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FOREIGN TECHNOLOGY DIVISION

INTERPRETOSCOPE
NEW PHOTOGRAMMETRIC DEVICE PRODUCED BY THE VEB C. ZEISS-JENA

By

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UNEDITED ROUGH DRAFT TRANSLATION

INTERPRETOSCOPE NEW PHOTOGRAMMETRIC DEVICE PRODUCED BY THE VEB C. ZEISS-JENA

BY: J. Konieczny

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Bulletin of Polish Photogrammetric Society

INTERPRETOSCOPE
NEW PHOTOGRAMMETRIC DEVICE PRODUCED BY THE VEB C. ZEISS-JENA

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The use of aviation photos for map processings still does not completely exhaust the possibility of utilizing the enormous information, which an avia photography can offer. This fact causes that all scientific disciplines, working on investigations, description and changes in the form of the Earth utilize avia photographies, to obtain by stereoscopic interpretation maximum information included in the text of the photos.

To enable proper, suitable and full interpretation of avia pictures was constructed in Jena in special device named the Interpretoscope. Besides interpretation this device is intended for the selection of photo material and proper preparation of this material for instrumental treatment. In addition, with this device can be carried out ground observations, as well as photos made by any photo camera, brought in approximation to one scale.

This circumstance is of great importance in cartographic-geological operations on the basis of initial photointerpretation. The interpretoscope consists basically of observations parts, for stereoscopic observation of

photos, of base and desk for insertion of photo material.

Photo observation is frontal. The built in pancartic system enables constant information in two magnification divisions. Division one from 2 x to 6 x and division two from 5 X to 15 X. Change over from one division of magnifications to another requires no change of eye glasses and is carried out rapidly (swiftly) by turning the exchange objectives. With the aid of the pancratic system it is possible to equilibrate also scale differences between individual photo fragments.

Optics is distinguished by a specifically large field of vision and high picture quality. The diameter of field of vision at a magnification of 2 X amounts to 100 mm. Upon magnification of 15 X the divisability is expressed by the number 90 L/mm.

Observation of photo material can also be carried out at light falling from the top, as well as during sub-lighting. Brightness control of individual photo fragment is realized with the aid of liquid filters dosaging the proper stream of light.

The interpretoscope enables in addition stereoscopic observation of non-cut avia film negatives. For this purpose the objective can be shifted in direction x and y together and separately, one with respect to the other. Schmidt prisms allow the turn to optical observed photos.

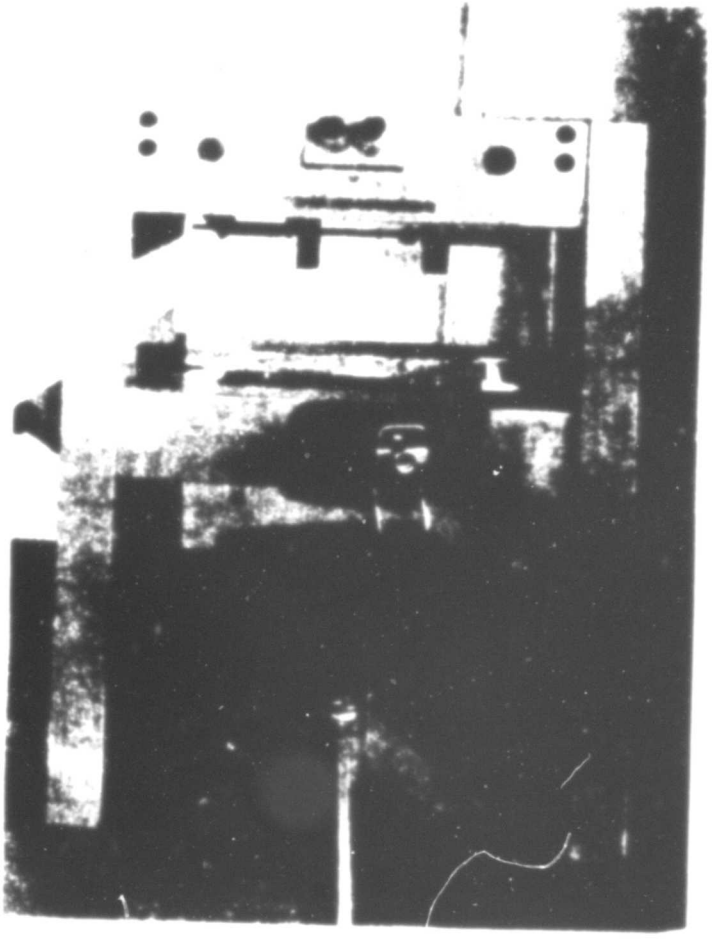
Combined shifting of objectives in direction x amounts to 240 mm, and shifting in direction y - 300 mm.

In this it is possible to observe photos up to the form of 30 cm X 30 cm, of longitudinal covering of up to 75%. For photos of form 23 cm X 23

longitudinal coating will amount theoretically 100%.

In the occular plane are situated black measuring signs. As result of stereoscopic placing of the measuring sign on any given detail of the model it is possible to read on a corresponding division reap. Shifting of objectives in direction x with an accuracy of 0.05 mm and on this basis describe the approximate height of model points.

On the side walls of the device are situated film containers, in which can be inserted aviation films, up to a width of 32 cm.



Technical Data

Magnification V...	-2X to 6X and 5X to 15X
Equilibrium of enlargement up to ratio	-1:3
Diameter of field of vision	$-\frac{200\ mm}{V}$
Illumination surface	-600 mm X 300 mm
Optical turn of photo....	-400 g
Width of film.....	-up to 32 cm
Range x.....	-240 mm
Range y.....	-300 mm
Range of base and px.....	-90 mm - 310 mm
Range py	-130 mm
Working voltage.....	-230 v 50 c
Power induction....	-250 va
Dimensions:	
width (without film receptables)	-1000 mm
depth	-700 mm
height	-1284 mm