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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

17 November 1977

MEMORANDUM FOR: The Director of Central Intelligence

FROM : William W. Wells
Deputy Director for Operations

SUBJECT : WARSAW PACT JOURNAL: Designing and Testing a Set for the Construction of Barge Bridges (SBG-66) for the Crossing of Medium and Large Water Obstacles in the German Democratic Republic

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on articles from a SECRET Soviet publication called Information Collection of the Headquarters and the Technical Committee of the Combined Armed Forces. This short article describes and has photographs of an East German barge bridge set for the crossing of medium and large water obstacles. This bridge set, made of relatively light and transportable components that can be assembled using cranes with a three-ton lifting capacity, has a cargo-carrying capacity of 80 tons and can handle two-way traffic at the rate of 8,000 vehicles per day. This journal is published by Warsaw Pact Headquarters in Moscow, and it consists of articles by Warsaw Pact officers. This article appeared in Issue No. 1, which was published in 1970.

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies. For ease of reference, reports from this publication have been assigned .

William W. Wells

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Distribution:

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Intelligence Information Special Report

COUNTRY EAST GERMANY/WARSAW PACT

[redacted]

DATE OF INFO. 1970

DATE 17 November 1977

SUBJECT

WARSAW PACT JOURNAL: Designing and Testing a Set for the Construction of Barge Bridges (SBG-66) for the Crossing of Medium and Large Water Obstacles in the German Democratic Republic

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article from a SECRET Soviet publication called Information Collection of the Headquarters and the Technical Committee of the Combined Armed Forces. This journal is published by Warsaw Pact Headquarters in Moscow, and it consists of articles by Warsaw Pact officers. This short article describes and has photographs of an East German barge bridge set for the crossing of medium and large water obstacles. This bridge set, made of relatively light and transportable components that can be assembled using cranes with a three-ton lifting capacity, has a cargo-carrying capacity of 80 tons and can handle two-way traffic at the rate of 8,000 vehicles per day. This article appeared in Issue No. 1, which was published in 1970.

End of Summary

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Designing and Testing a Set for the Construction of Barge Bridges (SBG-66) for the Crossing of Medium and Large Water Obstacles in the German Democratic Republic

For the crossing by troops of medium and large water obstacles, there has been developed and tested on the territory of the German Democratic Republic a set for the construction of barge bridges -- the SBG-66. Such sets are to be used in case permanent bridges are destroyed.

The following requirements were taken as the basis for the development:

1. Load-carrying capacity -- 80 tons for wheeled and tracked vehicles.

2. Width of roadway -- 7 meters for two-way traffic.

3. Capability of using the bridge set on rigid or floating supports.

4. Traffic capacity -- 8,000 vehicles per day.

5. Use of cranes with a 3-ton lifting capacity in constructing the bridge.

6. Construction set of minimum volume and structural components of modest weight, for convenience in transporting.

7. Covering the above-water portion of the floating supports for the box construction as well as the surface of the roadway with synthetic resin, and equipping the barges with attachments that ensure their stability in operation.

8. Minimal need for maintenance and maximal storability.

9. Simple construction and few components.

10. Provision for rapid movement on water.

The bridge set which was developed fully satisfied these requirements. In testing, pusher tugs were used as supports. In order to provide rigidity for the bridge, the barges were provided with alternating triangular and rectangular structures.

The barges are fitted out at a prepared site, at which the bridge sections are also assembled (Figure 1). Three barges form one bridge section; these are anchored near the designated bridge-laying locality in a dispersed manner. Beginning from the lower reaches of one of the banks, the bridge sections are moved out onto the bridge-laying axis by pusher tugs (Figure 2).

In order to reduce the time for laying bridges, components of the bridge roadway that jut out are used with hydraulic lifting cross members, and upon completion of the moving forward of each bridge section onto the line of the bridge, these components are let down into the water. All bridge sections are successively moved out onto the bridge construction axis following this same principle (Figure 3). In testing the SBG-66, wheeled and tracked vehicles moved in two-way or one-way order (Figure 4). No structural changes were observed during the time under load. The rigidity of the bridge structures made it possible to reduce listing of the barges and their depth of submersion, which permitted vehicles to move over the bridge at high speeds.

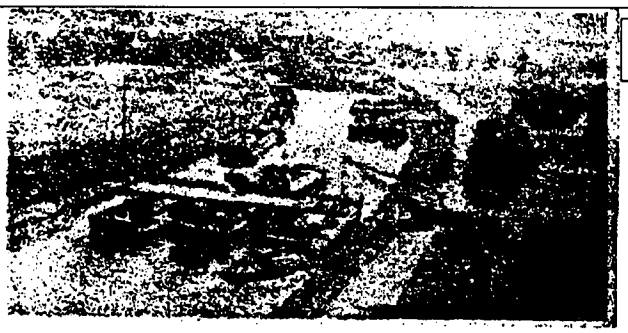

Figure 1. Assembly of bridge sections

Figure 2. Moving bridge sections onto the axis of bridge laying

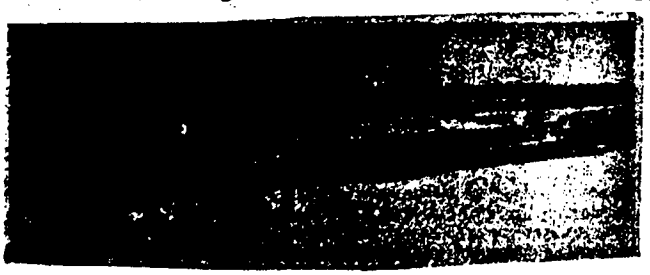

Figure 3. Bridge construction

Figure 4. Equipment crossing the bridge