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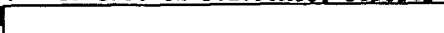


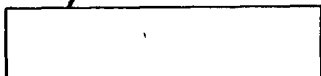
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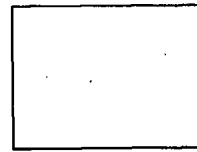
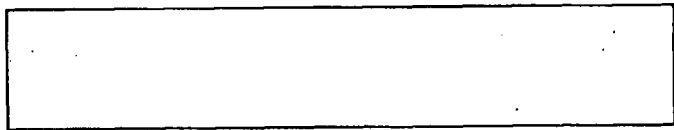
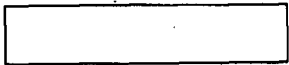
21 July 1975

MEMORANDUM FOR: The Director of Central Intelligence  
SUBJECT : MILITARY THOUGHT (USSR): The Structural Components  
of Low-Level Bridges of Industrial Manufacture

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This article examines the problem of building low-level bridges used in river-crossing operations, in comments on a previous article. The structural components of such bridges should be designed for prolonged storage and for transport on a single vehicle. This article appeared in Issue No. 1 (80) for 1967.

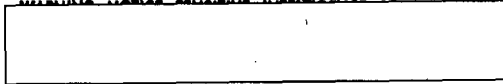
2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies. For ease of reference, reports from this publication have been assigned 

  
William E. Nelson  
Deputy Director for Operations



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Intelligence Information Special Report

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COUNTRY USSR

DATE OF  
INFO. Early 1967

DATE 21 July 1975

SUBJECT

MILITARY THOUGHT (USSR): The Structural Components of  
Low-Level Bridges of Industrial Manufacture

SOURCE Documentary

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 1 (80) for 1967 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. The author of this article is Colonel Ye. Kolibernov. This article examines the problem of building low-level bridges used in river-crossing operations, in comments on a previous article. The structural components of such bridges should be designed for prolonged storage and for transport on a single vehicle.

End of Summary

Headquarters Comment:

The SECRET version of Military Thought was published three times annually and was distributed down to the level of division commander. It reportedly ceased publication at the end of 1970. The article to which the current article refers was disseminated [redacted] with the title "Designs of Commercially Manufactured Low-Level Floating Bridges for Troops".

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The Structural Components of Low-Level Bridges of  
Industrial Manufacture

by  
Colonel Ye. Kolibernov

This timely question has been raised in the military press, specifically in an article by Lieutenant Colonel I. Kuznetsov and Major N. Lyubchenko.\* The authors correctly point out the impossibility and inadvisability of the continued utilization of the organic pontoon bridge means of large units and formations in support of river crossings. With the help of organic army and front pontoon bridge means, it is possible to carry out for an army at best two or three crossings each across two adjacent rivers of average width. It is entirely inadvisable and uneconomical to utilize the pontoon bridge parks of engineer troops for carrying out crossings over water obstacles in the depth of an operational disposition of troops.

In recent years, the engineer troops have shortened significantly the time needed for replacing floating bridges with low-level bridges by mechanizing the process of constructing them from components prepared beforehand. The great majority of units of engineer troops construct low-level bridges at the rate of 20 linear meters an hour while working from one bank, and from 30 to 35 linear meters while working from two banks.

Unfortunately, the capabilities of troops in preparing components are only one-fourth (as was correctly mentioned in the article) of the capabilities in constructing bridges. An increase in the number of supporting subunits does not solve the problem, either. Furthermore, the transport of existing components of wooden bridges requires a large number of transport vehicles which are not provided for by any tables of organization or calculations.

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\*Collection of Articles of the Journal "Military Thought", 1966, No. 2  
(78).

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In preparing a theater of military operations for war and in increasing the constant combat readiness of engineer units, bridge components are prepared in peacetime and are concentrated in advance in designated areas or in troop dispositions. Considerable resources are expended for lumber and for the manufacture of structural components which can be stored for only four to five years, after which they must be replaced.

The authors are fully justified in their concern about the need for centralized production of precast demountable structural components for large-span bridges utilizing fiberglass, plywood elements and low-alloy steels.

In determining the tactical-technical requirements for these structural components, it is necessary, in our opinion, in addition to the requirements presented by the authors, to provide for the possibility of prolonged storage (eight to ten years) and of transporting at least one bridge span nine to 12 linear meters long on one motor vehicle (without a pole trailer).

It is necessary to pay particular attention to the design of piers for bridges erected on rivers with silty bottoms and sticky sand, which is characteristic of the estuarial sections of rivers in the Western Theater of Military Operations. Thus, when constructing low-level bridges on the Oder and the Vistula Rivers even with spans four to 4.5 meters in length, it is necessary to drive in piled piers 11 to 13 meters long. In cases where the span is longer, the loads on the piers will be even greater.

In our opinion, further study is required to determine if it is necessary for these bridge components to meet the requirement of repeated assembly over several water barriers during an operation. The minimum of two or three low-level bridges built in the zone of each army will definitely be used subsequently by the front. Thus, to take down these bridges or replace them with similar ones is quite inadvisable. It is another matter in peacetime when the repeated assembly of bridges from such components is carried out during troop combat training.

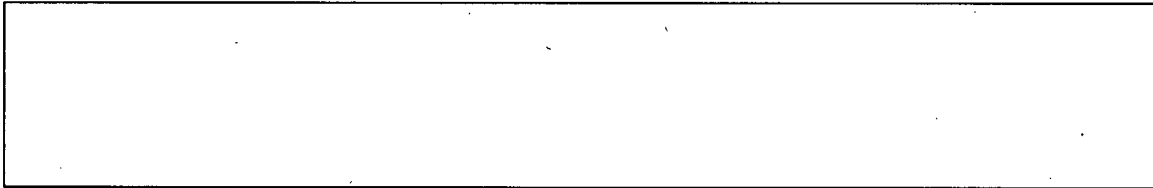
In light of the foregoing, it appears to us that we should take steps to speed up the designing, the testing in the troops, and the industrial manufacture of structural components of low-level bridges.

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