OD. No. 1619

Producenten van.

Naam Mechanische Beveiligingsmiddelen.

Zie ook: VWV

Uit		In	Uit		In	Uit		In	Uit		In
Datum	Aan	Datum	Datum	Aan	Datum	Datum	Aan	Datum	Datum	Aan	Datum
[illegible]	DPES II	[illegible]									
19/6-52	CS										
21/6-52	KO2										
1/7-52	[illegible]										
8/5-53	BVA										
[illegible]-12-56	III DI	17-12-56									
18-12-56	II TA	19-12-56 gaarne terug									
2-1-57	II TA										
28-8-58	DS										
DA		29-8-58									

D

DOSSIER No.: OD 1619 NAAM: PRODUCENTEN VAN MECHANISCHE BEVEILIGINGSMIDDELEN

Uit			In	Uit			In	Uit			In
Datum	Aan	Paraaf	Datum	Datum	Aan	Paraaf	Datum	Datum	Aan	Paraaf	Datum
15/1 '52	DPES II		25/1 '52								
11/6-52	PG		12/6-52								
23/6 '52	KO2		1/7								
8/5-53	BVA	[illegible]									
× 27-7-53	× D										
~~[illegible]~~	PA		14/8/53								
22-10-56	DPB I		17-12-56								
18-12-56	DTA		29-12-56								
2-1-57	DTA		29-2-58								
25 JUNI 1969	SD		27-6 '69								

GEDERUBRICEERD Dat. 30/6 '69 Par. [illegible]

40062-'49

MINUTENBLAD

DOSSIER No. OD 1619

NAAM: PRODUCENTEN VAN MECHANISCHE BEVEILIGINGSMIDDELEN

1. Aangelegd op verzoek van DI, voor D, [redacted],
22.1.51. ACD/PA

2. Naam:"Mechanische Beveiligingsmiddelen" op verzoek van D op 11.6.51 gewijzigd in: "Producenten Mechanische Beveiligingsmiddelen",
ACD/PA, 11.6.51

3 Ingezien i.v.m. oriëntering. Sec II 17-1-52

4 Ingezien ter oriëntatie DNB 24/1-52

5 9.4ACD en 4/CS i.v.m. uitlening ...
en 25 t.k. i.v.m. naamswijziging. ACD/PA 20-6-52

6 I.o.m. SDa aan KO2 ACD/PA 23-6-52

7 SD,
Moet dit OD nog PA blijven? ACD/PA 25.6.69

8 ACD/PA
Neen. SD 25/6/69

9 "GEDERUBRICEERD"
Dat. 30-6-69 Par.

5067 - '48

Aan: D.
Van: K.O. 2

Door cursisten worden bij het bespreken van het onderwerp "beveiliging" regelmatig vragen gesteld met betrekking tot mechanische beveiligingsmiddelen.

Beschikt U over een dossier waarin beschrijvingen en beoordelingen van de verschillende in de handel zijnde mechanische beveiligingsmiddelen zijn opgenomen?

In OD 1619 heb ik hieromtrent zeer weinig kunnen vinden.

Naar ik meen bevinden zich in OD NEVESBO gegevens omtrent infra-rood installaties.

DMS In OD 1479 bevindt zich een beschrijving van een installatie. 27-6-'52 2/7-52

Dov 7
Heeft u gegevens voor KO ?

In OD.
Mechanische Beveiliging

1D 1/7

In notaboek

Producenten mechanische beveiligingsmiddelen.

Afd. KO 2 in OD 1619. Bev.

Aan: A.C.D.
Van: K.O. 2

Aan SD
Van KO2

Gaarne ontving ik van U gegevens met betrekking tot het gebruik van electrische alarminstallaties in beveiligde bedrijven.

13-6-1952

Aan KO
Hier in OD 1619.

Afgedaan 20/6-52

N O T A

Voor: CO 129395
Van : DRES II

135417

Betr.: Uittreksel uit het besprekingsverslag van Philips d.d. 26 Maart 1952.

.....

Gevraagd om te willen nagaan bij het licht-technisch-adviesbureau, welke normen men heeft voor een doeltreffende terreinverlichting.

.....

DRES II, 4 April 1952.

SPECIALE INSTRUCTIES AAN ACD,
(Slechts bij definitieve opberging in te vullen).

~~ONAFGEDAAN~~

CO 129395 | OD 1619

1619

Afd./Sect.: Dat.: 4-7-52 Par.:

Interne aanwijzingen ACD.

ACD. Dat.: 9/7/52 Par.:

Aanteekeningen (Nummeren s.v.p.!):

ACHTEREENVOLGENS AAN: H.ACD, namens deze

VERANTW. VOOR ADM. AFDOENING: Dat.:

Afd.	Sectie	Behandeling.	Afz./Par.	Dat.
				3/1
			SD	1/2
			DMS	1/2-52
		HD ... PHD ...		
		DAS / ...		1/4
		H.A.Z en K.O	DMS I	3/4
		SDa. Verzoek afschrift in duplo van bijgaand artikel van pag 44 ... mit vermelding van C.O.no.	DAB	4.4.52

10192 - 51

VERVOLG
DUPLICAAT BLAD op Schutblad Nr. ____________

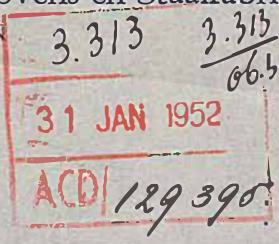
Afd.	Sectie	Behandeling	Afz./Par.	Dat.
HAZ.		Ir. Brummen [illegible]	[illegible]	
KO1			[illegible]	2/5
[illegible]	3	Gevr. Overgenomen van MA	[illegible]	12/5
	D[illegible]	[illegible] s.p.p. daarna aan		
	S Da	[illegible] aant DAB 4-6-52 aan [illegible]		
		[illegible]		
OCD/c		~~aant Dab in nota van~~ bijgevoegd.	SD/c	7/6-52
S	Da	De bedoeling van mijn aant. d.d. 10-6-52 was, te vernemen of afschr. voor Dab gemaakt is.		
		s.s.p. Co afdoen	[illegible]	9-6-52
		Afschrift voor Dab gemaakt.	SD/c	10/6-52
C	~~[illegible]~~	d.K.	[illegible]	
11/6		Vr. [illegible]	[illegible]	12/6-52
	[illegible]CD		[illegible]	17/6
D		[illegible] afdoening [illegible] beziging aangeven		
		[illegible]	[illegible]	21/6
	DNB	Wilt U beziging aangeven	SD	24/6
		Indien er een OD bestaat over Algemene Beveiligingsmaatregelen, dan hoort die stuk hierin thuis.	DNB/L	1/7

0/1619

Koninklijke Nederlandsche Hoogovens en Staalfabrieken N.V.

IJMUIDEN

TELEGRAMADRES: HOOGOVENS
CODES: BENTLEY, A.B.C. 6
TELEFOON NOS. 5841 EN 4646 (K 2550)



De Weledele Heer J.J. de Wolff
Aronskelkweg 112

DEN HAAG

F 6261

Uw ref.:	Uw brief van:	Onze ref.:	IJMUIDEN
		V.3746/71.31	25.1.52

Onderwerp:

Zeer geachte heer de Wolff,

In aansluiting aan onze bespreking van Vrijdag, 11.1.52, heb ik het genoegen U hierbij het beloofde artikel "Protective Lighting for Industrial Plants" by D.H. Tuck te sturen.

Ik hoop U hiermede van dienst te zijn geweest.

Hoogachtend,

F.W.E. Spies

Bijlage

PROTECTIVE LIGHTING

for Industrial Plants

By D. H. Tuck

Electrical Engineer, HOLOPHANE COMPANY, INC., New York, New York

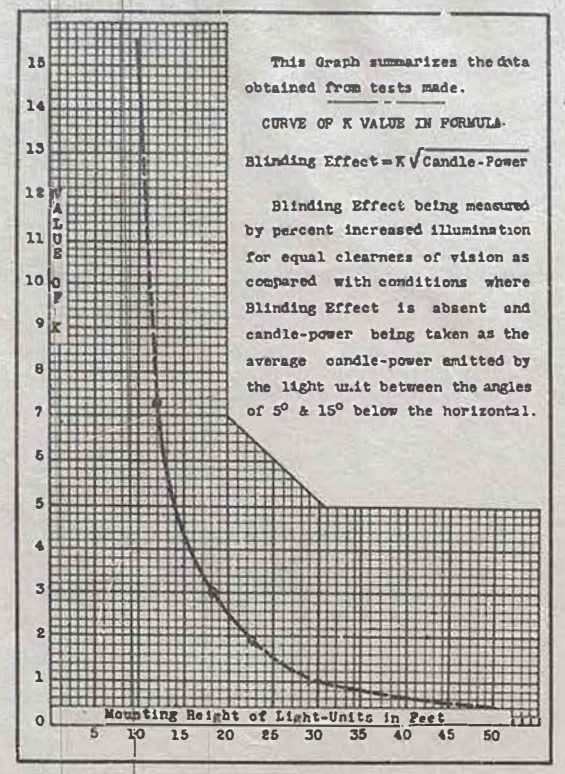
▲ LIGHT alone affords little, if any, protection to property. When combined with an adequate guard service and when designed to help the guard detect the presence of an intruder light becomes a necessity. In short, light is practically worthless without an adequate guard and a guard is inadequate without the help of a proper lighting system.

Before attempting to design a protective lighting system it will be worth while to put yourself in the place of the saboteur and then in the place of the guard and make some practical observations keeping in mind always that the saboteur is smarter in his business than you are and that the guard is dumber than you are. Let us suppose we have a manufacturing area inside an 8 ft fence with three strands of barbed wire slanting inward. The fence is lighted to a distance of approximately 200 ft outside the fence. A guard is employed to patrol the fence line keeping himself inside of the dark area for his own protection and to keep the saboteur in ignorance of his whereabouts. The saboteur wants to get inside the fence. One simple ruse on the part of the saboteur would be for his accomplice to make a commotion at the fence some distance away and engage the guard's attention while the real saboteur gets over the fence. (There are several other ways to accomplish the same result.) If the barbed wire slanted outward the fence would be harder to climb. It is often easier to dig under the fence instead of going over it. This example shows the necessity of having a fixed guard and good practice is to erect guard houses on approximately 2000 ft centers with the guard approximately 35 ft above the ground. With adequate light along the fence the guard can see at least to the next guard tower. The guard in the tower must be equipped with a telephone to the captain of the guard or two way radio telephone. Inasmuch as the effective use of fixed guards depends on his not leaving his post under any circumstances an additional mobile guard who can respond to a call quickly is necessary. This requirement has resulted in good practice of a patrol road approximately 50 ft inside the fence. The patrol guard is similar to the well-known police radio squad car. He has two way radio communication with the tower guard. The tower guard advantageously has an adjustable narrow beam search light at his disposal. It is considered a help to have the patrol road in comparative darkness so that the saboteurs cannot readily locate the position of the mobile patrol. On the other hand there must be sufficient light on the patrol road for safe driving without headlights. Fortunately nature answers this problem for us. There is no purpose in trying to keep the road darker than full moonlight on a clear night (0.025 ft-c) as this condition often exists. Full moonlight also is approximately the illumination for safe driving. (When the driver's eyes are dark adapted, driving is possible under much less than 0.025 ft-c but on the other hand with a lighted fence the driver's eyes are not completely dark adapted.) There is no practical advantage in having the patrol road in darkness as under usual night sky conditions the patrol car can be seen and if not seen, heard.

Our original problem has now advanced to a good guard practice. We now have a manufacturing area with an 8 ft fence with three top strands of barbed wire extending outward. Fixed guards in towers spaced on approximately 2000 ft centers and with the guard approximately 35 ft above the ground and having at his disposal an adjustable narrow beam searchlight and two way radio communication with a mobile guard operating on a patrol road approximately 50 ft inside the fence. (115 volt service is required in the fixed guard tower for a 1500 watt search light and a 1000 watt heater for winter use.) The patrol road must be illuminated to a degree approximating full moonlight on a clear night (0.025 ft-c). The remaining problem is how to most effectively light the area inside and out of the fence and at the same time do its most economically both as regards first cost and operating cost.

Refractor units have a tremendous practical advantage in that they have a 30 year record of trouble-free service in street lighting application all over the world where over a million are in use. They are a standard item of many manufacturers and so are readily available on a competitive basis. Another practical advantage for refractors is that they are available in various sizes for multiple lamps from 75 to 500 watt sizes and for series lamps from 1000 to 10,000 lumen sizes. They are also available to produce symmetrical distributions of light as well as a large variety of symmetrical light distributions so that whatever the concept of proper light distribution may be, there is a refractor type to meet the requirement. The vertical angle of maximum candle power is easily adjustable by changing the lamp position in the refractor to meet any practical ratio of spacing to mounting height.

Some practical consideration of the methods of plant protection by the combination of fixed and mobile guard and light will be of interest because they influence good practice. Glare is a function of mounting height as shown in Figure 1. It will be seen that 25 ft mounting



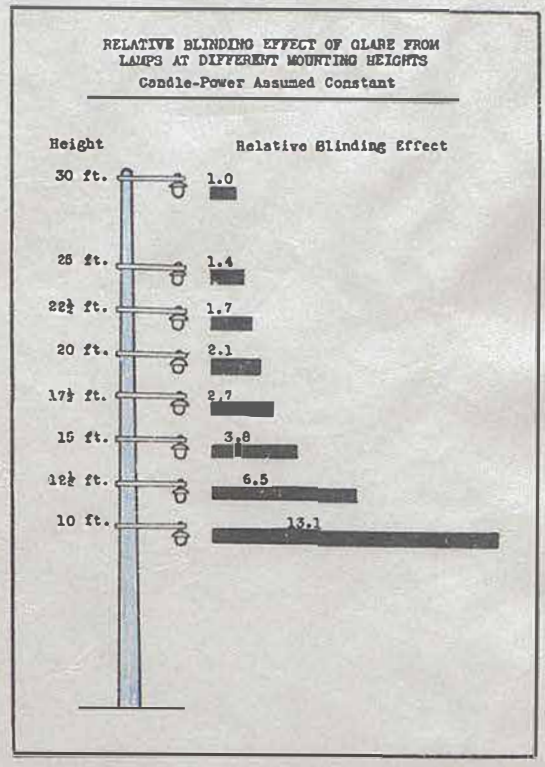


Figure 1 — Charts showing relation of glare to mounting height of lighting unit.

height is a practical one from the standpoint of glare reduction and readily available poles. Elimination of glare is necessary for many reasons:

1. Patrol car driver must not be subjected to glare because it would reduce his vision.
2. Glare is not permissible along highways, railroads or navigable waters.
3. At first thought glare in the direction of the saboteur (outside the fence) would be an advantage in that he could not see the mobile guard. The saboteur can by the simple expedient of looking through a black tube or pipe completely eliminate the glare and see the guard as well as if there were no glare. It is also well to remember that the saboteur can make the guard come outside where the guard would be at a disadvantage. It is best therefore not to tolerate glare from any direction.
4. A 25 ft mounting height has another practical advantage over lower mounting height in eliminating elongated shadows made by irregularities in terrain or obstruction as such shadows would afford a hiding place for a saboteur.

The fence offers an obstruction to good vision from the standpoint of the mobile guard (the tower guard sees over the fence and being 5 ft above the lights his vision is maximum). If the lights are placed too far back from the fence the inside vertical surface of the fence is illuminated and causes a veiling or back glare which makes it difficult to see through the fence. If the lights are closer to the fence then transmission of light through the wire mesh at small angles causes a reduction in illumination just outside the fence. The optimum location of the light is therefore practically over the fence.

In most instances the property outside the fence is grown over with weeds or woods and there is no advantage in trying to illuminate beyond the fence greater than the cleared ground. The illuminated area outside the fence should be kept mowed. Light that would be wasted in unkept area outside the fence should be utilized in the kept area by employing the proper asymmetrical distribution of light.

It is important that the area between the fence and the patrol road be illuminated so that an intruder who has made the fence can be apprehended. In fact it is even more important to be able to see a saboteur inside the fence than outside because he is potentially more dangerous when outside.

Spacing of lights should be selected so that a failure of one lamp would not seriously impair the effective uses of the protection afforded by having unlighted pockets midway between units. The amount of light required should be selected for the poorest condition of contrast, i.e., dark terrain and the saboteur with dark clothing. Integrating all of these considerations good practice is:

Units — General Electric Company, catalog No. 79VR or 79R for series or multiple lamps; Holophane

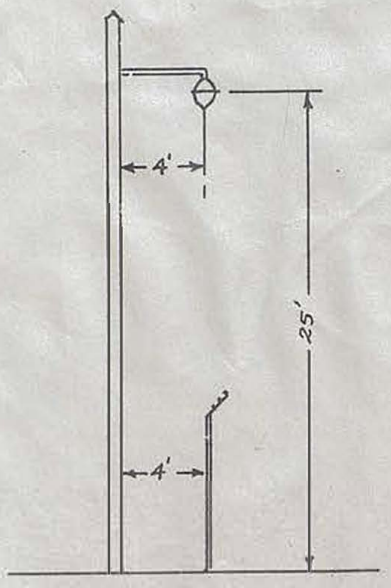


Figure 2 — Sketch showing a good arrangement in protective fence lighting.

Figure 3 — Typical good practice in protective lighting of boundry fence.

Company, catalog No. 04376-A for multiple lamps only; Line Material Company, catalog No. 602004-C 5G for series lamps, No. 602004-C 80G for multiple lamps; Philadelphia Electric Manufacturing Company, catalog No. 608 AR for series lamps, No. 609A for multiple lamps; Westinghouse Electric and Manufacturing Company, catalog No. S-1121601 for series lamps, No. S-1122403 for multiple lamps.

Lamp size — 300 watt multiple or 6000 lumen series for fence lighting.

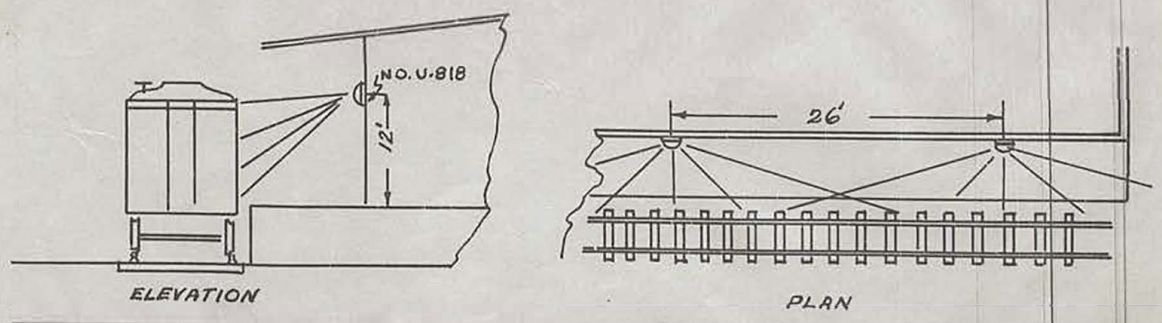
Spacing — Poles spaced on 150 ft centers.

Mounting height — Locate bracket so that bottom of unit is 25 ft above grade.

Pole location — Locate pole so that bracket will bring unit approximately over fence. (Note: This specification is in accord with "Standard Specifications for Fence Lighting," No. 6403-E, Oct. 15, 1941, of War Department Office of the Chief of Engineers Construction Division — Engineering Branch.)

Circuits — The multiple circuit has some practical advantages. Ordinary 115 volt lamps can be used. Disconnecting hangers can be used without the expense of individual insulating transformers. Ordinary circuits are employed. Safety of relamping due to elimination of high voltage at lamp socket. 115 volt circuit of 2500 watt capacity is required at guard tower. Single phase 2300 volt, 60 cycle primary and 7.5 kva, 115-230 volt secondary transformers are used. Each transformer will take care of eight 300 watt lights on each side or 16 in all, and in addition, the 1500 watt guard tower searchlight and 1000 watt guard tower heater. The conventional two wire or REA type circuit is used. The

Figure 4 — Shipping platform lighting designed to be out of the way and to light interior of car as well as platform.



series constant current circuit has been used in the majority of the existing installations. Individual insulating transformers are used where disconnecting hangers are used for servicing the lighting units and for the 115 volt guard tower circuits. Either the multiple or series circuit represents good practice.

Roadways — Roadways leading to and inside the plant offer the same problems as ordinary highway lighting where refractors are used as standard equipment. More illumination is required for roadways than for fence lighting. Lamps of 500 watt, multiple, or 10,000 lumen series are used. The spacing is 150 ft and the mounting height is 25 ft. The same units are used as for fence lighting except that larger lamps may be used in some cases. The pole location is on the far side of the drainage ditch and a bracket is used to bring the light over the edge of the road.

Paths, over doorways and around buildings — Units with 200 watt multiple lamps mounted approximately 16 ft above grade, and spaced on approximately 100 ft. centers may be used for walk way lighting. The same unit is used on a ½ in. goose neck for over doorways and around important buildings where night traffic warrants such lighting.

Shipping platforms — Shipping platforms located on both truck and railroad side of a warehouse are lighted with units mounted on the back wall of the warehouse. Mount approximately 12 ft above platform and space on approximately 26 ft centers. The light distribution is such that the inside of trucks and box cars will be illuminated with 200 watt multiple lamps in the units.

UITTREKSEL

Voor OD....1619. Naam ~~Alarma-~~ Mechanische Beveiligingsmiddelen

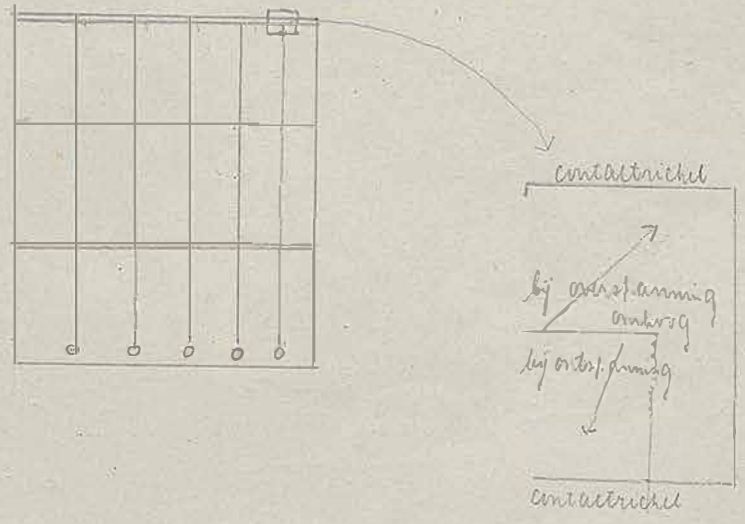
Origineel in OD 782 Naam Beveiliging Ministerie van Landbouw

Volgnr. ..... Ag.nr. ..... Aard van het stuk verslag bespreking

Afz. D.IIb Datum 2 October '50

.....

De BVA deelde ons destijds mede, dat hij ertoe was overgegaan een Alarma-beveiliging aan te schaffen. Uitdrukkelijk heeft hij destijds gecontracteerd, dat Alarma niet een bepaald systeem zou aanbrengen, maar door toepassing van eenbepaald systeem de niet-indringbaarheid zou garanderen. Bij door de BVA en mij gehouden controle bleek, dat het systeem niet feilloos werkte en de niet-indringbaarheid derhalve niet was gegarandeerd. Er waren n.l. door Alarma langs de ongeveer 2 meter hoge ramen lange draden aangebracht op een bepaalde spanning. Zodra de spanning werd verminderd of vermeerderd, zou alarm moeten worden gemaakt. Zie onderstaand schetsje.



Er bleek n.l. dat er nog zoveel over- en ontspanningsmogelijkheid overbleef, dat eenvoudig door met een punaise de draad op de in het schetsje getekende onderste brede dwars-sponning vast te zetten, het ontspannings-alrm uitbleef. -2-

Uitgetrokken door ..... Afd./Sectie ..... Datum .....

Op aanwijzing van .....

UITTREKSEL

Voor CD 1619 Naam Mechanische Beveiligingsmiddelen

Origineel in ..... Naam .....

Volgnr. ..... Ag.nr. ..... Aard van het stuk .....

..... Afz. ..... Datum .....

De firma Alarma daarop geattendeerd poogde in eerste aanleg te betogen dat Landbouw dit systeem had gecontracteerd. Tegen deze zienswijze werd door de BVA met succes geopponeerd. Alsnog werd bepaald, dat het werk eerst zou kunnen worden opgeleverd, indien was voldaan aan het contractueel overeengekomene. De directeur van Alarma, de heer Schwartz, deelde daarop aan de BVA mede, dat deze zaak hem een strop van ongeveer f. 3.000.- zou bezorgen.

.....

Uitgetrokken door Th Afd./Sectie D.Ib Datum 4 October '50

Op aanwijzing van D.IIb

5074 - '48

UITTREKSEL

Voor D. 16 19 DTV Naam Mechanische Beveiligingsmiddelen

Origineel in OD 776 Naam Beveiliging N.S.F.

Volgnr. Ag.nr. Aard van het stuk verslag bespreking

Afz. D VII Datum 24-8-50

.....

Relatie N.S.F. had geinformeerd naar het bestaan van een radio-grafisch waarschuwingssysteem, waarop ik hem een vorig maal had geattendeerd. Volgens zijn zegsman was er op dit terrein nog niets ontwikkeld en zou een zodanig systeem de inschakeling van diverse mensen vergen.
Men zou relatie echter laten weten of er een redelijke kans bestond, dat zoiets zou worden ontwikkeld.
Ik heb hem gezegd, dat het niet de bedoeling was om een probleem te stellen, doch meer om geinformeerd te zijn omtrent de mogelijkheid.

.....

Uitgetrokken door Br. Afd./Sectie D I d Datum 29-8-50

Op aanwijzing van D VII

5074 - '48

UITTREKSEL

Voor OD 161 G D IV Naam meeg. beveiligingsmiddelen

Origineel in OD 776 Naam Beveiliging N.S.F.

Volgnr. Ag.nr. Aard van het stuk verslag bespreking

Afz. D VII Datum 10-8-50

....

Relatie NSF zou nagaan of er bij het bedrijf een installatie in productie of in ontwikkeling was, die zou kunnen worden aangeduid met "radio-grafisch waarschuwingssysteem", d.w.z. een zendertje, dat signalen of iets dergelijks uitzendt, die door een groot aantal ontvangertjes zullen kunnen worden opgevangen. Relatie zei, dat hij indertijd in Maar-Heeze via de telefoonleiding een installatie had laten aanbrengen, die als volgt werkte. De portier drukte op een knop en op het politiebureau ging vervolgens een rood lichtje branden. Hij zou mij t.z.t. van zijn bevindingen op de hoogte brengen.

....

Uitgetrokken door Br. Afd./Sectie DI/d Datum 15-8-50

Op aanwijzing van D VII