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## CENTRAL INTELLIGENCE AGENCY

8 August 1950

INTELLIGENCE MEMORANDUM NO. 319

SUBJECT: Soviet Capacity to Produce Proximity Fuses

Manufacturers within the Soviet orbit can now produce limited quantities of radio-type proximity fuses for artillery projectiles; by 1951, production can be made adequate to supply large quantities to the Soviet armed forces. Information on US proximity fuses and samples have been in Soviet hands for the past five years. During this time, strenuous efforts have been made to develop a similar fuse and to prepare for mass production.

Effective proximity fuses have been produced in Sweden through the joint efforts of the Bofors and Philips companies. In Czechoslovakia, the production stage has been approached through the joint efforts of the Military Technical Institute and the Tesla National Corporation. The Czechoslovak and Swedish fuses are close copies of US Navy VT fuses. Although there is no conclusive indication that Bofors has supplied fuses and technical information to the USSR, Bofors has demonstrated the fuses to representatives of nine nations for the purpose of making sales in commercial quantities. Czechoslovak progress in proximity fuses obviously is known to the USSR.

Since 1946, the Soviet bloc electronics industry has been striving to master production techniques and to build the machinery and equipment needed to make the three critical components of the proximity fuse (filamentary subminiature tubes, capacitors, and batteries). Mass production capacity of radio tubes in Czechoslovakia, Hungary, and the USSR has been set up to a level far beyond that necessary to meet normal radio requirements. Manufacturing methods for making proximity fuse batteries have been established. The USSR has recently been procuring from the US large quantities of materials needed to make capacitors, the third critical component of the proximity fuse.

There can be no doubt that proximity fuses are now available for Soviet use in limited quantity. The problems remaining for the USSR in this field are to expand component manufacturing facilities and to increase proximity fuse production sufficiently to provide for the needs of Soviet armed forces.

Note: This memorandum has not been coordinated with the intelligence organizations of the Departments of State, Army, Navy, and the Air Force.

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