

BIBLIOTHEEK RIVIERKUNDE

MORFOLOGIE

36-1b

VERSLAG MODELONDERZOEK

RIVIERKRUISINGEN

M. 9-46.

B'JLAGEN



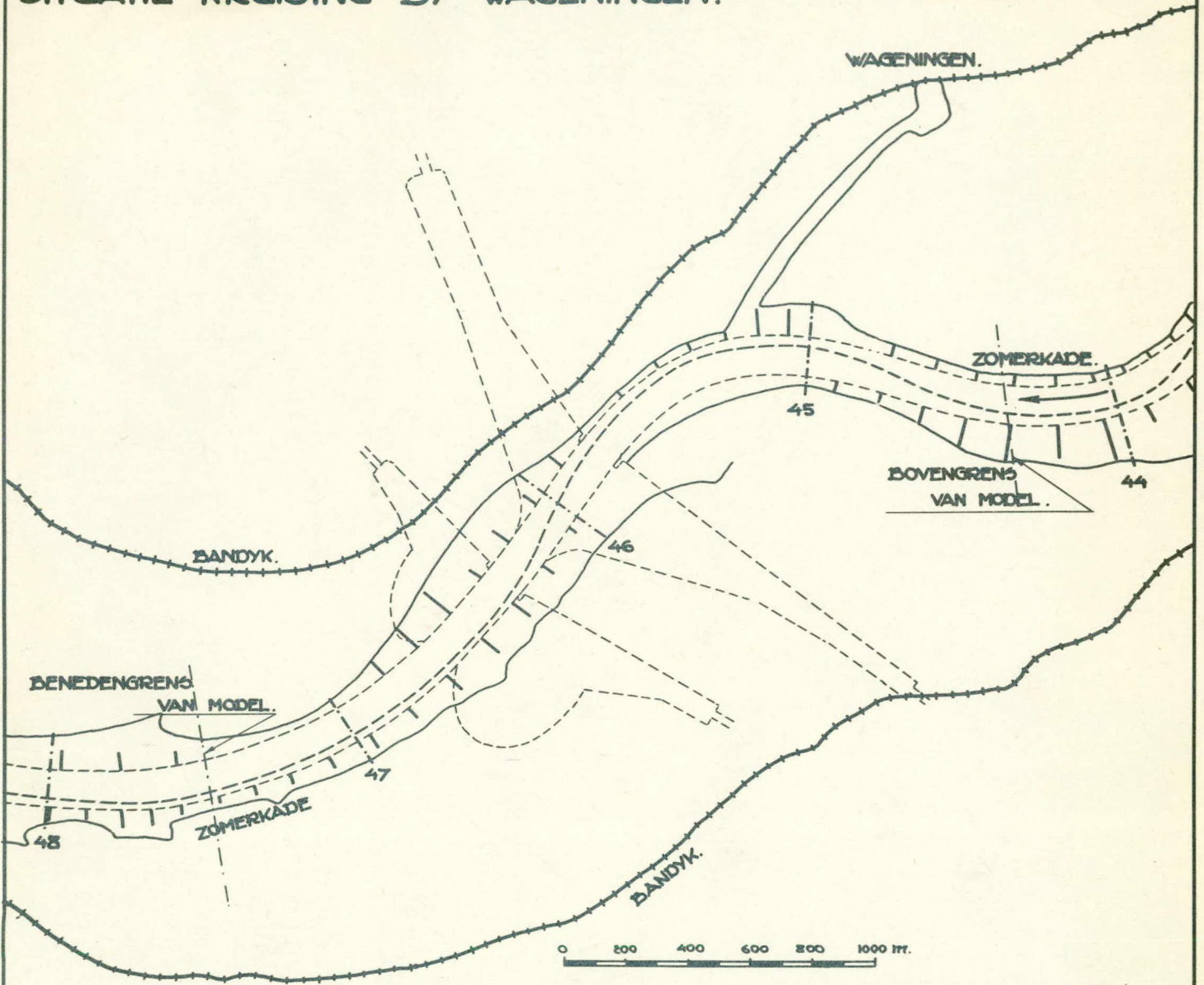
Rijksinstituut voor Volksgezondheid
en Milieu (RIVM)
Bilthoven

Bilthoven

Nr. ANSB-35.1/II ON

FIGUUR. I.

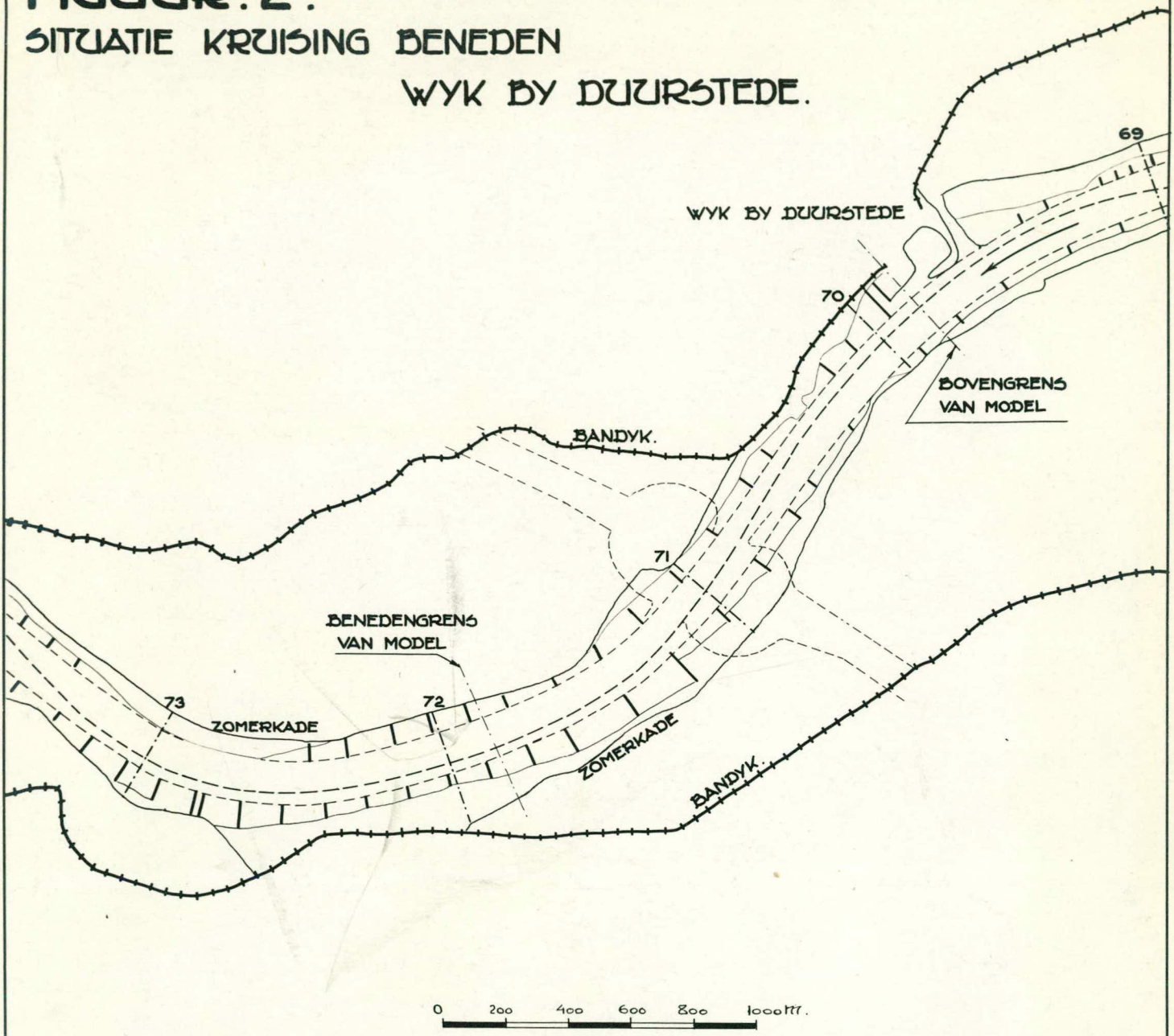
SITUATIE KRUISSING BY WAGENINGEN.





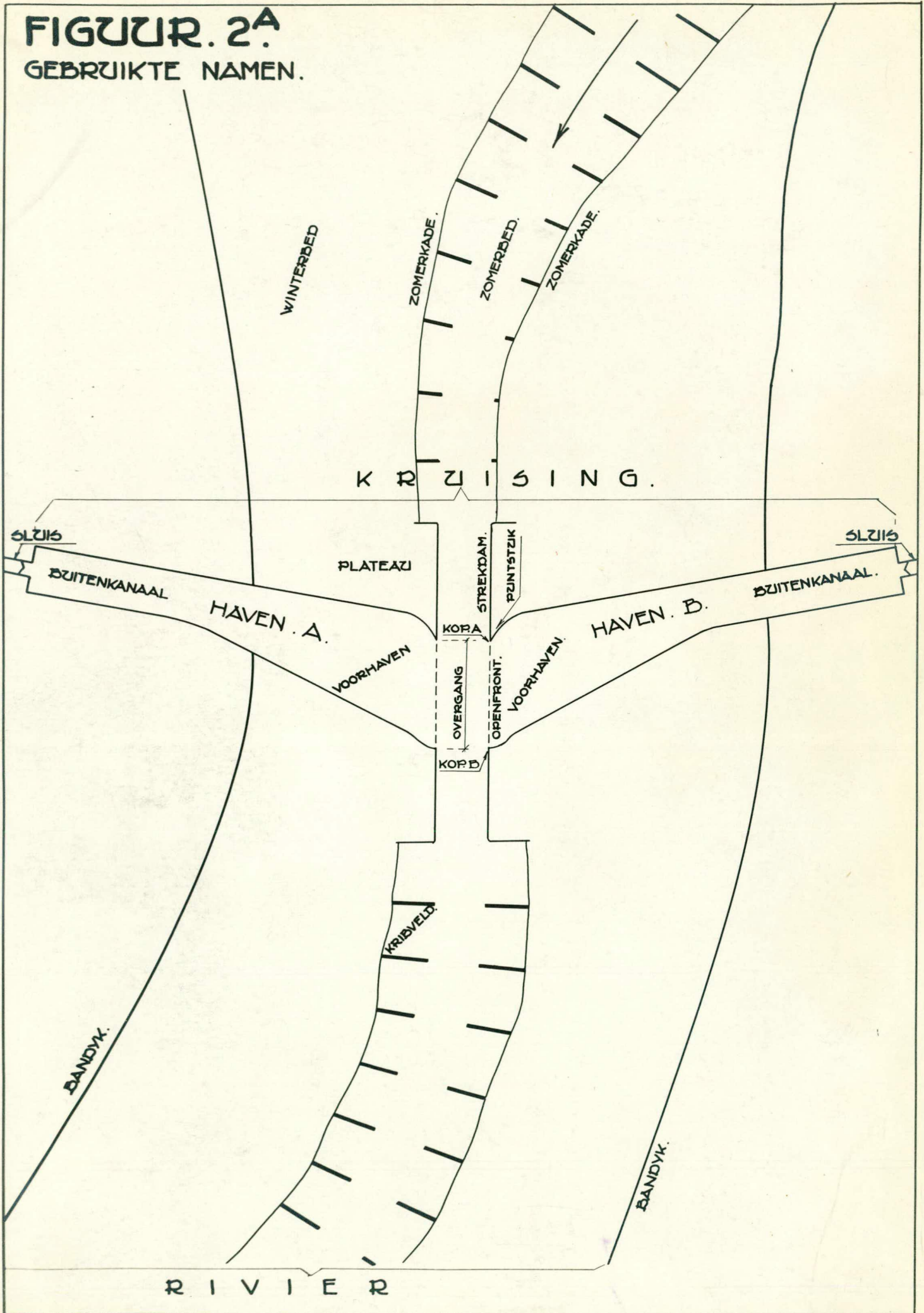
FIGUUR. 2.

SITUATIE KRUISING BENEDEN
WYK BY DUURSTEDE.



FIGUUR. 2A.

GEBRUIKTE NAMEN.

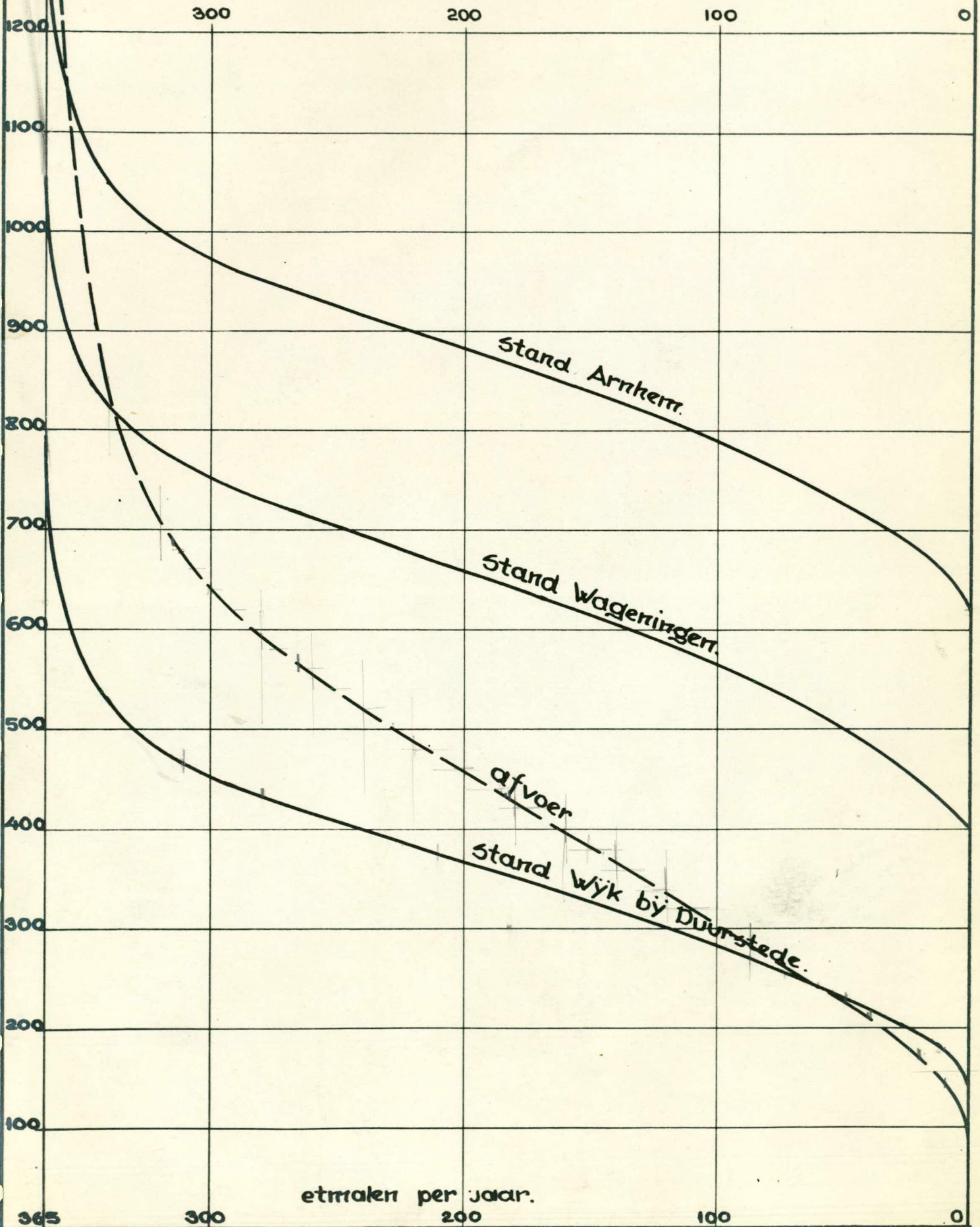




cm N.A.P.
m³/sec.

FIGUUR 3.

FREQUENTIES NEDERRYN-LEK 1921/30



C17+N.A.P.
1400

FIGUUR. 4.

AFVOERKROMME ARNHEM.

1200

1000

800

600

0

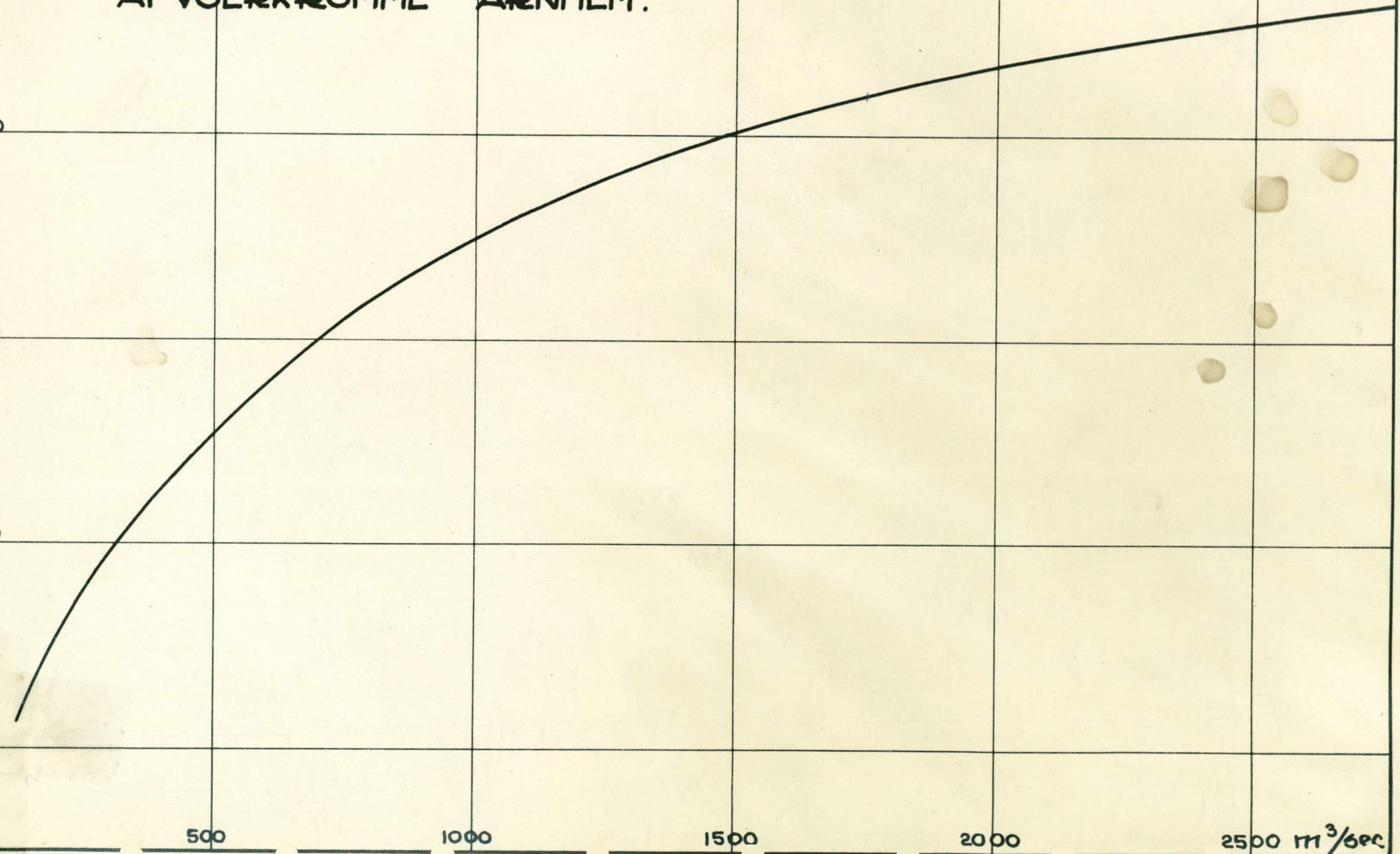
500

1000

1500

2000

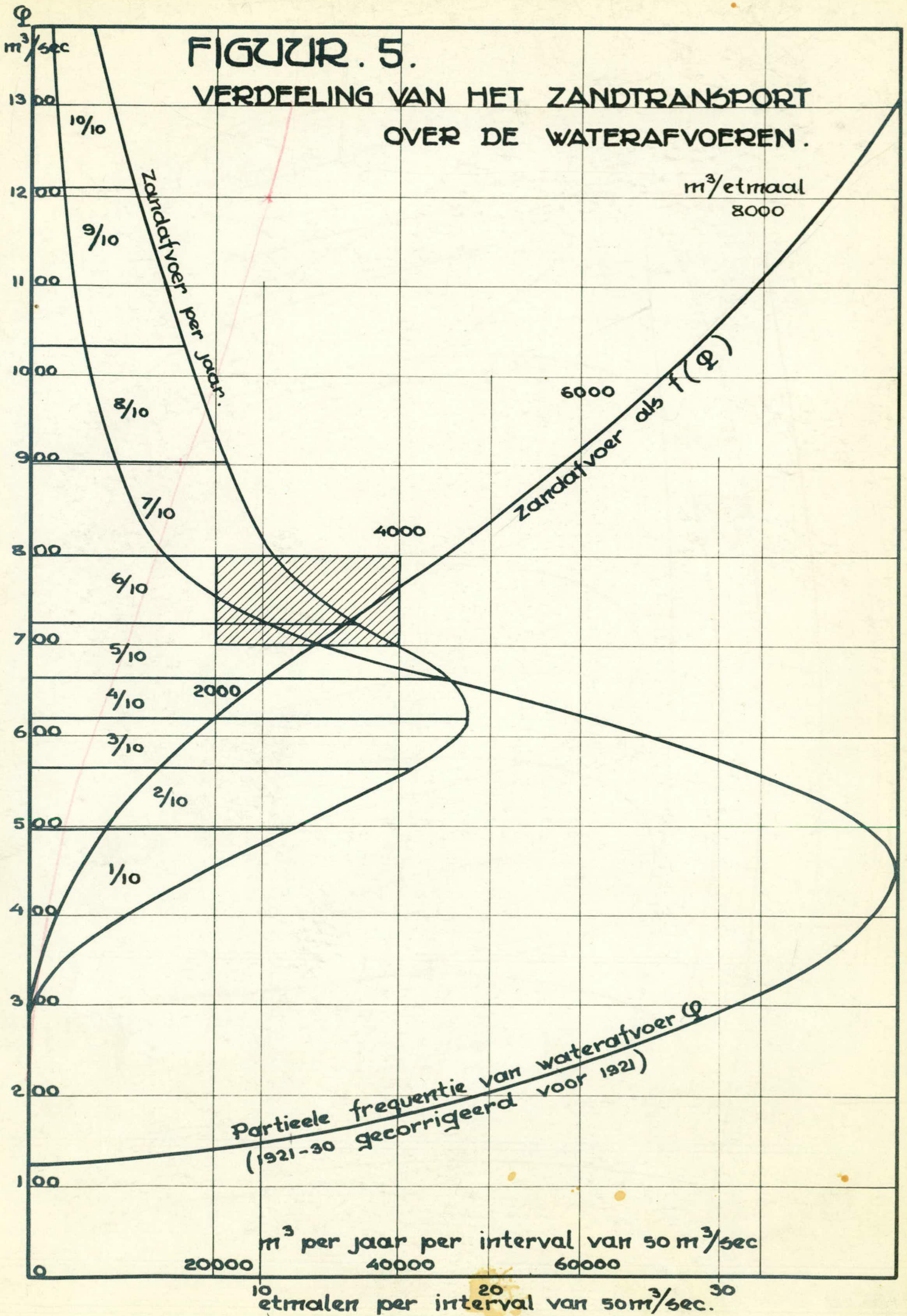
2500 m³/sec





FIGUUR. 5.

VERDEELING VAN HET ZANDTRANSPORT OVER DE WATERAFVOEREN.

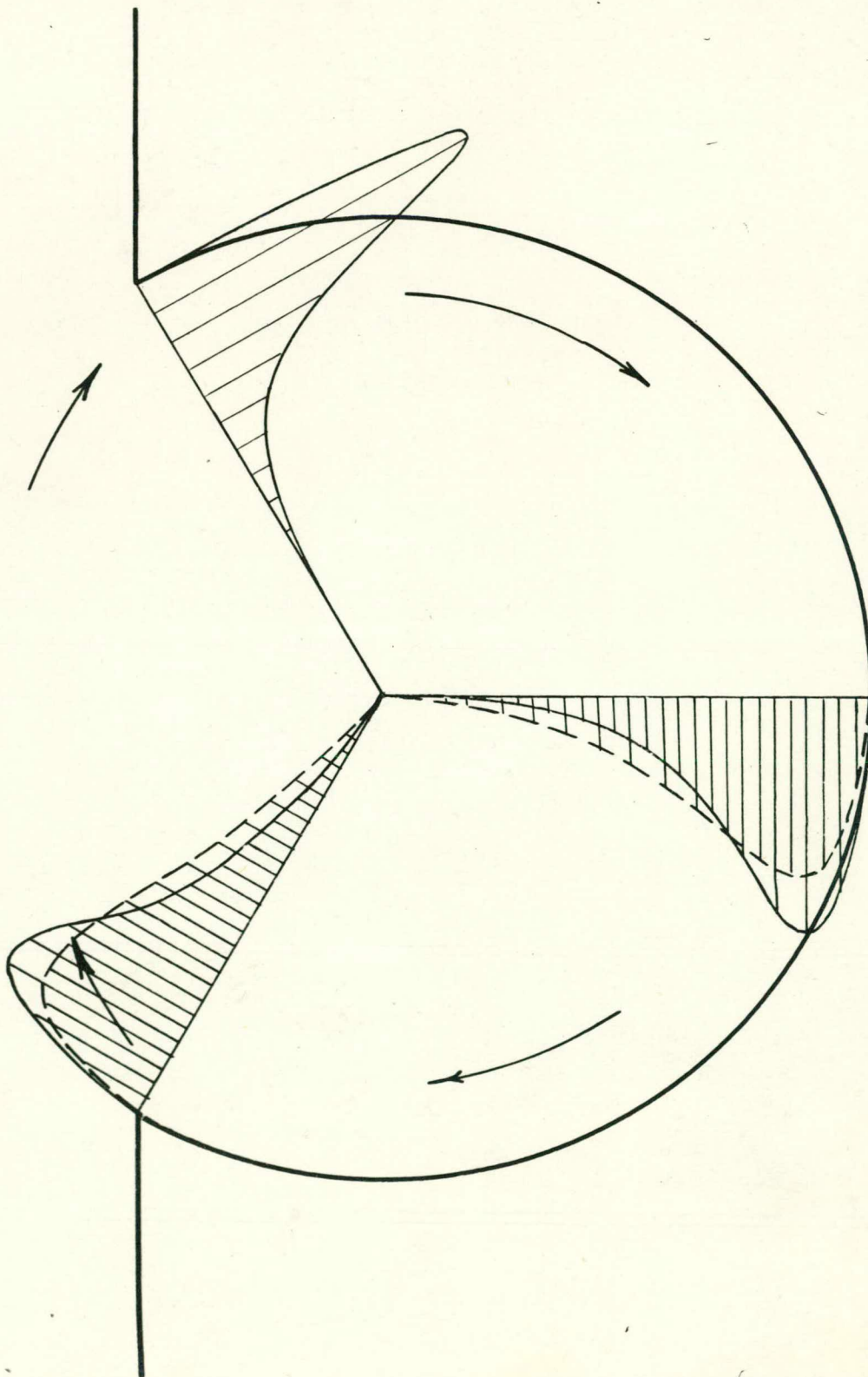


FIGUUR. 8.

SCHEMA VAN DE STROOMVERDEELING IN EEN NEER

———— LAMINAIRE STROOMING

----- TURBULENTE "



FIGUUR. 9.

MODEL. 9 KRUISING BY WAGENINGEN.

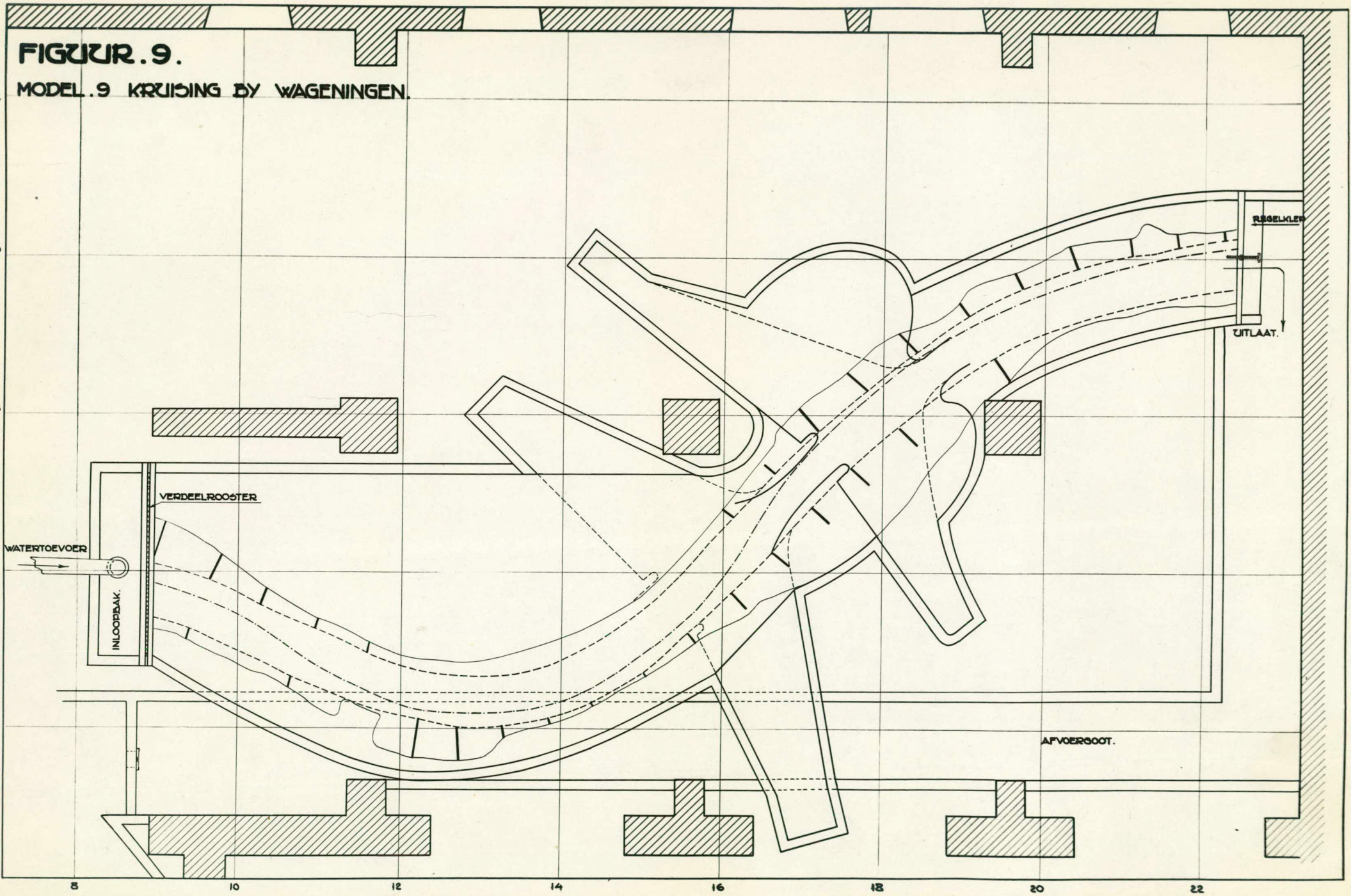
82

80

78

76

74



8

10

12

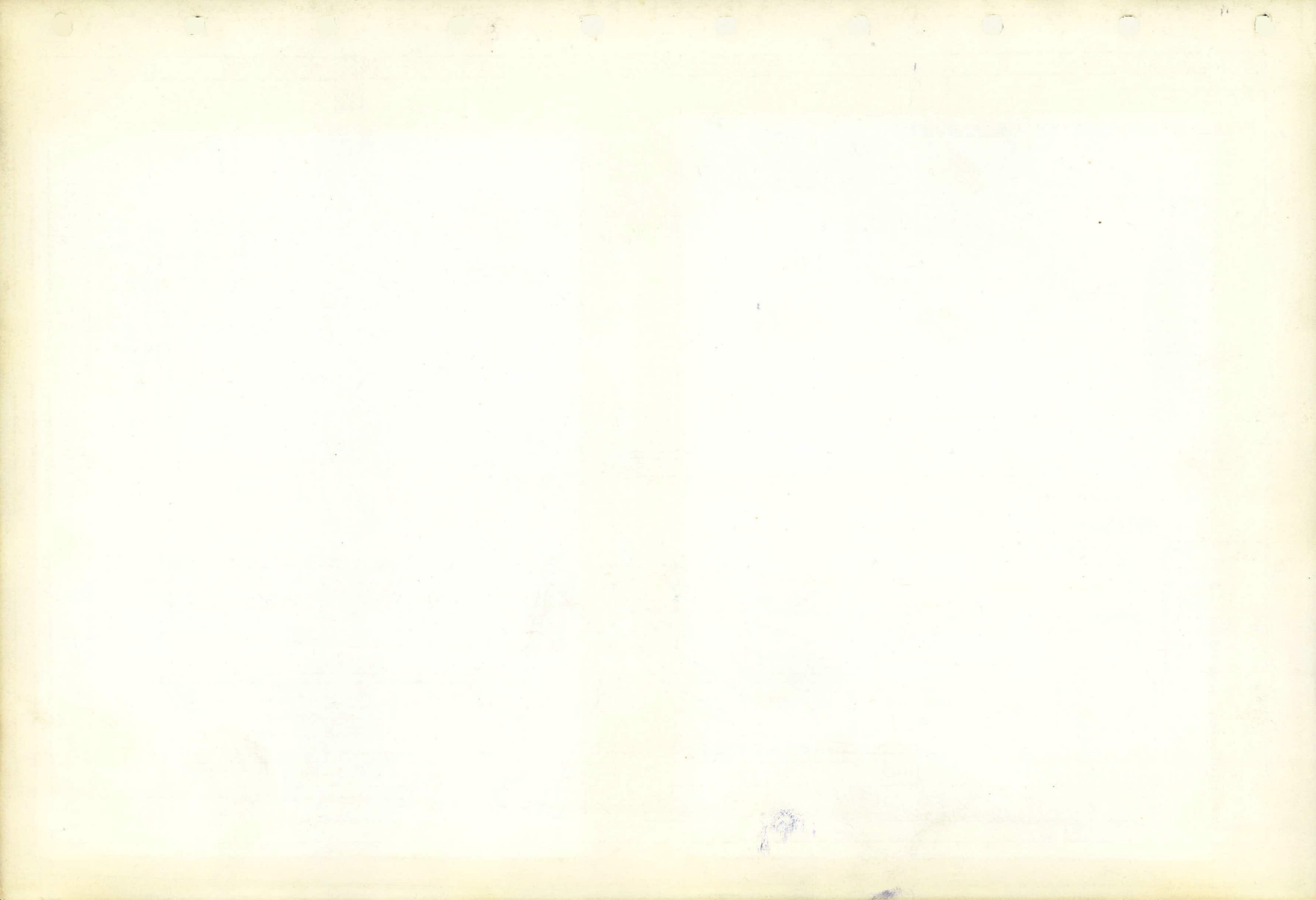
14

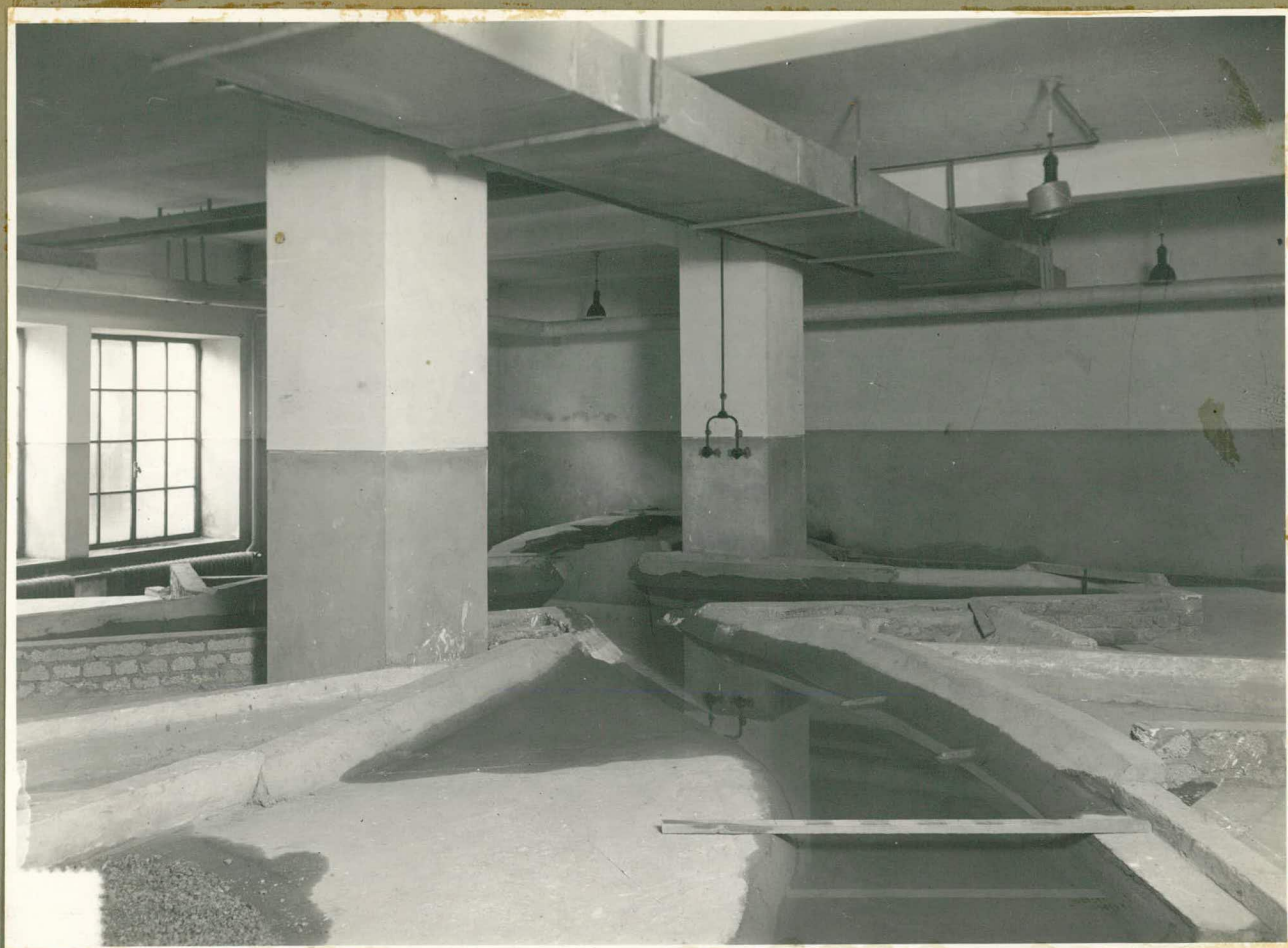
16

18

20

22





figuur 10. Model 9. Stroomafwaarts gezien.

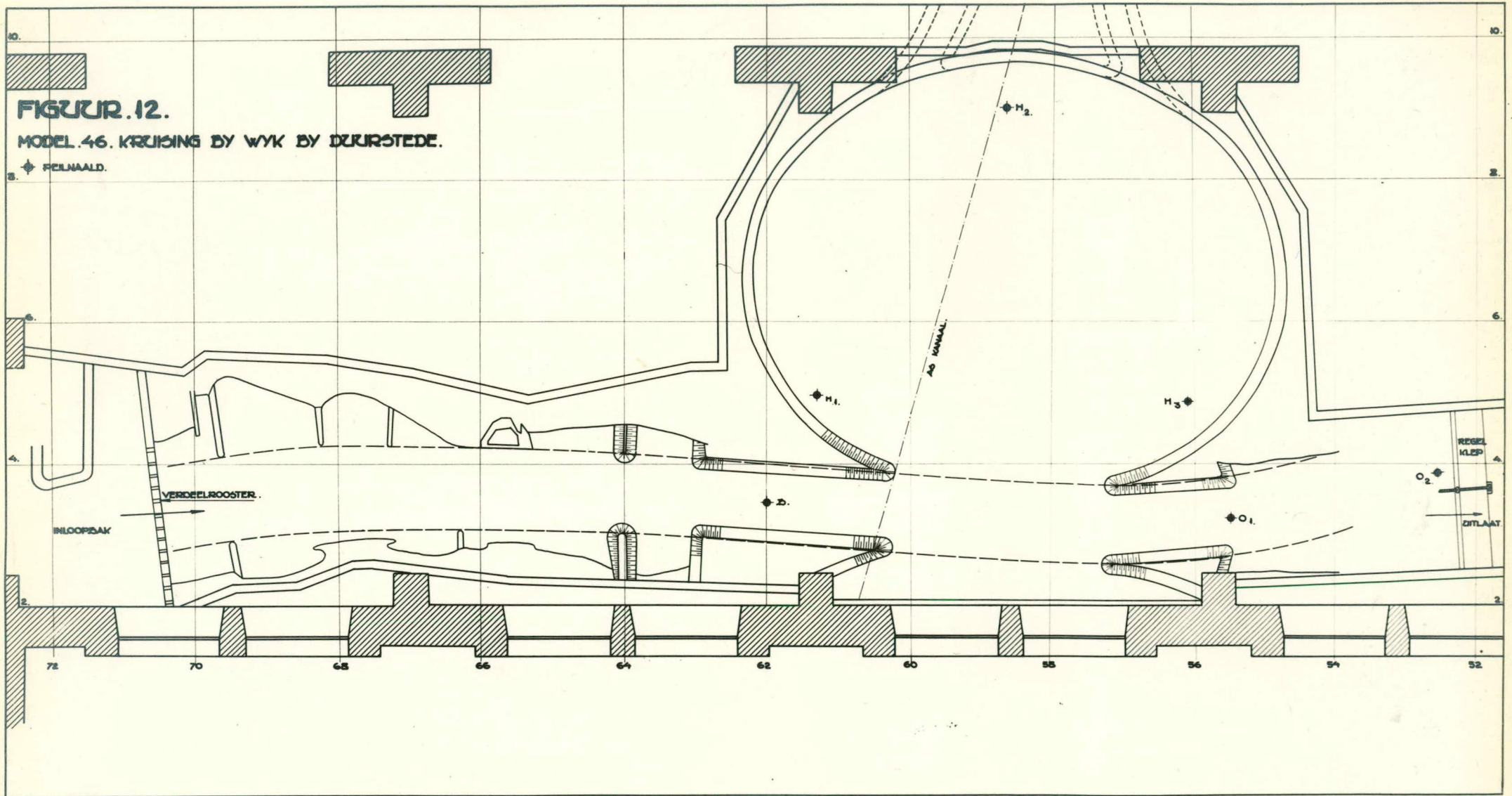


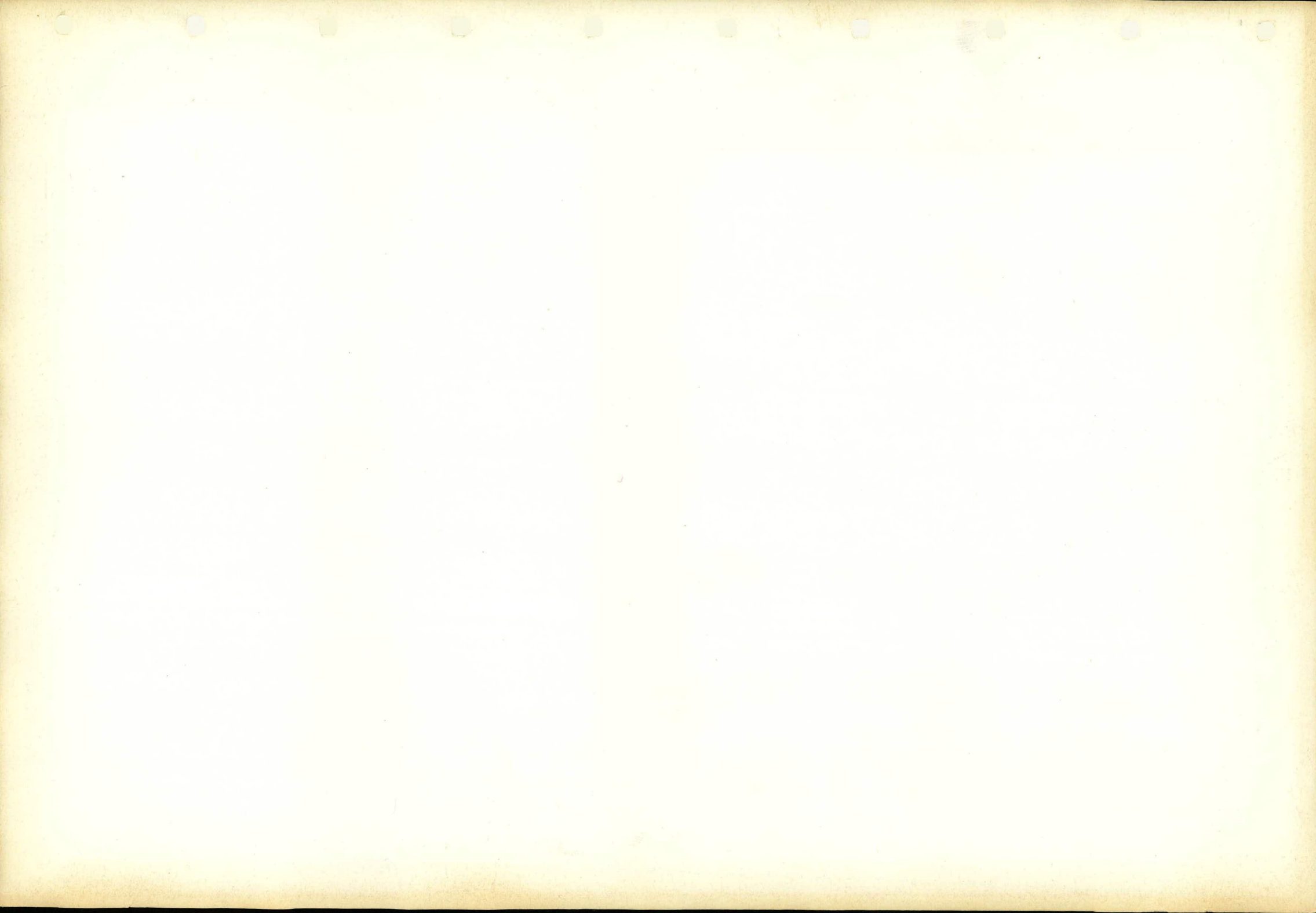
figuur 11. Model 9. Stroomopwaarts gezien.

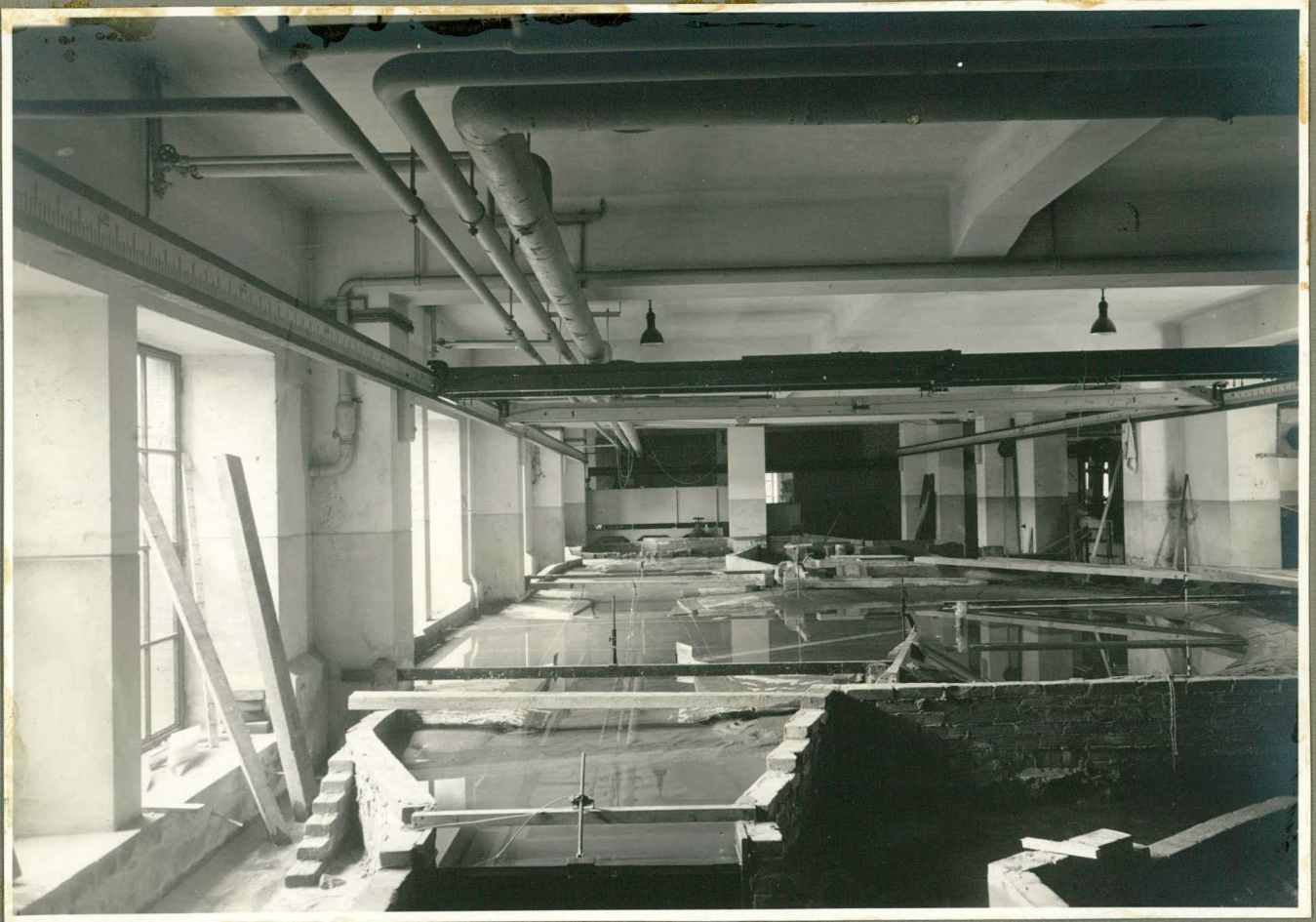
FIGUUR.12.

MODEL.46. KRUISING BY WYK BY DURSTEDE.

◆ FELMAALD.







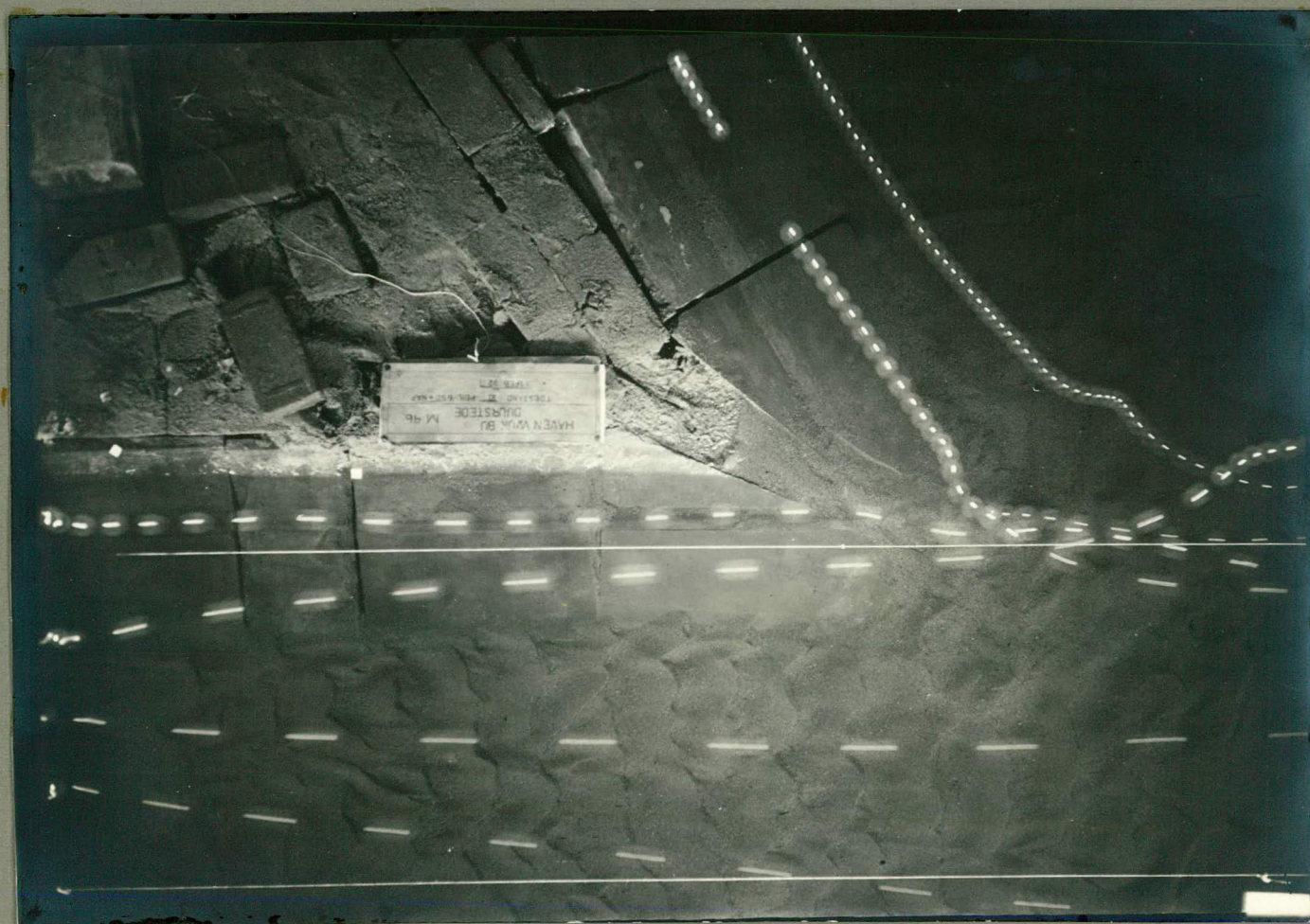
figuur 13. Model 46. Stroomopwaarts gezien.



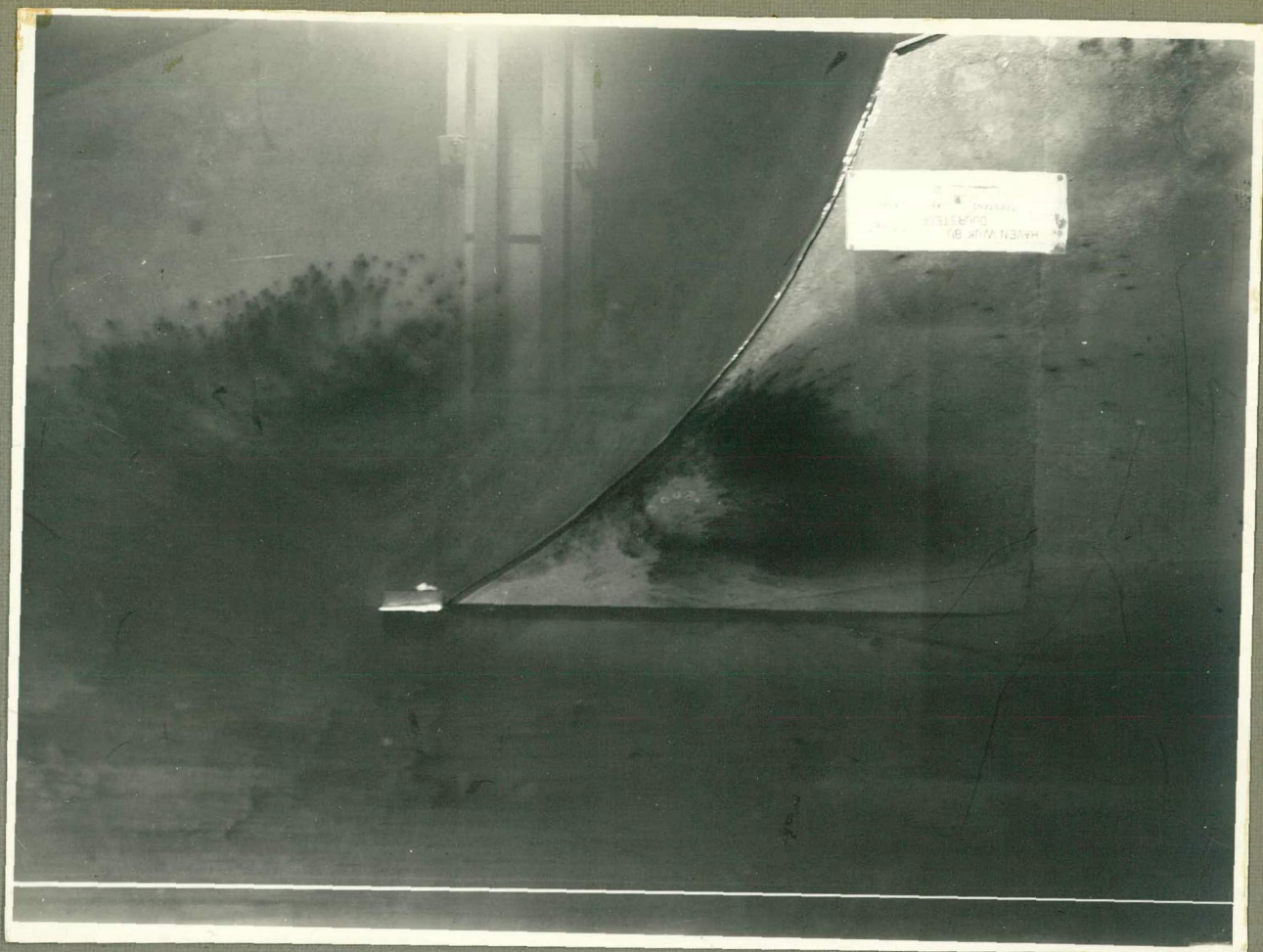
figuur 14. Model 46. Overgang en voorhaven.



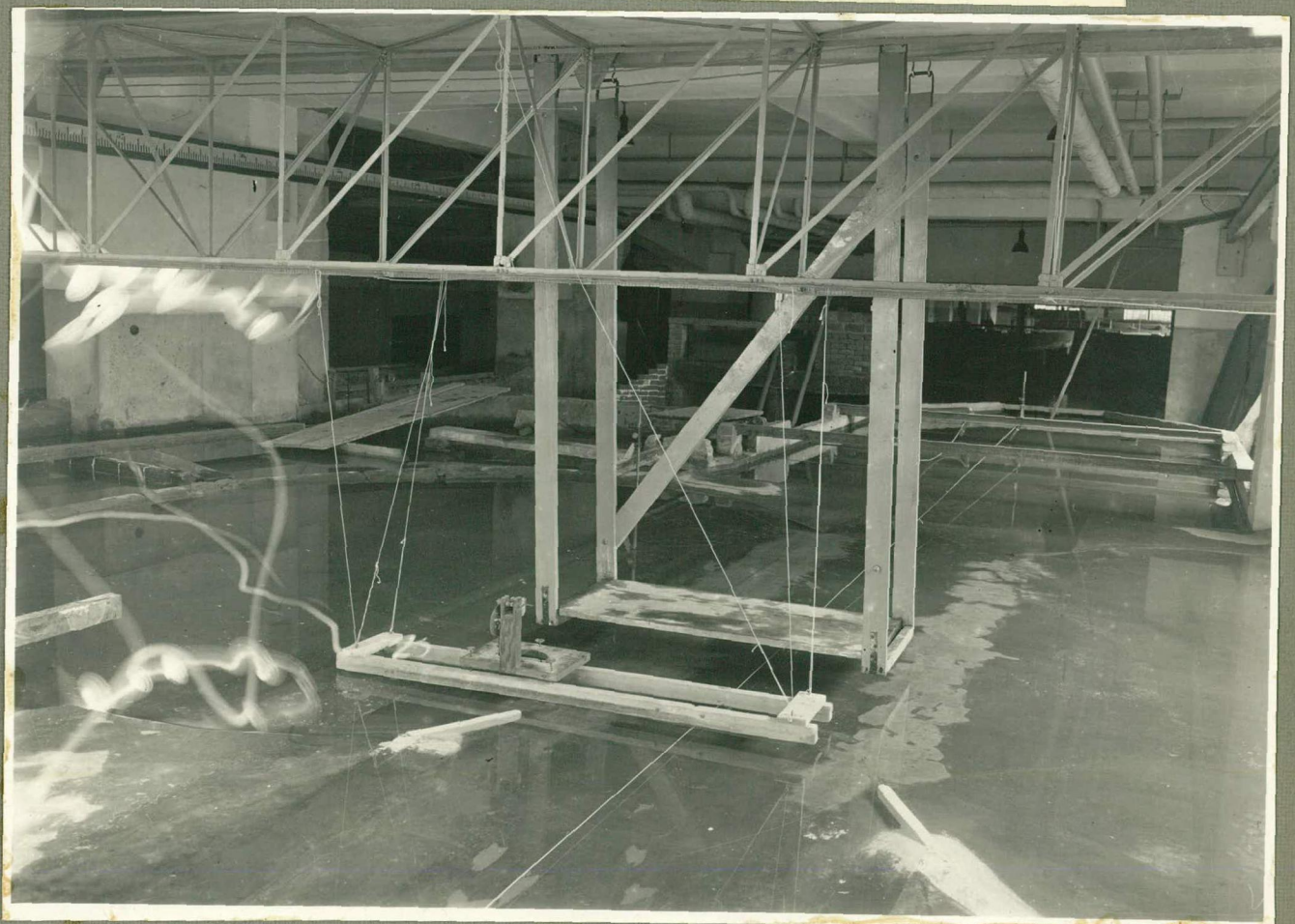
figuur 15. Meten van waterstandshoogten.



figuur 16. Stroomfoto met verlichte drijvers.
Toestand IV, kop A.



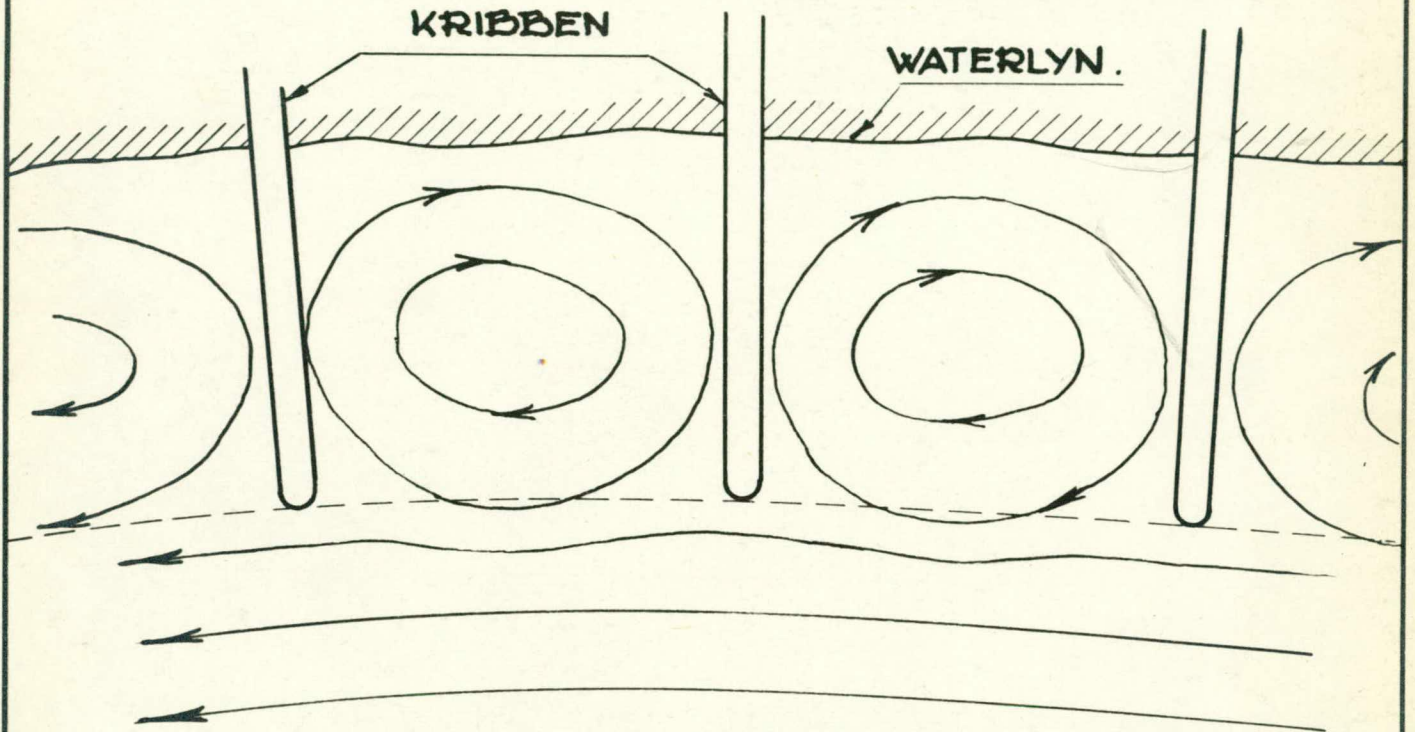
figuur 17. Stroombanen met $KMnO_4$ kristallen
Toestand A, kop B.⁴



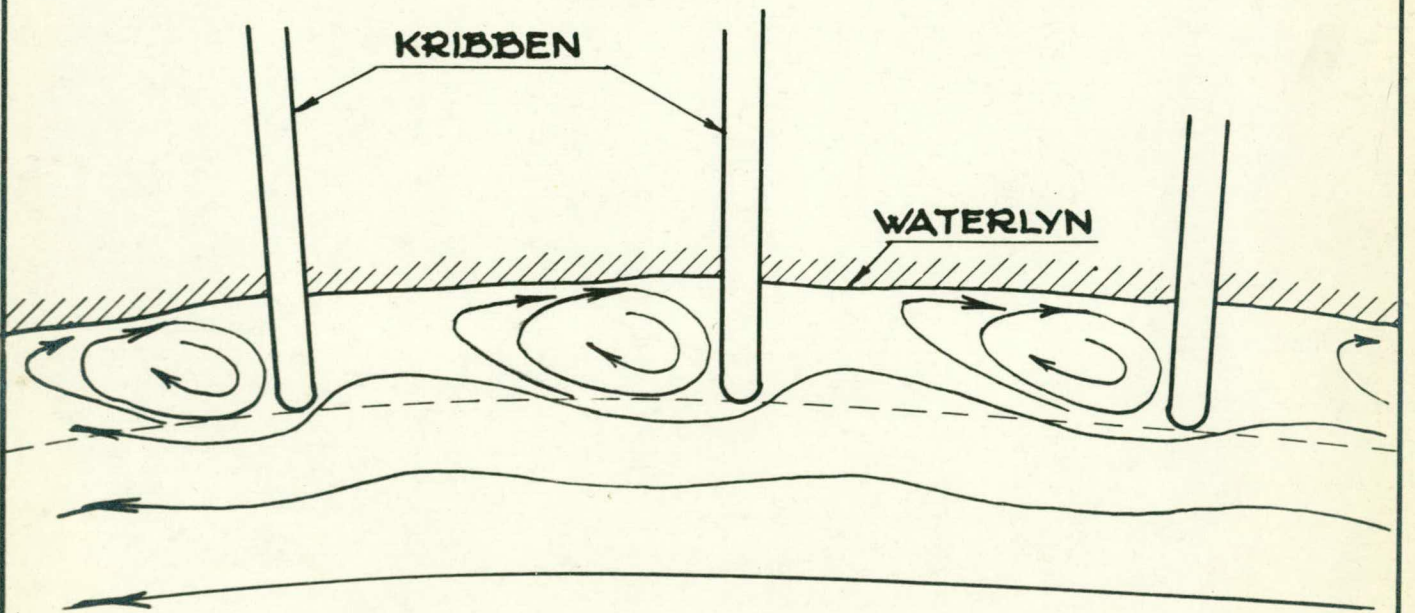
figuur 18. Opstelling slingerstroommeter.

FIGUUR. 19.

SCHEMATISCHE STROOMBEELDEN IN KRIJBVELDEN.

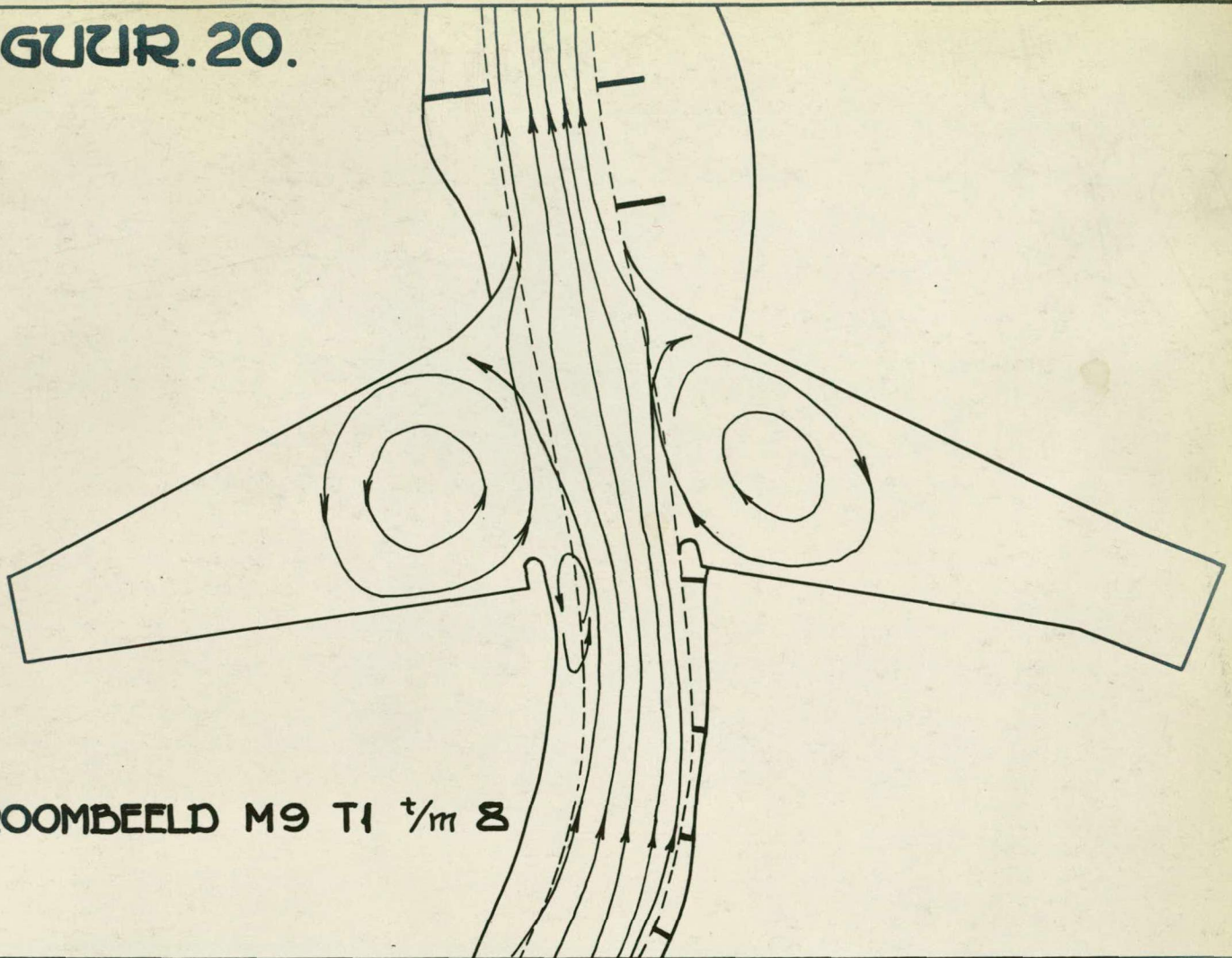


HOOG EN MATIGE RIVIERSTANDEN



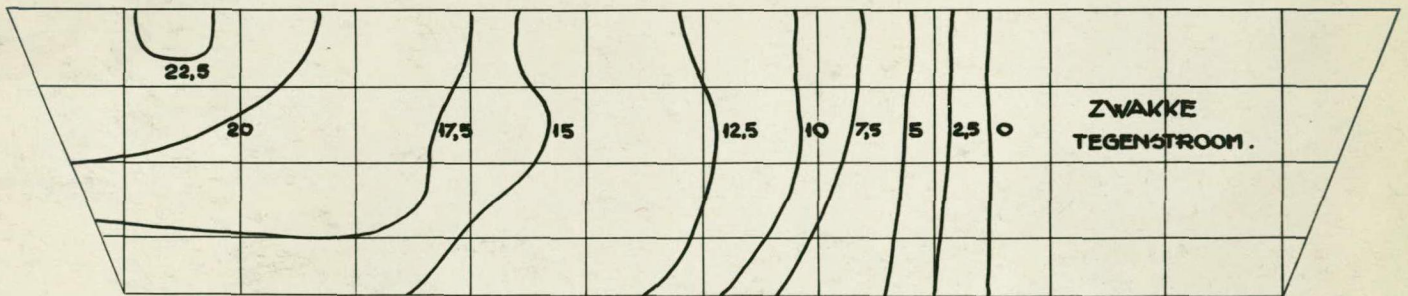
LAGE RIVIERSTANDEN.

FIGUUR. 20.



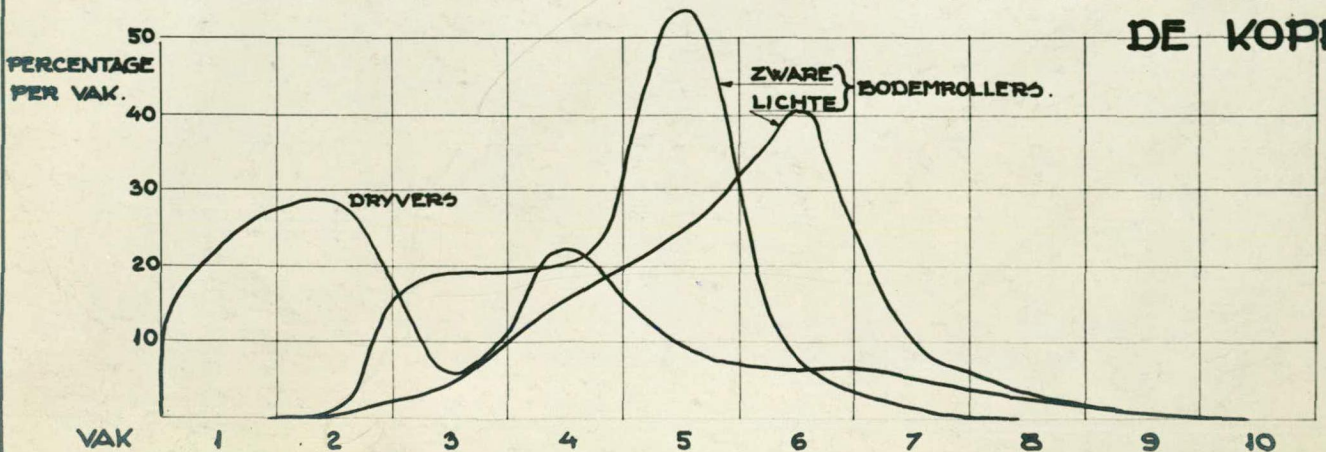
A.
STROOMBEELD M9 T1 $\frac{1}{m}$ 8

B. SNELHEIDSVERDEELING TUSSEN DE KOPPEN.

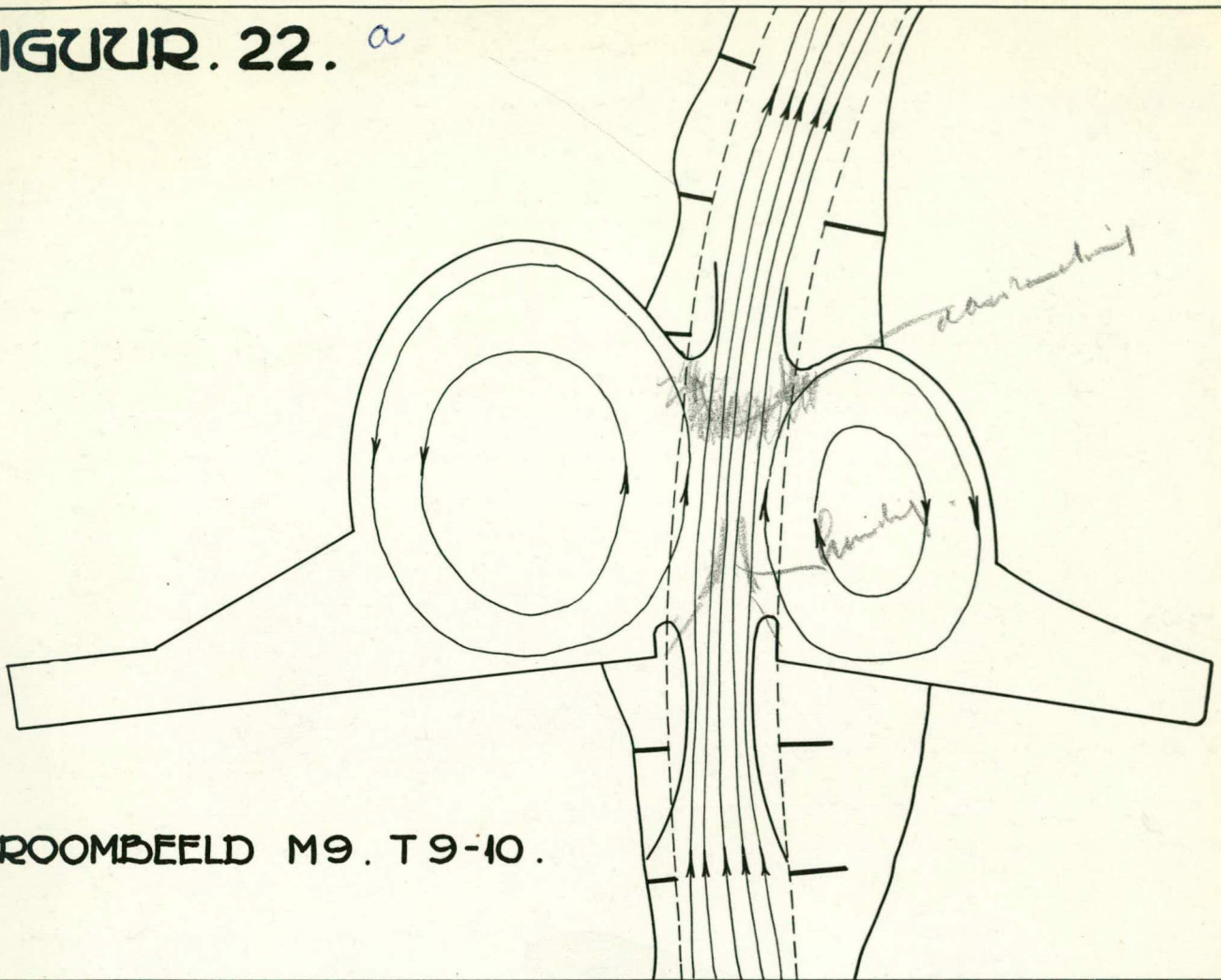


T3. RIVERSTAND MR + 50 CM.

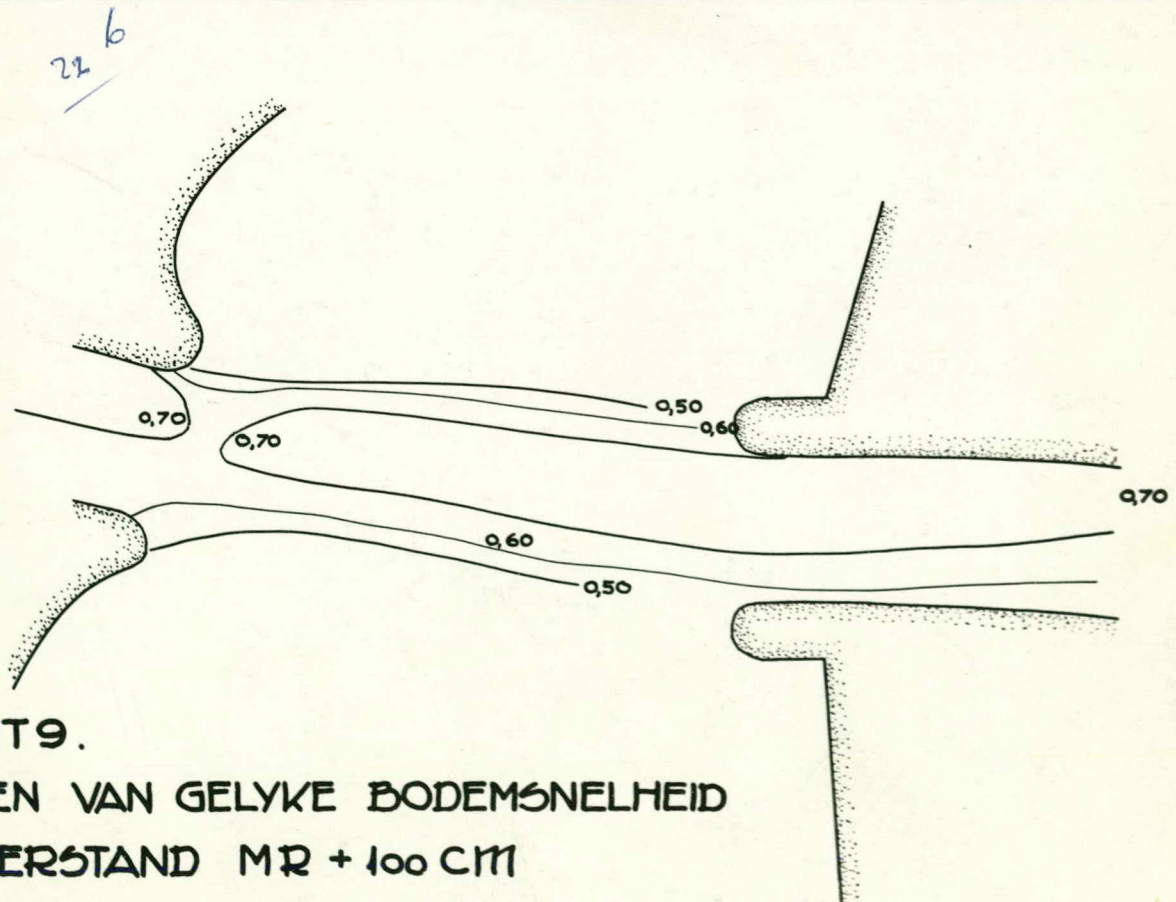
C. VERDEELING VAN DRYVERS EN BODEMROLLERS TUSSEN DE KOPPEN.



FIGUUR. 22. *a*



STROOMBEELD M9. T9-10.



M.9. T9.
LYNEN VAN GELYKE BODEMSNELHEID
WATERSTAND MR + 100 CM

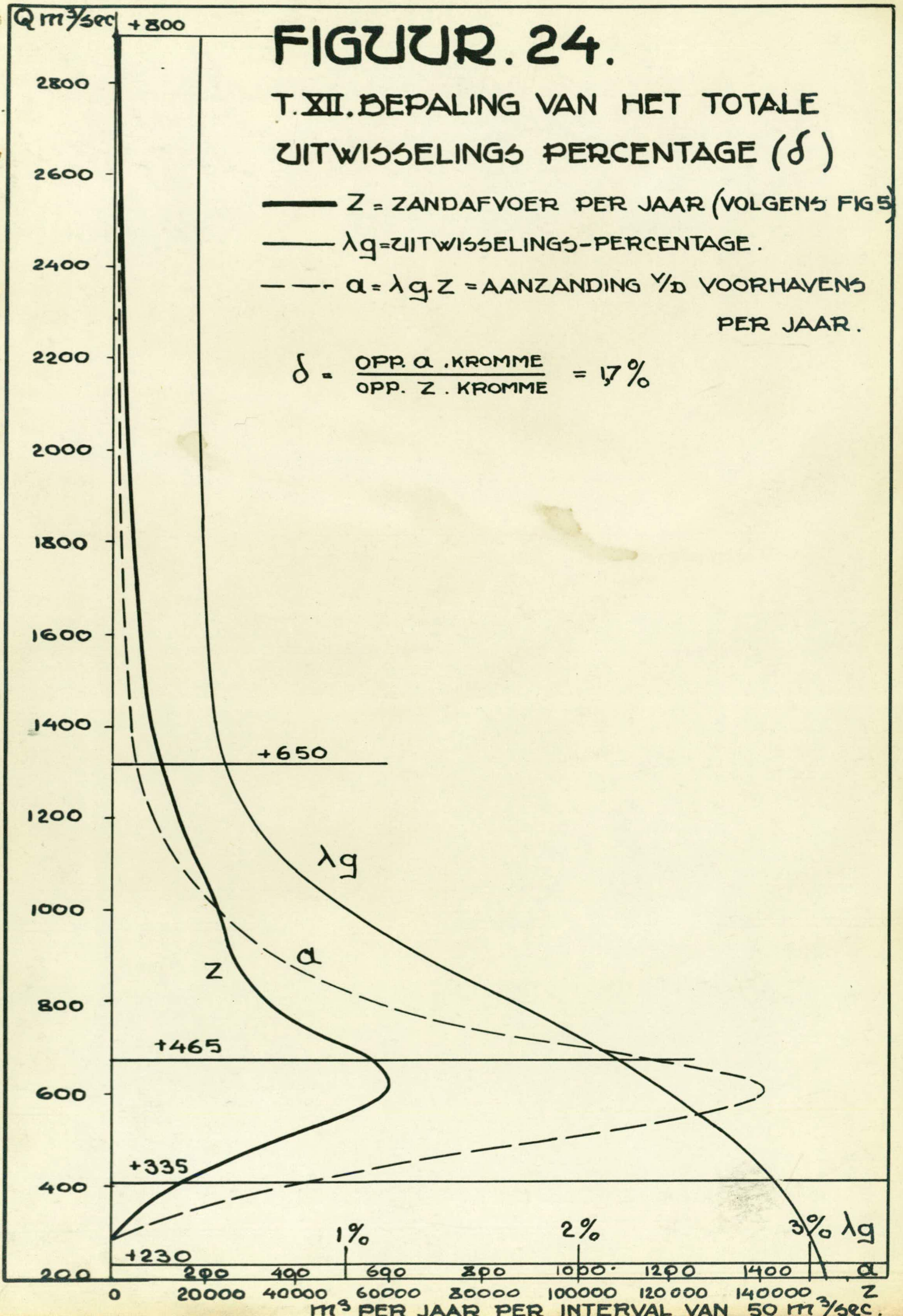
$Q \text{ m}^3/\text{sec} + 800$

FIGUUR. 24.

T. XII. BEPALING VAN HET TOTALE
ZUITWISSELINGS PERCENTAGE (δ)

- Z = ZANDAFVOER PER JAAR (VOLGENS FIG 5)
- λg = ZUITWISSELINGS-PERCENTAGE.
- - - $\alpha = \lambda g \cdot Z =$ AANZANDING $\frac{1}{2}$ VOORHAVENS
PER JAAR.

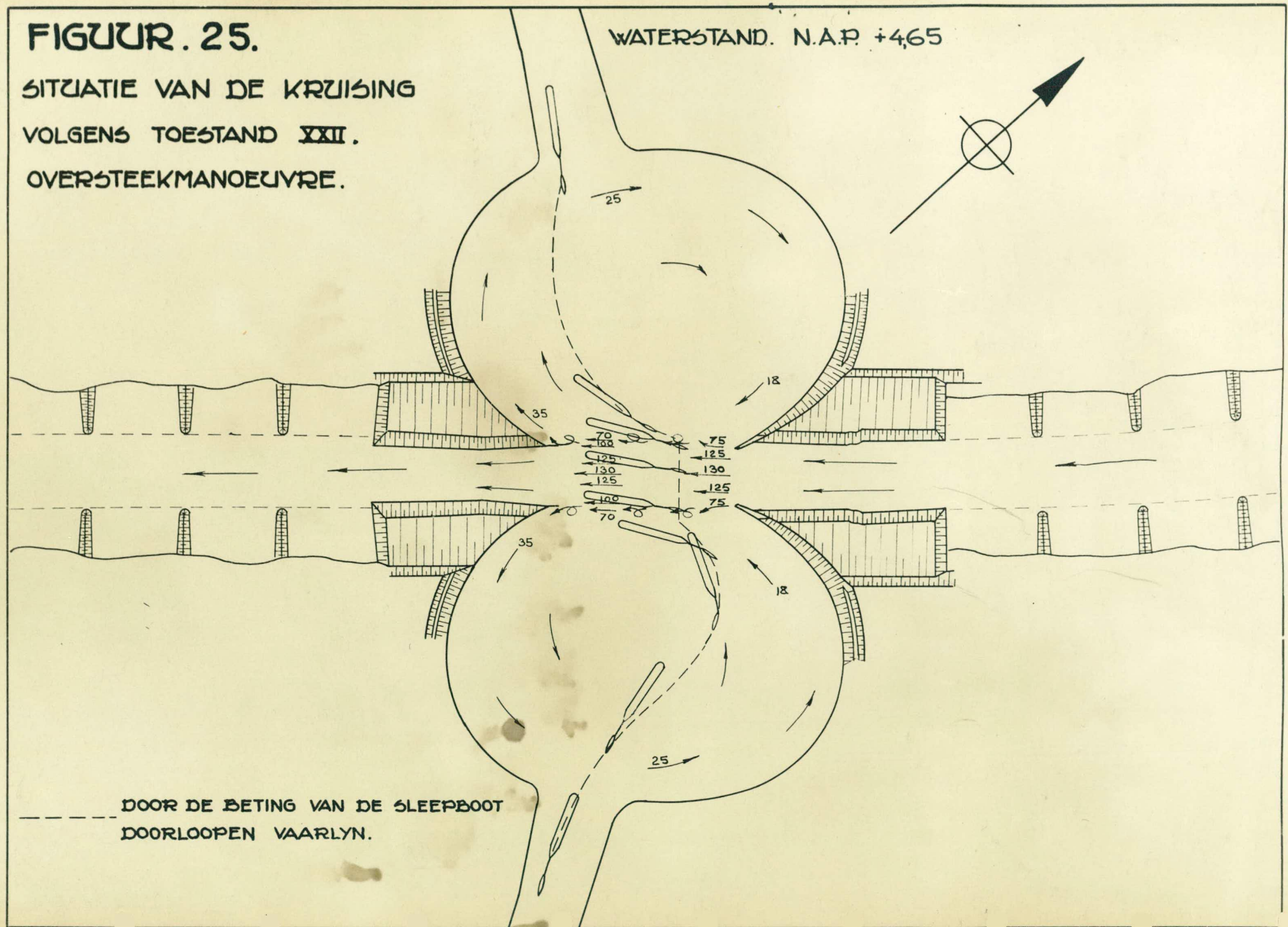
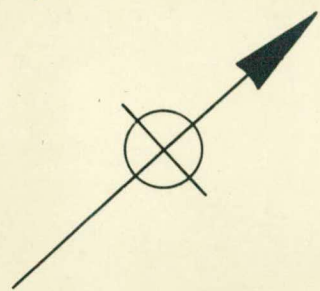
$$\delta = \frac{\text{OPP. } \alpha \cdot \text{KROMME}}{\text{OPP. } Z \cdot \text{KROMME}} = 17\%$$



FIGUUR. 25.

SITUATIE VAN DE KRUISSING
VOLGENS TOESTAND XXII.
OVERSTEEKMANOEUVRE.

WATERSTAND. N.A.P. +4,65

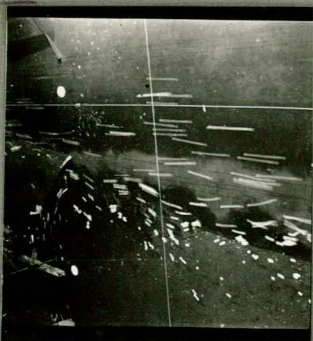
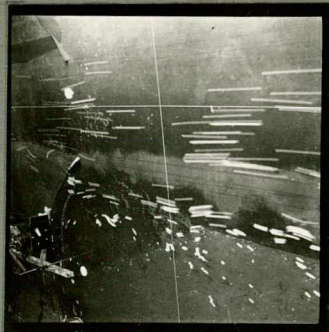
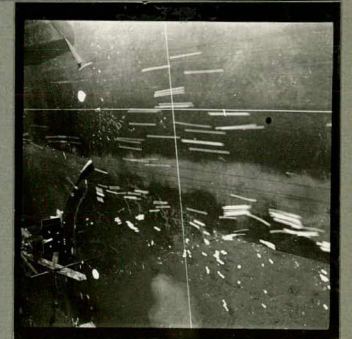
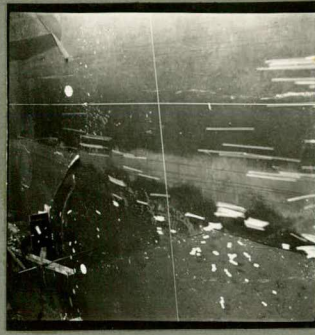


DOOR DE BETING VAN DE SLEEPBOOT
DOORLOOPEN VAARLYN.

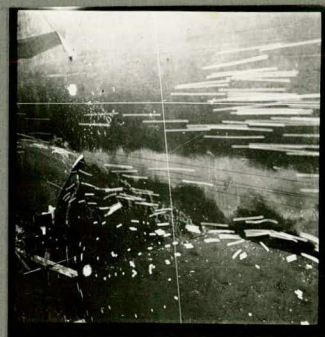
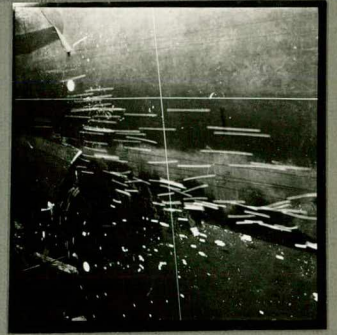




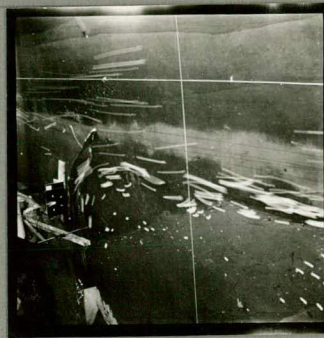
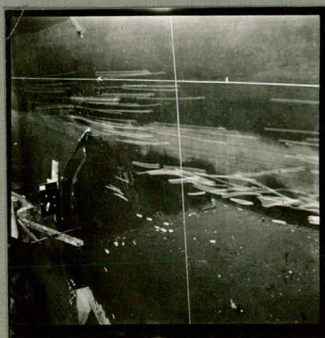
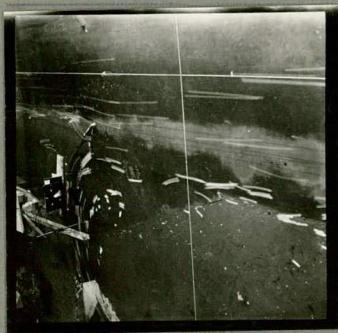
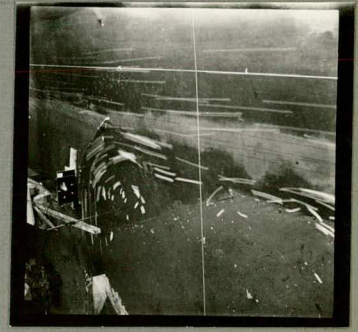
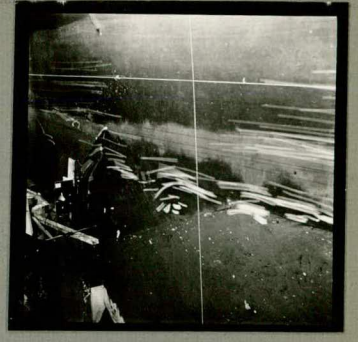
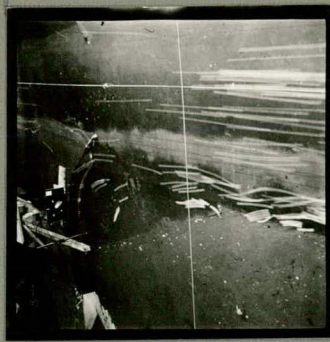
figuur 26. Aftapinrichting voor de nabootsing
van de sluisvulling.



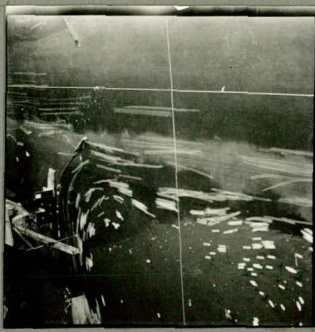
figuur 27. 1. Model 46. T. XXIX N.A.P. + 650,
normale strooming.



figuur 27. 2. Model 46. T. XXIX N.A.P. + 650,
sluisvulling.



figuur 27. 3. Model 46. T. XXIX N.A.P. + 650,
constante onttrekking $90 \text{ m}^3/\text{sec}$.



figuur 27. 4. Model 46. T. XXIX N.A.P. + 650,
constante onttrekking $150 \text{ m}^3/\text{sec}$.

