

# DUTCH ANNOUNCE URANIUM PROCESS

Technique Reportedly Uses  
a Centrifuge for Separation

Special to The New York Times

THE HAGUE, Feb. 29—The Government sent a letter to members of Parliament today informing them, it is understood, that the Netherlands has developed a potentially cheap method of making uranium 235, the vital material of atomic power.

This method involves the use of an ultra-centrifuge for separating uranium 235 from uranium 238. The basic separation method now used by the nuclear powers is the gaseous diffusion process, in which uranium in a gaseous form is pumped through thousands of filters.

The letter is reliably reported to confirm rumors of such a development. Such a letter is a procedure employed in offering a subject for parliamentary debate.

The letter said that in 1961 the Governments of the Netherlands, Britain and West Germany had made a secret pledge to the United States not to divulge any secrets on new atomic projects to other countries.

The Dutch Government will now seek a revision of the agreement that would enable it to cooperate with other countries in the production of the fissionable material.

The Government is expected to announce soon that it hopes to be able to start a pilot plant using the new method within the next two years, or even sooner.

It is also strongly rumored here that West Germany is nearly as far advanced in research on inexpensively produced uranium 235 as the Netherlands, but is holding back on construction of a pilot plant for fear that it would increase political tensions between the Soviet Union and Western Europe.

## Materials a Problem

Both the United States and Germany are known to have experimented with the ultra-centrifuge approach during World War II, but ran into the problem of finding materials that could stand up to 50,000 revolutions a minute and to the effects of corrosion.

The Dutch Government's note gave no details of the technical nature of the process, but reliable sources said the key to the success was a new material, perfected by the Werkspoor Company of Amsterdam, that is able to withstand the high speeds and corrosive effects of an ultra-centrifuge.

The separation process itself works on a well-known principle perfected by Prof. Jacob Kistemaker in which the heavier gas particles of uranium 235 are thrown outward more quickly than the lighter ones of natural uranium.

The 50-year-old scientist has been working on his principle since 1955 at the Reactor Centrum Nederland, a research center at Watergraafsmeer, near Amsterdam. The center is subsidized by Government and private funds.

Four years ago Professor Kistemaker began working with a small centrifuge, and last year Werkspoor produced a large one that has operated successfully for several months.

## Service is Expensive

However this large centrifuge is very expensive to run and is impractical for industrial application. Sources said the Dutch Government was considering building a complex of about 10 centrifuges, which it is hoped would work satisfactorily for a long period on the same source of energy.

The great advantages of the Dutch centrifuge, one source said, are its easy adaptability to the needs of a small country or region and the fact that when perfected it will need relatively little electricity.

There have been reports in the Dutch press that Royal Dutch Shell, Philips Electronics Industries of Eindhoven and Werkspoor are all involved in discussions with the Dutch Government on the establishment of a prototype ultra-centrifuge costing between \$80-million and \$90-million. The companies have refused to comment on the reports.

Dutch political sources said the reason for the secrecy was the extreme sensitivity of the nuclear-proliferation issue. They said the centrifuge process presented the possibility that even small nations could manufacture weapons in factories so small that planes or satellites could not distinguish them from normal industrial plants.

The New York Times

Published: March 1, 1968

Copyright © The New York Times