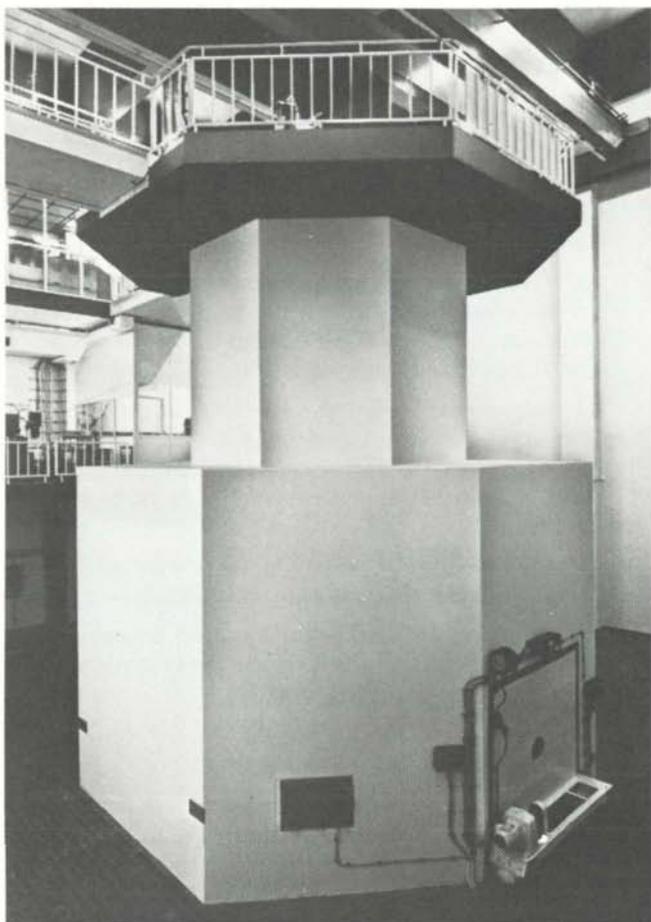


A New Reactor for Zaire

Self-help was the successful theme of the Republic of Zaire in the construction of its new TRIGA Mark II reactor at the Regional Centre for Nuclear Studies (CREN - K) in Kinshasa. Construction of this reactor was begun in February 1970 and was carried out entirely by a team from the Nuclear Sciences Commission of the Republic of Zaire.



It was completed last year with an output of 1 MW in steady operation, and is capable of reaching 1600 MW in pulsed operation.

The main components of the reactor were supplied by Gulf Energy and Environmental Systems of San Diego, California. All the auxiliary systems of the reactor were designed and built at Kinshasa by the local team of the Nuclear Sciences Commission.

The Republic of Zaire was helped in its project by the International Atomic Energy Agency (IAEA) and by a number of countries, in particular the United States of America and Belgium.

The United States supplied the enriched uranium which was used for the fabrication of fuel elements. The reactor control desk, the construction of which had been started at Kinshasa, was completed by Belgium, which also supervised the criticality tests on the reactor.

The new reactor is being used, in particular, for the production of isotopes. It includes a number of experimental facilities, among them four beam tubes and a thermal column, which can be used for sophisticated studies in physics.

In pulsed operation, the available flux is approximately 10^{17} n/cm².sec. With these characteristics, it will be possible to consider using the reactor for materials testing studies, for example, on the resistance of fuel cladding to intense neutron fluxes.