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Intelligence Requirements on Flying-Saucer Type Aircraft

Hq. USAF - AFOIR

30 OCT 1947
Lt Col Garrett/mob/4544

CSGID
Attn: Plans and
Collection Branch

1. It is requested that a Collection Memorandum, similar to the attached draft, be issued to the addressees indicated thereon. This is in accordance with conversation between Lt. Colonel Smith and Lt. Colonel Garrett.

2. It will be appreciated if, at the time this Memorandum is reproduced, ten (10) additional copies could be run off and sent to the Directorate of Intelligence, Air Intelligence Requirements Division, Collection Branch, for file purposes.

FOR THE SECRETARY OF THE AIR FORCE:

- 2 Incls.
- 1. Intelligence Requirements
- 2. Draft of Collection Memorandum

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Office of Ass't. Chief of Air Staff-2

AAAF
30 OCT 1947
AAG - MAIL BRANCH

PRM 11681

DECLASSIFIED
E.O. 12958, Sec. 1.3
DATE 26 01 68
BY DOK MARS, Date 197

OFFICE SYMBOL	1. AFOIR-CO	2. AFOIR	3.	4.	5.
NAME AND GRADE OF ADDRESSEE	Col Taylor 3rd	Geo. F. Schulgen			
	Lt Col Garrett	Brig. Gen. USAF			

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INCLOSURE NO. 1

1. Research and Development

- X 691. *Replies* X 201-1000
- a. What German scientists had a better-than-average knowledge of the Horten brothers' work and perspective thinking; where are these scientists now located, and what is their present activity? Should be contacted and interrogated.
 - b. What Russian factories are building the Horten VIII design?
 - c. Why are the Russians building 1,800 of the Horten VIII design?
 - d. What is their contemplated tactical purpose?
 - e. What is the present activity of the Horten brothers, Walter and Riemar?
 - f. What is known of the whereabouts of the entire Horten family, particularly the sister? All should be contacted and interrogated regarding any contemplated plans or perspective thinking of the Horten brothers, and any interest shown by the Russians to develop their aircraft.
 - g. Are any efforts being made to develop the Horten "Parabola" or modify this configuration to approximate an oval or disc?
 - h. What is the Horten perspective thinking on internal controls or controls that are effective mainly by streams of air or gas originating from within the aircraft to supplant conventional external surface controls?

2. Control

For any aircraft whose shape approximates that of an oval, disc, or saucer, information regarding the following items is requested:

- a. Boundary layer control method by suction, blowing, or a combination of both.
- b. Special controls for effective maneuverability at very slow speeds or extremely high altitudes.
- c. Openings either in the leading edge top and bottom surfaces that are employed chiefly to accomplish boundary layer control or for the purpose of reducing the induced drag. Any openings in the leading edge should be reported and described as to shape, size, etc. This investigation is significant to justify a disc shape configuration for long-range application.

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- d. Approximate airfoil shape in the center and near the tips.
- e. Front view and rear view shape.

3. Items of Construction

- a. Type of material, whether metal, ferrous, non-ferrous, or non-metallic.
- b. Composite or sandwich construction utilizing various combinations of metals, plastics, and perhaps balsa wood.
- c. Unusual fabrication methods to achieve extreme light weight and structural stability particularly in connection with great capacity for fuel storage.

4. Items of Arrangement

- a. Special provisions such as retractable domes to provide unusual observation for the pilot or crew members.
- b. Crew number and accomodation facilities.
- c. Pressurized cabin equipment.
- d. High altitude or high speed escapement methods.
- e. Methods of pressurization or supercharging from auxillary units or from the prime power plant.
- f. Provisions for towing - especially with short fixed bar, and for re-fueling in flight.
- g. Provisions for assisted take off application.
- h. Bomb bay provisions, such as dimensions, approximate location, and unusual features regarding the opening and closing of the doors.

5. Landing Gear

- a. Indicate type of landing gear - whether conventional, tricycle, multiple wheel, etc.
- b. Retractable, and jettison features for hand gear.
- c. Provisions for takeoff from ice, snow, or water.
- d. Skid arrangements for either takeoff or landing.

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6. Power Plant

a. Information is needed regarding the propulsion system used in the aircraft. Possible types of engines that could be employed include:

- (1) Reciprocating (piston type) engine or gas turbine. Either or both of these could be used to drive propellers of conventional or special design, rotating vanes, ducted fans, or compressors.
- (2) Jet propulsion engines including turbo jets, rockets, ramjets, pulse jets, or a combination of all four.
- (3) Nuclear propulsion (atomic energy). Atomic energy engines would probably be unlike any familiar type of engine, although atomic energy might be employed in combination with any of the above types.

Aircraft would be characterized by lack of fuel systems and fuel storage place.

b. The power plant would likely be an integral part of the aircraft and could possibly not be distinguished as an item separate from the aircraft. If jet propulsion is used, large air handling capacity, characterized by a large air inlet and large exhaust nozzle, should be evident. The size of entrance and exit areas would be of interest. It is possible that the propulsive jet is governed or influenced for control of the aircraft. The presence of vanes or control surfaces in the exhaust or methods of changing the direction of the jet should be observed.

c. Information desired on the propulsion systems pertains to the following items:

- (1) Type of power plant or power plants.
- (2) General description.
- (3) Rating (thrust, horsepower, or air flow).
- (4) Type of fuel.
- (5) Catalytic agents for super-performance or normal cruising power.

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3. The first sightings in the U.S. were reported around the middle of May. The last reported sighting took place in Toronto, Canada, 14 September. The greatest activity in the U.S. was during the last week of June and the first week of July.

4. This strange object, or phenomenon, may be considered, in view of certain observations, as long-range aircraft capable of a high rate of climb, high cruising speed (possibly sub-sonic at all times) and highly maneuverable and capable of being flown in very tight formation. For the purpose of analysis and evaluation of the so-called "flying saucer" phenomenon, the object sighted is being assumed to be a manned aircraft, of Russian origin, and based on the perspective thinking and actual accomplishments of the Germans.

5. There is also a possibility that the Horten brothers' perspective thinking may have inspired this type of aircraft - particularly the "Parabola", which has a crescent plan form. Records show that only a glider version was built of this type aircraft. It is reported to have been built in Heiligenberg, Germany, but was destroyed by fire before having ever been flown. The Horten brothers' latest trend of perspective thinking was definitely toward aircraft configurations of low aspect ratio. The younger brother, Riemar, stated that the "Parabola" configuration would have the least induced drag - which is a very significant statement. The theory supporting this statement should be obtained if possible.

6. The German High Command indicated a definite interest in the Horten type of flying wing and were about to embark on a rigorous campaign to develop such aircraft toward the end of the war. A Horten design, known as the IX, which was designated as the Go-B-229 and Go-P-60 (night fighter) was to be manufactured by the Gotha Plant. It is reported that a contract for fifty such aircraft was planned, but only three or four were built. This plant is now in the hands of the Russians. A recent report indicates that the Russians are now planning to build a fleet of 1,800 Horten VIII (six engine pusher) type flying wing aircraft. The wing span is 131 feet. The sweepback angle is 30 degrees. The Russian version is reported to be jet propelled.

REQUIREMENTS

1. Requirements appear at Inclosure No. 1.

SPECIAL INSTRUCTIONS

Control No. A-1917

DISTRIBUTION

1. To MA's England, France, Sweden, Finland, USSR, Turkey, Greece, Iran, China, Norway, Philippines, and to Commander-in-Chief, Far East, and Commanding General, United States Air Forces in Europe, through Commanding General, EUCOM.

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