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ACC CEB/19/4

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10000/150/731

SICILY
NOV. 1943 - MAY 1944

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
Public Works and Utilities Sub-Commission
APO 394

AEP/ccb

ACC/052/PWU

29 May 44.

Subject: Steam Plants data.

To : Col. James P. Crowdon,
C.E.B.

The enclosed is passed to you for information.

723

W.M. LAPPER,
Lieut-Colonel,
Chief, Public Util. & Adm.Div.

SGES Centrale termica Palermo

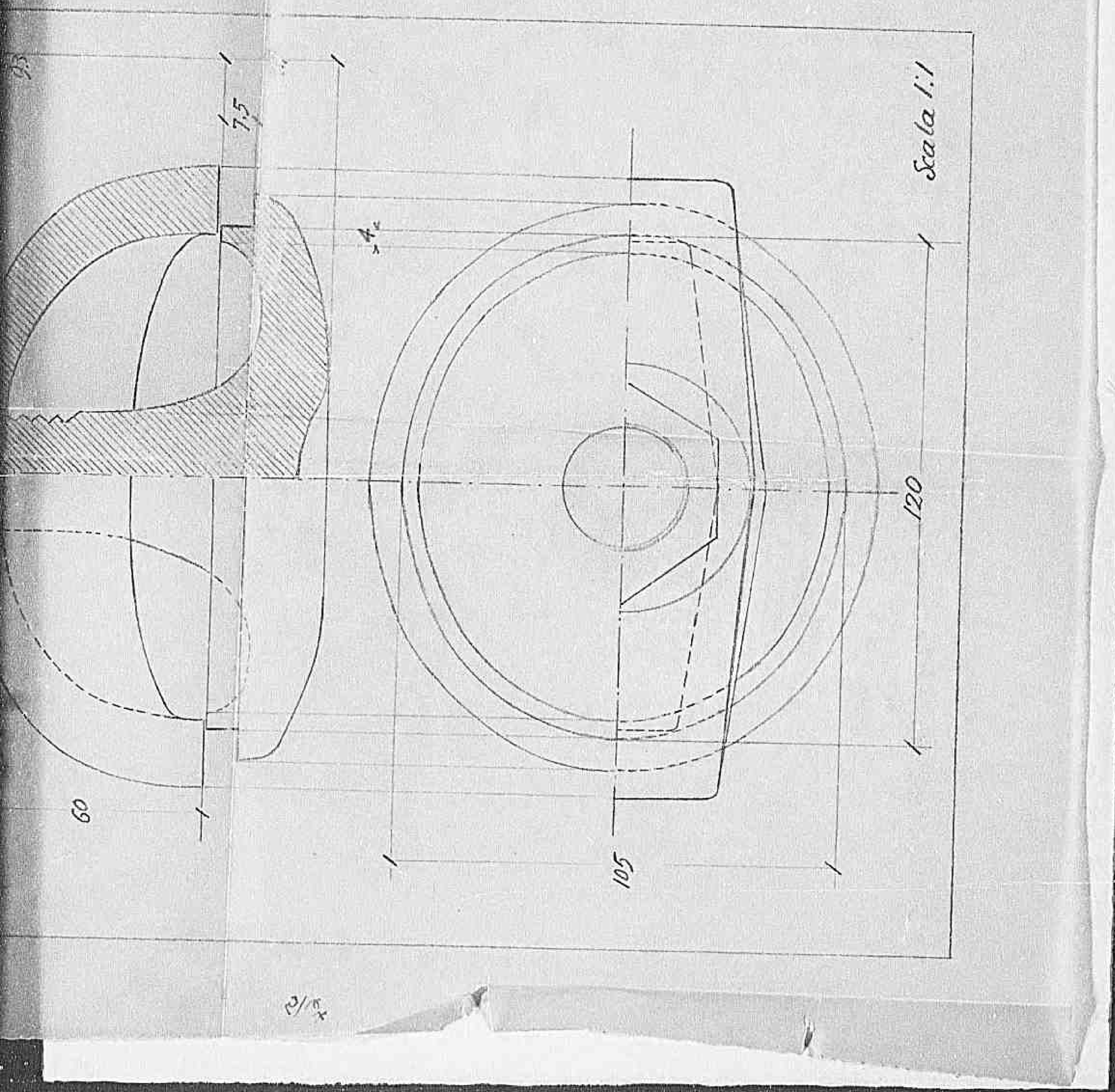
Dis. Nº 2518

Tappi di foro a pugno con cavallotti esterni per economizzatori caldaie B e W.

Declassified E.O. 12356 Section 3.3/NND No. 785019

0825

Declassified E.O. 12356 Section 3.3/NND No. 785019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Station	Location	No of Boilers	Steam Pressure Atmospheres Kg/cm²	Steam Temperature Degrees C	Each Boiler Surface Sq Metres	Turbine KWS	Generator KVAs	Volts	Phase	Frequency	C.
Porto Empedocle	Sicily	2	37	425	425	2 x 5,000	2 x 7,500	10,000	3	50	
Cagliari	Sardinia	5 2 2	13 30 30	350 375 375	250 500 650	1 x 3,000 1 x 6,000 1 x 10,000	1 x 3,750 1 x 7,500 1 x11,500	5,000	3	50	
Portovesme	Sardinia (Portoscuro)	4	13	350	250	1 x 3,000	1 x 3,750	5,000	3	50	
San Caterina	Sardinia	4	40	420	422	2 x12,500 1 x 8,800 1 x 1,500	2 x12,500 1 x11,000 1 x 1,900	5,000	3	50	

Declassified E.O. 12356 Section 3.3/NND No. 785019

...ees	Steam Temperature Degrees C	Each Boiler Surface Sq Metres	Turbine KWS	Generator KVAs	Volts	Phase	Frequency	Date in Operation	Reference
	425	425	2 x 5,000	2 x 7,500	10,000	3	50	1931	CR 436
1	350 375 375	250 500 650	1 x 3,000 1 x 6,000 1 x 10,000	1 x 3,750 1 x 7,500 1 x11,500	5,000	3	50	1925	CR 436
	350	250	1 x 3,000	1 x 3,750	5,000	3	50	1916	CR 436
	420	422	2 x12,500 1 x 8,800 1 x 1,500	2 x12,500 1 x11,000 1 x 1,900	5,000	3	50	1939	"La Centrale Ternica di S. Caterina". Publication by Societa Editrice Riviste Elettriche, 1939.

ALLIED CONTROL COMMISSION
SICILY REGION Hq.
AFO 394

R&D/el

File : ACC 412.42

11 March 1944

SUBJECT : Materiel Requirements for Repair of S.C.R.S. Plant, Palermo.

TO : Land Forces Sub-Commission.

1. The following materiel is necessary for the repair of the Babcock and Wilcock Pulverized Coal Boiler, No. 4, at the General Electric plant in Palermo. With this boiler in operation, its productive capacity would be 30 to 35 tons of steam per hour; 5,000 Kwh.

Angle iron, 4-3/4" x 4-3/4" x 1/2"	1,000 lbs.
" " 2" x 2" x 1/4"	500 "
Rivets, 3/4" x 2-1/2"	1,000 "
" 19/32" x 1-5/8"	2,000 "
" 15/32" x 1-7/16"	1,000 "
Bolts and nuts, 7/8" x 2"	100 "
" " " 5/8" x 1-13/16"	250 "
" " " 7/16" x 1-5/8"	500 "
" " " 1/2" x 1-3/8"	2,000 "
Powdered graphite	50 "
Calcium carbide	880 "
Asbestos - sufficient to cover an area of 500 sq. ft.	
Steel drawing pipes for boiler:	300
outside diameter 4" (102 mm)	
inside " 3-5/8" (91 mm)	
length 18' 1" (5,500 mm)	
Steel drawing pipes for boiler:	
outside diameter 3-7/32" (82 mm)	50
inside " 2-7/16" (72 mm)	
length 20'0" (6,250 mm)	

720

Declassified E.O. 12356 Section 3.3/NND No. 785019

1 . The following materiel is necessary for the repair of the Babcock and Wilcock Pulverized Coal Boiler, No. 4, at the General Electric plant in Palermo. With this boiler in operation, its productive capacity would be 30 to 35 tons of steam per hour; 5,000 Kwh.

Angle iron, 4-3/4" x 4-3/4" x 1/2"	1,000 lbs.
" " 3" x 3" x 1/4"	500 "
Rivets, 3/4" x 2-1/2"	1,000 "
" 19/32" x 1-5/8"	2,000 "
" 15/32" x 1-7/16"	1,000 "
Bolts and nuts, 7/8" x 3"	100 "
" " " 5/8" x 1-13/16"	250 "
" " " 7/16" x 1-5/8"	500 "
" " " 1/2" x 1-3/8"	2,000 "
Powdered graphite	50 "
Calcium carbide	880 "
Asbestos - sufficient to cover an area of 500 sq. ft.	300
Steel drawing pipes for boiler: outside diameter 4" (102 mm) inside " 3-5/8" (91 mm) length 18' 1" (5,500 mm)	720 50
Steel drawing pipes for boiler: outside diameter 3-7/32" (82 mm) inside " 2-7/16" (72 mm) length 22'2" (6,750 mm)	
Steel drawing pipes for boiler: outside diameter 5-3/4" (145 mm) inside " 5-5/16" (135 mm) to total a length of -	85'
Steam manometers - 0 to 25 Kg. per sq. cm.	4
Welaid electrodes for electric welding, No. 6	4,000
" " " " No. 10	4,000
Nickel chrome steel bar, diameter 3", length 4'	1
Sheet washer materiel, 5/64" thick	630 sq. ft.

For the Regional Commissioner,

C.F. BOLICK
Lt. Col., F.A.,
Chief, T.C.E.W. & U. Div.

Values as per dwg No 2518 and sample 100
Refractory Bricks (ordinary) 1500
Cement Refractory Tons 10.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

ALLIED MILITARY GOVERNMENT
SICILY REGION HEADQUARTERS
APO 394

JHP/ce

5 February 1944

File : RTC 675

Subject : Electric Power-Sulphur Mining

To : Deputy Chief Civil Affairs Officer HQ A.M.G.

1. Reference is made to your letter of 27 January 1944, Ref.412.4 and to paragraph 3 letter of 25 Jan. 1944 from DCCAO to Chief MGS AFHQ attention Col.J.E.Butterworth, Ref. 400.3.

2. Even with a priority on power ranking below only military requirements and essential civilian needs it is considered impossible to guarantee year around power to sulphur mines for reasons discussed below.

3. While it is true that Sardinian coal can be used at the Catania and Porto Empedocle plants, the Catania plant cannot at this time supply energy to western Sicily where it is needed for sulphur mining.

4. The necessary equipment and supplies were ordered over six weeks ago to rebuild the 70 KV transmission line near Catania. We have salvaged all scrap materials available in the island and have completed some 12 Km, of the 30 Km.70 KV line; however it is a hay-wire job at best as scrap trolley wire has to be used in liew of the stranded I C aluminum.

5. The Porto Empedocle Plant is in wery poor condition and a recent failure shut it down for two months. The rotor was shipped to Palermo and repairs made by U.S. Navy. It was returned to Porto Empedocle 28 Jan. and put in service. It can furnish a maximum of 3000 KW but its reability is questionable. This is the only machine at Porto Empedocle. The pulverized fuel boiler can operate and burn Sardinian coal when the machine is run full load, however on light load and for peaking one of the other boilers must be used and as a minimum

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400 tons of English coal per month is required for this purpose.

6. The Palermo plant can use up to 30% Sardinia coal but both boilers are in very bad condition, and again repair parts have been ordered but not received. It is impossible to keep this plant running full time due to urgent necessary maintenance. The two boilers are not equipped to burn Sardinia coal and even though it can be used up to 30% the life of the already poor boilers is further reduced.

7. As for the pressure being put on the management of the Palermo plant that has been done repeatedly and SGES officials are doing all that is possible. The essential materials now on requisition must be received before the pulverized fuel burning boiler can be put into service on Sardinian coal.

8. Rain fall is considerably below normal. We are now using next Summers irrigation water for necessary power.

CHARLES POLETTI
Lt. Colonel
Regional Civil Affairs
Officer

Declassified E.O. 12356 Section 3.3/NND No. 785019

Subject: Red Lead for Sicilian
Electrical Power Facilities.

Directorate of Works,
AFHQ Adv Adm Echelon,
C. M. F.

2052/DDW.

C. E. P. M.
(for Col J P Growdon)

29 Jan, 1944.

With reference to your letter of 26th Jan, 44, it is regretted that local supplies are not sufficient to meet military requirements here. If the lack of Red Lead is holding up work which is considered of military importance the demand should be dealt with in Sicily by No 1 District.

WARS/WNW.

W.A.R. SMITH,
Lieut. Col, R.E.,
for Brigadier,
D. D. W.

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
APO 394

28 January 1944

SUBJECT: Power Plant Materials Needed in Sicily

TO : Chief, T.C.U.W.M. & S. Division Region, A.M.G.

1. In connection with the refractory bricks needed for the Palermo Power Plant, it has been reported that there are available, at the plant of the S.A. Ferro and Metalli in Palermo, several old furnaces containing refractory bricks which might be suitable. Might it be possible that an inspection be made of this property in order to determine the suitability of this material?

2. There are at Naples, approximately 5,000 refractory bricks, having the following dimension: 245 x 120 x 65 millimeters. Would these bricks be useful at Palermo?

3. In connection with obtaining the steel plate, tubes, and shapes from the Palermo Navy Yard, it appears that the biggest difficulty is over the accounting procedure that may be involved. It is understood that these materials were captured from the Italian Navy during hostilities, and do not comprise a part of the regular U.S. Naval stores. It is suggested that the question be raised with the U.S. Naval authorities at Palermo as to whether it would be possible to turn this material over either to Region I A.M.G. or to the Societa Generale Elettrica della Sicilia, receiving in return a receipt. It is believed that turning the material over to AMG might result in the easiest procedure.

4. In the evnt that the Island Resources Board of Sicily is concerned with the allocation of this material, there is enclosed herewith, a letter to the Chairman of the Board, recommending that the material be made available to the Societa Elettrica della Sicilia.

5. Requisitions have already been placed for the following materials:

	Material	Point of Intended Use
1.	4000- Admiralty Brass Condenser tubes. 25 millimeters O.D. x 23 millimeters I.D. x 4655 millimeters long	Catania Power Plant
2.	5000- Admiralty Brass Condenser tubes 19 millimeters O.D. x 17 millimeters I.D. x 4577 millimeters long	Catania Power Plant

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	Material	Point of Intended Use
3.	6- Electronic vacuum tubes - similar in characteristics to Telefunken RGN 1404	Carrier Current System
4.	6 - Electrolytic Condensers - 1500 microfared capacity. Test voltage. 60 volts	do
5.	4- Paper Condensers 3.5 microfared capacity. Test voltage 3000 volts	do
6.	4- Paper Condensers- 4 microfafad capacity. Test voltage 3000 volts.	do
30.	10 Metric tons-Trasformer oil suitable for 70 Kv. operating voltage	Catania Substation
31.	200 Kg. red lead	Palermo Power Plant

JAMES P. GROWDON
Colonel C.E.
Chief, Electric Power Mission.

1 Inc. Letter to Chairman, Island Resources Board of Sicily.

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This letter mailed with inclosure dated Jan 30 as essential W.D. mail
VSR.

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
APO 394

28 January 1944

SUBJECT: Material at Palermo Navy Yard Needed in Sicilian Electric Power Facilities.

TO : Chairman, Island Resources Board of Sicily.

1. It is understood that there is certain captured enemy material on hand in the Palermo Navy Yard which could be used in repairing the Sicilian electric power facilities. In the event that allocation of this material comes within the jurisdiction of the Island Resources Board of Sicily, it would be appreciate if it could be earmarked for the Sicilian electric plants, in order that urgent repairs may be made, to insure a continuous supply of electric energy to military and essential civilian users.

2. Attached in duplicate hereto is a list of the material referred to which is presently at the Palermo Navy Yard.

JAMES P. CROWDON
Colonel CE
Chief, Electric Power Mission.

1 Incl. - List of Material Required by Sicilian Power Plants, and on Hand at the Palermo Navy Yardd

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
APO 394

28 January 1944

SUBJECT: Material at Palermo Navy Yard Needed in Sicilian Electric Power Facilities.

TO : Chairman, Island Resources Board of Sicily.

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JAMES P. GROWDON
Colonel CE
Chief, Electric Power Mission.

1 Incl. - List of Material Required by Sicilian Power Plants, and on Hand at the Palermo Navy Yard

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LIST OF MATERIAL REQUIRED BY SICILIAN POWER PLANTS,
AND ON HAND AT THE PALERMO NAVY YARD

240-sq meters 8 millimeters sheet iron

180-sq meters 5 millimeters sheet iron

20-sq meters 4 millimeters sheet iron

85-sq meters 3 millimeters sheet iron

20-sq meters 2 millimeters sheet iron

45 meters 90 x 90 x 10 millimeters angle iron

70 meters 70 x 70 x 7 millimeters angle iron

60 meters 60 x 60 x 10 millimeters angle iron

200 meters 50 x 50 x 5 millimeters angle iron
30
30 meters 80 x 80 x 11 millimeters tee iron

60 meters 80 x 45 x 6 millimeterschannels

300 meters 70 x 10 millimeters flat bar iron
150 meters, 50 x 50 millimeters flat bar iron.
600 seamless steel tubes 102 millimeters
OD x 91 millimeters ID x 5500 millimeters long

50 Seamless Steel Tubes. 82 millimeters
OD x 72 millimeters ID x 6750 millimeters long

200 kg 50 millimeters asbestor cord

50 kg 12 millimeters asbestor cord

50 kg boiler manhole packing

70 kg linseed oil

200 Graphite brushes. 19 x 20.5 x 20.5 millimeters

20 Copper coal brushes. 35 x 22 x 10 millimeters

20 Bronze Coal brushes. 50 x 25 x 15 millimeters

300 Elettro graphite brushes. 31.8 x 8 x 26 millimeters.

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Col. Gravdon:

1. This is more stuff for Sicily.

2. Understand there's a brick plant that can be started in Sardinia - but I think we should stay out of brick business.

3. Recommend we get them thru Industry & Commerce.

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HEADQUARTERS
ALLIED MILITARY GOVERNMENT
APO 394

27 January 1944

SUBJECT: Refractory Bricks Needed in Sicilian Electric Power Plants.

TO : Chief, Industry and Commerce Subsection.

1. It is requested that refractory bricks as listed below be ordered for use in the Palermo Sicily power plant of the Societa Generale Elettrica della Sicilia. To assure the continued supply of electric energy to the essential military and civilian consumers in Sicily, it is necessary that this material be obtained without delay.

2. A list of bricks follows:

a. 30,000 refractory bricks 220 x 110 x 60 millimeters

b. 2,000 refractory bricks of Special Design No. 1 as shown on sketch attached hereto.

c. 2,000 refractory bricks of Special Design No. 2 as shown on sketch attached hereto.

3. These bricks will be used in steam boilerfurnaces in the Palermo power plant. They should bare an alumina content between 40 and 42 percent, and should have a melting point of 3200 F. It is requested that shipment be made to Headquarters, A.M.G., Region I, Palermo. Attention: T.C.U.P.W. & M. & S. Division, and marked for Palermo Power Plant.

James P. Growdon
JAMES P. GROWDON
Colonel C.E.
Chief, Electric Power Mission.

1 Incl. Sketch "Special Design, Refractory Bricks, Palermo Power Plant."

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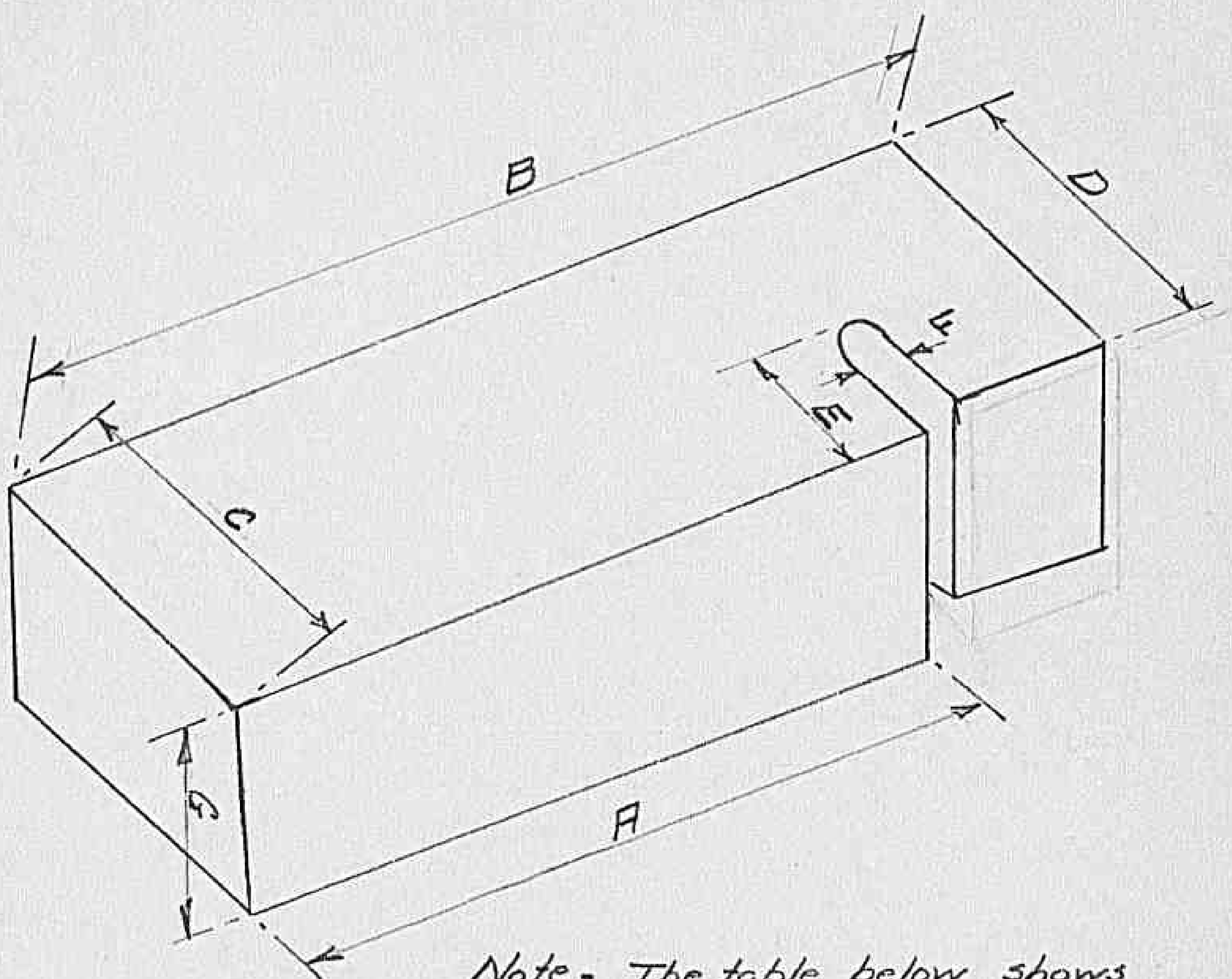

Note - The table below shows the dimensions of the two special designs of bricks needed. Dimensions are in millimeters.

TYPE	A	B	C	D	E	F	G
SPECIAL DESIGN NO.1	220	280	110	104	40	15	60
SPECIAL DESIGN NO.2	220	280	165	159	40	15	60

SPECIAL DESIGN REFRACTORY BRICKS. PALERMO POWER PLANT

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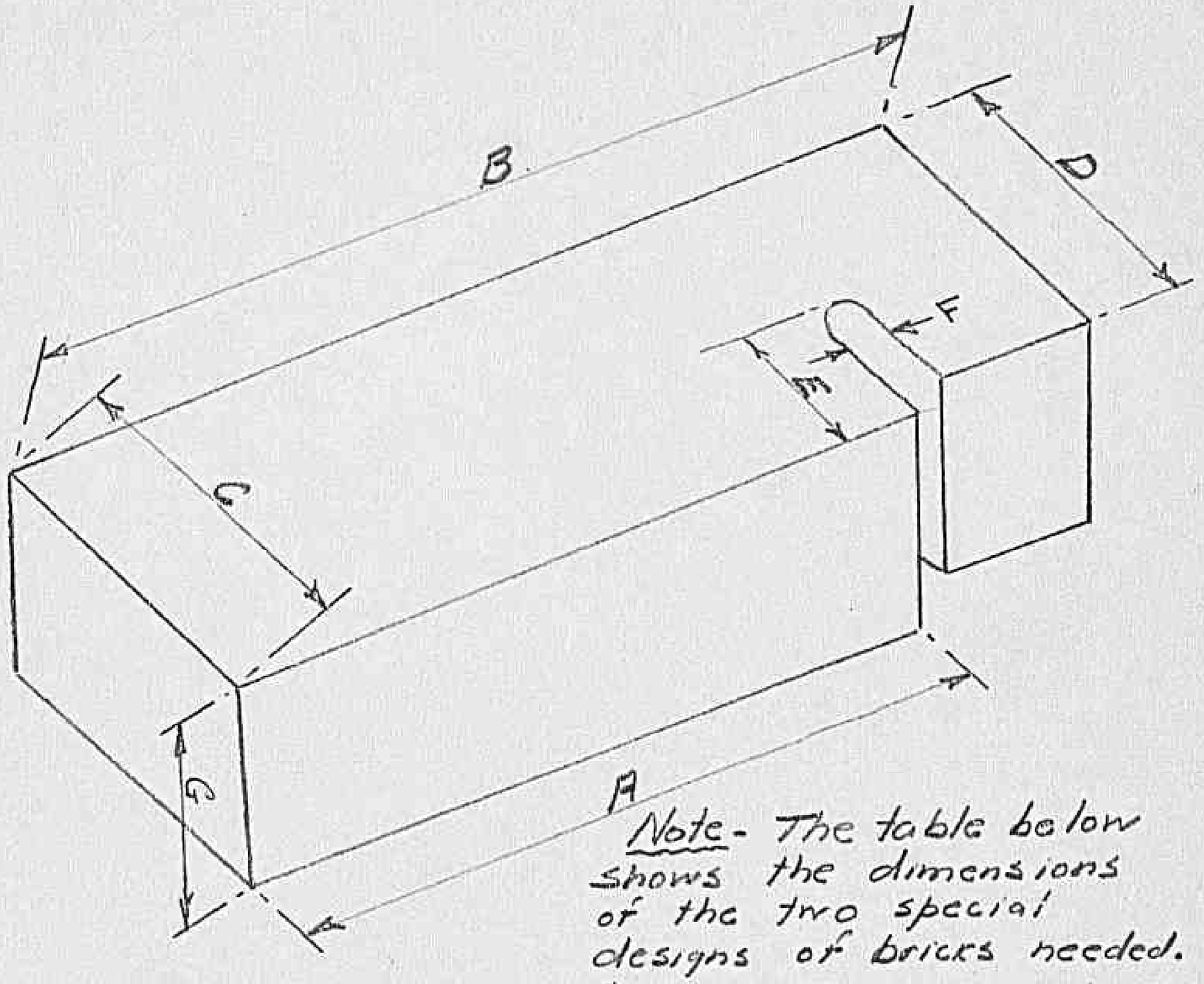

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TYPE	A	B	C	D	E	F	G
SPECIAL DESIGN NO.1	220	280	110	104	40	15	60
SPECIAL DESIGN NO.2	220	280	165	159	40	15	60

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SPECIAL DESIGN
REFRACTORY BRICKS
PALERMO POWER PLANT.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Refractory Bricks: Source.

1. S.A. Ferro x ~~Metalli~~ Metalli, Palermo. (1)
Have old furnaces that can be ~~the~~ dismantled
Shapes.

2. Ilva steel plant – Naples (3)

3. Sardinia – Col. Hale (2)
4000 Bricks.

Call Capt. Austin, C.E.C. 10025.
or 11151.

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
APO394

25 January 1944

SUBJECT: Report of Major Van Dusen, Concerning his Visit with Colonel Bolick

TO : Colonel Growdon.

1. Major Van Dusen, AMG Hq. liaison officer visited Sicily recently, and talked to Lt. Colonel Bolick ~~x~~ concerning the electric power situation. Colonel Bolick's observations were:

a. That he had no one to assist him in following the electric power situation.

b. That lack of personnel prevents his collecting sufficient information for us to make decision, and that he thought that such information should be collected by field representatives of the Electric Power Mission.

c. That he was concerned about the status of the requisitions which he sent over here in the middle of December. (The material which will be obtained outside the theater have been requisitioned; the materials which will be obtained here will be straighlened out today or tomorrow).

d. Major Bowen (Bowman) stated that the C.E. of Sicily is presently producing 90% of its output for civilian requirements and 10% for military. He stated that the company is losing money. Major Van Dusen was not certain whether this was due to low rates or non payment of bills.

e. That in the case of the gas company, it is necessary to pay discharged employees a considerable amount of termination pay.

vsh.

VINAL S. RENTON
Major Infary.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

ALLIED MILITARY GOVERNMENT
SICILY REGION HEADQUARTERS

CFB/oe

File : RTC 004.

22 January 1944

SUBJECT: Repairs to Electric Utilities, Sicily

To : Electric Power Mission
(Att. Col. Growden

1. Repairs to Porto Empedocle.

a. (1) This plant contains two identical 5000 Kw units. One turbine was disassembled for repairs prior to the invasion and some of the parts are in Switzerland. The other turbine has 7 rows of blades missing and operates at low efficiency and reduced outpout. One generator was destroyed by a short circuit in November. The other was damaged by a shell during the invasion.
(2) The latter rotor was brought to Palermo. The damaged shaft has been trued up by the Navy shop and a new bearing cast. The rotor is enroute Porto Empedocle for reassembling and test. Coal is likewise being loaded at Palermo for rail shipment to permit the test.

b. (1) The pulverized fuel boiler at Porto Empedocle is in shape to operate using 100% Sardinia coal, No.4 size (0 to 3/8 inch). It does not operate well, idling for standby and peaking.
(2) For this reason, as well as to permit operation while this boiler is being given routine maintenance, it is essential that some English coal be available for use in the two smaller Riley grate boilers.

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These boilers are also capable of operating.

(3) It is possible that the attempted repair will prove to be unsuccessful.

(4) It is possible that the load at Porto Empedocle will be too light (3000 Kw max. on account of the missing turbine blades) for the successful operation of this plant. In this case English coal will be necessary for the other boilers.

2. Repairs to Palermo steam plant.

a. (1) The 5000 Kw unit continues to operate satisfactorily.

(2) Repairs to the 7500 Kw unit have been completed. The turbine has been operated though adjustments are being made on the over-speed safety device. The generator unit is being dried out for use under load if desired. This machine is more efficient under light load than the 5000 Kw unit.

b. (1) The two Riley grate boilers continue to operate but require heavy maintenance. A coal chute has been completed which elimitates the need for hand filling of the boiler hopper on No.1 boiler.

(2) A test has being run on No. 1 boiler using 100% Sardinian coal. Because of the rapid destruction resulting, this office ordered the experiment discontinued on the second day of the test.

In addition to periodic inspections from this office, the experiment was observed by combustion engineers from the Italian " Associazione Nazionale per il Controllo della Combustione - Sezione della Sicilia ", who will render a complete report in addition to the report of the S.G.E.S.

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(This agency has previously made such experiments in compliance with the Italian policy of increcesing the proportion of Italian fuels being burned, to reduce imports. Reports are available from them on most of the Major boilers in Sicily if they are desired).

Later experiments have been ordered to determine the maximum percentage of Sardinian coal which can be burned. Previous tests are said to have set the optimum at 20% to 30%.

(3) The pulverized fuel boiler has been out of use for some years, and the stack was removed during the repair of this plant. The necessary steel and other repairs needed were requisitioned by this office in December through that office.

Such repairs as are possible using local resources are under way. (The cooperativeness of local U.S.Naval authorities is worthy of special comment).

There are two problems still unsolved:

(a) The firebox is not high enough for satisfactory combustion of the high-volatile Sardinian coal.

(b) The pulverizer has a capacity of 1 T/hr of hard Sardinian coal where the boiler could burn as high as 5 T/hr.

Completion of repairs is beyond the capabilities of local resources.

(4) This plant is being used for peaking

o. The Catania steam plant is capable of carrying its present light load, but extensive deferred maintenance is necessary before May to permit carrying heavy Summer and Fall requirements.

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(1) The necessary fire brick, boiler and condenser tubes and dther supplies required were requisitioned some weeks ago but without acknowledgement from there.

(2) Due to excellent cooperation from the Royal Navy and C.R.E. Major Crowther has obtained much material locally; including turbine lubricating oil and some transformer oil.

3. Hydro-electric production is satisfactory

a. At the Piana dei Greci reservoir, the pumps have been removed and water for the Casuzze plant is flowing by gravity. Storage is about 3,000,000 m.c. below that at this date last year. (1 m.c. will give nearly 1 Kwhr).
Minor routine maintenance of flumes, roads, bridges and masonry is required but no major repairs.
This plant is being used for peaking.

b. All three plants of the San Carlo group are in good shape.
(1) The Gammauta reservoir will hold only about 10 days supply. (1,500,000 mc. or nearly 1,500,000 Kwhr) Only 250,000 mc. have wasted.
(2) The Prizzi reservoir; which empties into Gammauta when desired, has not been in operation for a full season. It is about half full. (Capacity 8,800,000 mc.). No water has been drawn from Prizzi this season. Normal runoff estimated at 8,000,000 mc./yr.
(3) The Margi River project, to divert 2,000,000 mc. additional into Prizzi is being pushed. Most of the required materials have been delivered to the 70%

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Site and the canal is actually delivering some water into Prizzi although all the masonry and gate structures have not been completed.

c. The Alcantara and Cassibile plants are increasing production as precipitation and runoff increase. None of these has appreciable storage capacity.

4. Diesel plants have been shut down for some time from lack of fuel.

a. The Trapani plant is in good state of repair.

b. The Racalmuto plant needs a compressor and other repairs to permit operation on a reasonable basis.

c. Other diesel plants are small and mostly very old and inefficient.

5. It is essential that the 70 Kw tieline and the necessary substations be repaired to permit transfer hydro power across the island to reduce waste..Maj. Crowther is being retained at Catania to press this repair. Makeshifts and expedients are being required which will reduce the efficiency of operation and should be corrected as soon as possible.

6. An excellent study of the power plant situation was made by Capt. Louis.W.Laughlin of the P.W.& M. Sub-Commission; and is in his possession. This follows the specification of 75,000,000 Kwhrs " send out " as specified by the Head of the E.P.M. The Captain followed the study from analysis of connected load to monthly coal requirements . Reference is made to that report which is available at that headquarters.

The S.C.E.S. recommends certain adjustments in coal requirements; involving chiefly greater use of coal from Jan to April and less use in the Summer and Fall, this is a desireable situation if correct.

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7. With the submission of this report and the transfer of the undersigned from the Section the Utilities Section, T.C.U.P.W.& M & S. Division, remains without any personnel in Region 1 Hq. Any further data desired will of necessity be obtained from the S.G.E.S. directly. Although the Chief of the Division will be able to hand requests to the S.G.E.S. he will be unable to do anything more.

Clair F Bowman

CLAIR F. BOWMAN
Maj. C.E.
Chief, Utilities Section
T.C.U.P.W.M.& S Div.
Region 1 A.M.G.

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
APO 394

21 January 1944

SUBJECT: Request for material Needed in Sicilian Electric Power Facilities

TO : Chief, Industry and Commerce Subcommission

1. It is requested that requisitions be placed for the following equipment which is needed as soon as possible to make urgent repairs at the electric power plants of the Societa Generale Elettricita della Sicilia on the island of Sicily. These materials have been requested by the Utilities Section, A. M. G., Region 1, and are required in order to insure a continuous supply of electric energy to the essential consumers on the island.

Item No.	Material	Point of Intended Use	Remarks
1.	4000-Admiralty Brass Condenser tubes. 25 millimeters O.D. x 23 millimeters I.D. x 4655 millimeters long	Catania Power Plant	Probably necessary to obtain from United States
2.	5000-Admiralty Brass Condenser Tubes. 19 millimeters O.D. x 17 millimeters I.D. x 4577 millimeters long	Catania Power Plant	Probably necessary to obtain from the United States
3.	6-Electronic vacuum tubes- similar in characteristics to Telefunken RGN 1404	Carrier Current System.	
4.	6-Electrolytic Condensers-1500 microfarad capacity. Test voltage. 60 volts.	do	Physical dimensions to be as small as possible
5.	4-Paper Condensers-3.5 microfarad capacity. Test voltage 3000 volts.	do	do
6.	4-Paper Condensers-4 microfarad capacity. Test voltage 3000 volts.	do	do

Must be shipped with parts listed above

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(Continued)

Item No.	Material	Point of Intended Use	Remarks
7	240-sq meters-6millimeter sheet iron	Paloma Power Plant	
8	180-sq meters-5 millimeter sheet iron	do	
9	20-sq meters-4 millimeter sheet iron	do	
10	85-sq meters-3 millimeter sheet iron	do	
11	20-sq meters-2 millimeters sheet iron	do	
12	45 meters- 90 x 90 x 10 millimeters angle iron	do	
13	70 meters- 70 x 70 x 7 millimeters angle iron	do	
14	60 meters- 60 x 60 x 10 millimeters angle iron	do	
15	200 meters-50 x 50 x 5 millimeters angle iron	do	
16	30 meters-80 x 80 x 11 millimeters tee iron	do	
17	60 meters-80 x 45 x 6 millimeters channels	do	
18	900 meters-70 x 10 millimeters-flat bar iron	do	
19	150 meters-50 x 10 millimeters-flat bar iron	do	
20	600 seamless steel tubes 102 millimeter OD x 91 millimeter ID x 5500 millimeters long	do	

Captured enemy material

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Item No.	Material	Point of Intended Use	Remarks
21	50 Seamless Steel Tubes. 82 millimeters OD x 72 millimeters ID x 6750 millimeters long.	Palermo Power Plant	Random lengths can be used provided that the total length of the tubing equals 350 meters.
22	200 kg-50 millimeter asbestos cord	do	
23	50 kg-12 millimeter asbestos cord	do	
24	50 kg boiler manhole packing		
25	70 kg Linseed oil	do	
26	200-Graphite brushes. 19 x 20.5 x 20.5 millimeters	Catania Power Plant	
27	20-Copper-coal brushes. 35 x 22 x 10 millimeters		
28	20-Brands-Coal brushes. 50 x 25 x 15 millimeters	do	
29	300-elettro-graphite brushes. 31.8 x 8 x 26 millimeters.	do	
30	10 Metric tons-Transformer oil suitable for 70 kv. operating voltage.	Catania Sub-station	This material is very urgently needed.
31	200 kg red lead.	Palermo Power plant.	

2. It is understood that items 7 to 29 inclusive are available at the Palermo Navy Yard as captured naval stores, and that some of the material listed in the foregoing has already been taken from the yard for use in the Sicilian power plants.

3. In order to facilitate transporting the materials, it is recommended that those intended for use at Catania be shipped directly there; that the remainder be shipped to Palermo.

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JAMES P. GROWDON
Colonel CE
Chief, Electric Power Mission

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Please see back for notes-

Declassified E.O. 12356 Section 3.3/NND No. 785019

Subject: Comments on Letter "Repairs to Electric Utilities, Sicily"

To: Col Grandon.

① Appearently, Region I is going out of the power business, according to the last paragraph. That's bad because it leaves the job on Sicily uncovered. It's a little good- because it gives us an available out to take over the Sicily system, as we appearently are going to do with S.M.E. Hence, we can act consistently in both places - if we want to follow the systems ~~the~~ directly instead of acting thru the Regions. I believe, however, that if we're going to operate directly with the Sicily electric company, we had better have one of our number check up on the system ~~plants~~ occasionally ~~by~~ through a personal visit. To avoid losing all touch, ~~it~~ it is suggested that we ask the power company to submit a monthly report ~~giving~~ to us through ~~region~~ Region I, containing information of current energy and demand requirements, as well as the

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Item No.	Material	Point of Intended Use	Remarks
21	50 Stoomlaan Steel Tubes. 82 millimeters OD x 72 millimeters ID x 6750 millimeters long.	Palermo Power Plant	Random lengths can be used provided that the total length of the tubing equals 350 meters.
22	200 kg-50 millimeter asbestos cord	do	
23	50 kg-12 millimeter asbestos cord	do	
24	50 kg boiler manhole packing	do	
25	70 kg Linseed oil	do	
26	200-Graphite brushes. 19 x 20.5 x 20.5 millimeters	Catania Power Plant	
27	20-Copper-coal brushes. 35 x 22 x 10 millimeters	do	
28	20-Bronze-Coal brushes. 50 x 25 x 15 millimeters	do	
29	300-elektro-graphite brushes. 31.8 x 0 x 26 millimeters.	do	
30	10 Metric tons-Transformer oil suitable for 70 kv. operating voltage.	Catania Sub-station	This material is very urgently needed.
31	200 kg red lead.	Palermo Power Plant.	

2. It is understood that items 7 to 29 inclusive are available at the Palermo Navy Yard as captured naval stores, and that some of the material listed in the foregoing has already been taken from the yard for use in the Sicilian power plants.

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JAMES P. GROWDON
Colonel CE
Chief, Electric Power Mission

-3-

Please see back for notes-

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(1)

Notes - Items 1-6 inclusive and Item 30 have been listed on a requisition prepared by Captain Adams, Industry & Commerce. Items 7-29 inclusive are in Palermo Navy Yard, and it was suggested in our letter dated 28 Jan. to Chief T.C.C.W.M. & S Division, Region I, that a receipt be obtained either from ~~the~~ JANG or Sicily G.E. in exchange for the ~~equipment~~ material. Col. Crowder has given memo to Col Smith (S) who will forward load.

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current condition of ~~eq~~ the equipment. Attached
hereto is a letter to Region I requesting that
such be done. Major Van Dusen, AMG

2. It looks as if the company is doing a good job in trying to rehabilitate the system

Hq. Liaison officer reported to us yesterday that Colonel Bollick appeared a little discouraged over his lack of personnel, and I think we should go light on making requests of him.

2. I believe that the most important job yet to be done in Sicily is to get the missing parts for the Porto Empedocle plant. turbine, which are reputedly in ~~Sicily~~ Switzerland. If this is done - additional capacity will be available - and Sardinian coal with admittedly can be burned.

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Porto Empedocle.

1 Generator - 5,000 KW - Severe damage.

1 Generator - 5,000 KW - {Damaged beyond repair - Parts in Switzerland

2 Stokers - (Severe damage which has been repaired). @ 18 Ton/HR.

1 Pulverized Fuel - 35 Ton/HR. - Can burn Sardinian Coal.

35 x 2204 x 9250 x .75 = 693,545,000 BTU/HR.

2209
35
11020
6612
77190
9250
38 57000
159280
694260
693545000

11# W.R. (1350 - 50) x 11 = 13,000 btu/KW-hr.

693,545,000 / ~~13,000~~ 19,300

1300
1300
14300

14,300 / 693,545,000

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SUBJECT: Status of Repairs and Procurement of Material, Sicilian Gas and Electric Utilities.

TO: LT. COL. W.L. CISLER.

1. Submitted hereunder is the latest information concerning the status of repairs and the procurement of materials relating to the Sicilian gas and electric facilities.

2. On Dec. 3 you gave a memorandum to Col. D.S. Adams concerning the state of the manufactured gas plants at Palermo, Catania and Messina. No recommendations were made; no information has been received as to whether repairs have been started. It is recommended that no further action be taken by this mission at this time in connection with the gas systems in Sicily.

3. Early in December, you prepared a memorandum, for Colonel Crowden's signature, to Lt. Colonel C.P. Bolicis, delegating to the T.C.U.P.W. of 695 Division Region I AMG the responsibility for electric utility operation, distribution excepted, in Sicily. The memorandum was left in Palermo for Col. Crowden's signature. The memorandum

(1).

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recommended that the following steps be taken immediately:

RECOMMENDATION	PRESENT STATUS
a. The restoration to service of the 70kv Catania-Caltanissatta transmission line, and facilities at the Catania 70kv switching station.	No information received concerning whether this work has been started although FMG Region I has requested 10 metric tons of transformer oil for use at Catania 90/70kv substation.
b. The restoration to service of No. 2 Turbine-Generator Unit at Porto Empedocle.	No information received as to whether this work has been started
c. Determine condition and requirement for condenser tubes at Catania.	Requirement figures of tubes have been submitted They amount to 9000 tubes of two different sizes, involving about 25 tons of brass. FMG Region I states that the number of tubes requested is insufficient to do a

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Complete refubing job. However, they have asked for 30,250 ℔ of surface, and assuming 1.2 ℔/KW, a total of 31,200 ℔ should be all that's needed To completely retube the 3 condensers. AMG Region I also wants some ferrules for the condensers. The weight of raw material needed for these is approximately 2000# if the scrap from the machining operations is recycled and {Tubes at Palermo Navy Yard used. {are too large for Catania Station.

d. At the Palermo Station, overhaul the boilers, firing equipment, coal preparation and conveying equipment, and the 7500 KW turbine.

1. AMG Region I has listed the following material as being needed:

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(a) Structural Shapes, sheet iron, packing - available in Palermo Navy Yard. The approved method of paying for this material at the present time is unknown.

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(b) Boiler tubes, also available at the Palermo Navy Yard.

(c)- Refractories. A check is presently being made in Sardinia to determine whether the material is available there.

2. AMG Region I has not indicated specifically that repairs are contemplated on the Army equipment, or the coal preparation and conveying equipments or on the 7,500 kw unit.

4 Early in December the Società General Elettrica della Sicilia submitted a list of material claimed to be needed at Palermo. Aside from material already mentioned, the following was listed:

MATERIAL	PRESENT STATUS.	RECOMMENDATION
STEAM Turbine oil 3,000 Kg @ Palermo.	No info received.	That it be secured from U.S.

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MATERIAL.	PRESENT STATUS.	RECOMMENDATION.
500 Kg - lubricating oil having following characteristics: Viscosity at 50°C: 5,5-10 Engler Flash Point: 185°C Min Organic acidity: Max. 2%. Ash: Max. .5%	No Info.	That an effort be made to obtain it From Army Sources.
9000 Kg - lubricating oil having the following characteristics: Viscosity at 50°C: 3,5-5,5 Engler. Flash point: 170°C Min. Organic acidity: Max. 2% Ash: Max 0,5%	No info	That an effort be made to obtain it From Army Sources.
1000 Kg - Cylinder oil having the following characteristics - Minimum - 4 Engler - Flash point 250°C Organic Acidity Max 1,5% Ash 0.15%	No info	That an effort be made to obtain it From Army Sources.

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MATERIAL	PRESENT STATUS	RECOMMENDATION
3000 Kg. "Yellow Grade - Consistent Type.	No info	That info be obtained as to its intended use - ie - whether "water pump grease," and that it be obtained in U.S.
Wire for motor windings 1000 Kg	No info.	Look further into local sources before ordering -
Cotton Waste	No info -	That an effort be made to obtain from Navy Source - and that figure of 1000 Kg be substantially reduced.
4 Steel Rings for Coal Mill	No info.	That it be made in Palermo.
50 Tons Cast Iron for "fusion."	No info.	That it be obtained in Palermo.

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MATERIAL	PRESENT STATUS	RECOMMENDATION
200 Kg - Asbestos Cord. - 50 mm.	Available in Palermo Navy Yard.	Secure as soon as means of payment is decided upon.
50 Kg. - Asbestos Cord - 12 mm.	do.	do.
50 Kg - Boiler Manhole Packing.	do	do.
70 Kg - Linseed oil.	do	do.
200 Kg Red Lead.	No info.	Endeavor to secure from U.S. Army Sources.
20 Kg. Pure Tin -	Unavailable in Palermo - Believed needed for solder.	Recommend 684 r. 100 lb. solder be obtained, preferably from U.S. Army sources.

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5. Early in December, the Societa' General Elettrica della Sicilia submitted a list of material claimed to be needed at Catania. Aside from material already mentioned, the following was listed:

MATERIAL	PRESENT STATUS.	RECOMMENDATION
2750 Assorted Motor Brushes - needed for auxiliaries.	540 have been located in the Palermo Navy Yard; the remainder un-located.	That an effort be made to secure them from the States.
1000 Kg. of grease.	NO INFO.	Check as to type needed & obtain from state.
Spare parts for B.T.H. Turbine including blading for 17th & 18th wheel. All ball bearings for governing gear and labyrinth packing.	NO INFO.	Determine possible source of this material.
3000 Kg. Steel Balls for Coal Mills.	NO INFO.	Endeavor to locate a quantity of balls in Italian Cement Mills - 688
4000 Kg. Steam Turbine Oil.	Enough has been found for use at Catania & is en route then	NONE.

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6 The Società General Elettrica della Sicilia have stated that the following equipment is urgently needed for carrier current operation:

MATERIAL	PRESENT STATUS	RECOMMENDATION
6- Telefunken Type RGN 1404 Tubes- Believed that Type 81, American Manufacture, would be use.	Have not been ordered	That the Type 81 tubes be secured from U.S.
14- Electrolytic Paper Condensers.	Have not been ordered.	That info be obtained from Sicily re physical dimensions, and that material be obtained from U.S.

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As regards rewinding the generator of Porto Empedocle, AMG Region I reports that work can be done in Palermo on machines of smaller capacity and less. It is therefore recommended that arrangements be made with the OGREN Company to do the job. Insofar as the condenser tubes are concerned - I believe they will eventually have to be procured from the states - However - the possibility exists that some of the tubes may be removed from a larger condenser and used in a smaller one. Also, we do not know yet whether the tubes are held into the tube sheets by rolling, or ferrules, on one end. This is being checked. In so far as the ferrules are concerned, I suggest that they be made from scrap, in Palermo.

In addition to the 10 tons of transformer oil requested by Sicily, SME has indicated that they need approximately 90 Tons. I believe that this, too must come from the States, but before discussing the figure with either Col Cooley, or SME, would like to be sure that we have the means of getting the oil.

VSR.

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SHEET 1 OF 1

8 Jan 1944

Equipment probably to be ordered from U.S.

4000 - Condenser Tubes - 25mm O.D x 23mm I.D x 4655 mm long.

5000 - Condenser Tubes - 19mm O.D x 17 mm I.D x 4577 mm long.

Transformer oil.

RADIO EQUIPMENT

6 - Vacuum Tubes - either Telefunken RGN 1404 or American Type 81.

6 - Electrolytic Condensers.

8 - Paper Condensers of two different capacities.

Assorted motor brushes.

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VSK

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Sheet 1 of [illegible] 3 Jan. 1944.

The following material is required by electric generating stations in Sicily. As of this writing the point of its availability is not known.

ITEM	POSSIBLE POINT OF AVAILABILITY.
In Metric Tons. Transformer oil: for operating conditions of 70,000 volts. G.E. No. 12 Transil oil or Cities Service Transformer oil will be OC.	Bari oil Refinery
40 Tons - Refractory Bricks - 220×110×60 mm. Alumina 40-42%. Fusion point 1750°C.	Material may be available in Sardinia-Being checked.
10 Tons - Refractory Cement - Fusion point 1750°C.	Material may be available in Sardinia - Being checked.
6 - Vacuum Tubes. Either (a) Telefunken type RGN 1503 heavy European screw cap, 4 volt. filament, 800 volts plate, continuous current 0,1 amp or, (b) American type 81 with filament voltage not greater than 5 volts -	68½

(MORE).

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The following material is required by Electric generating stations in Sicily. As of this writing, the point of its availability is not known. This list is continued from Sheet 1.

	ITEM	Possible Point of Availability.
6 -	Electrolytic condensers - 1600 m f - test, 60 volts rating.	
4 -	Paper condensers - 3.5 m.f. - 3,000 volt.	
4 -	Paper condensers. 4 m.f. 3,000 volt.	
1000 Kg.	Yellow Grease - "Consistent type for Lubricators."	
4,000 -	Admiralty brass tubes - 25 mm O.D.; 23 mm I.D.; 9655 mm long -	No #
8,000 -	Ferrules for tubes - 25 mm O.D.	Sq. Ft.
5,000 -	Admiralty brass tubes - 19 mm O.D.; 17 mm I.D.; 9572 mm long -	
10,000 -	Ferrules for tubes 19 mm O.D.	682

Spare parts for B.T.H. Turbine:
(a) Complete blading for 17th & 18th wheel,
(b) Governor ball bearings. (c) Labyrinth packing.

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5 Jan. 1944

Our More No.			Possible point of Availability	Società Generale Elettrica della Sicilia Mare No.
	3000 kg. Steel balls for coal mills. Brinnel hardness 250-300.			
50	30x35x19.5 mm	Copper-Coal brushes.		1
500	36x30x20 mm	Graphite brushes		2
50	30x35x12 mm	Bronze-Coal brushes.		3.
50	41/36.6x30x15 mm	Copper-Coal brushes.		4.
50	29x31.5x6.5 mm	Coal brushes.		6.
150	37x32x19 mm	Elettro graphite		7.
50	30x25x10 mm	Coal		8.
20	35x30x15 mm	Elettro-graphite		10.
30	50x25x15 mm.	Copper-Coal		11.
20	45x32x16 mm	Graphite		12.
20	55x25x25 mm	Linen-copper.		13.
—	115x19x8 mm	Linen-copper.		15
100	36x31.6x12.5 mm.	Elettro-copper		16.
—	38x32x13 mm.	Elettro-copper		17.
20	31.5x25x15.8 mm.	Copper-coal	680	18.
100	16x9.6x7.9.	Elettro-graphite		19.
50	40x31.5x8.	Graphite		20.
(?) 50	38x2x12.5	Copper-Coal.		21.

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OUR MARK NO			
	20- 40x30x20 mm Copper-Coal Brushes		22
	50- 55/90x32x16 mm Electro Graphite Brushes		23.
	30. 55x32x40 mm Graphite brushes.		24.
	30- 55x25x25 mm Copper-Coal brushes		25
	50- 30x25x16 mm Copper-Coal brushes.		26.
	50- 30x30x30 mm Copper-Coal brushes.		27.
	20. 60/57x32x12,2 mm Electro-graphite brushes.		28.
	50 15x30x45 mm. Copper Coal brushes.		29.
	100 19,5x40x40 mm. Copper coal brushes.		30.
	300 9,8x30x40 mm Copper-Coal brushes.		32.
	20. 35x25x12,5mm. Bronze Coal brushes.		33.
	200- According to Sample. Graphite brushes.		34.

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WAR DEPARTMENT
Q. M. C. Form No. 400
(Revised Apr. 6, 1931)

REQUISITION

To: ..... No. of Sheets 1 Sheet No. 1

Requisition No. ..... Date 18 Dec. 1943 Period Special

SHIP TO Società Generale Elettrica della Sicilia, Palermo, Sicily.
Per Utilities Section, A.M.G. Region 1, Palermo, Sicily.

REQUISITIONED BY (show Signature, Rank, Organization, Destination. If different from "SHIP TO" include address):

Clair F. Bauman, Maj. C.E.
Utilities Section,
A.M.G. Region 1,
Palermo, Sicily.

APPROVED BY:

STOCK No.	ARTICLES	UNIT	ON HAND AND DUE	CONSUMED	REQUIRED	APPROVED
	1. Asbestos ~~Asbestos~~ cord, 50 mm.	Kg.			200	
	2. " " " 12 "	"			50	
	3. Rustproof varnish	"			150	
	4. Oil white lead	"			30	
	5. Gray varnish	"			100	
	NOTE.- Alternative for items 3, 4, and 5.					
	6. Red lead	Kg.			200	
	7. Linseed oil	"			80	
	Item no. 7 is available from captured Naval Supplies; however, red lead must be obtained elsewhere.					

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U. S. GOVERNMENT PRINTING OFFICE 16—25027-1

Declassified E.O. 12356 Section 3.3/NND No. 785019

INSTRUCTIONS FOR PREPARATION OF REQUISITION

Space "TO."—To show the approving office to which requisition is submitted.

Space "PERIOD."—Show period for which the supplies are required.

Space "SHIP TO."—Full shipping address to be given. Where mail address is different from shipping address the former should also be shown, e. g., "Q. M., Fairfield Air Depot, Osborn, Ohio. Mail address, Fairfield." Except for established camps, posts, or stations, street or building address should be shown, e. g., "C. O. 328th Inf., National Guard, 456 Republic Bldg., Grand Haven, Mich." Where the property is to be invoiced to an organization, etc., different from that to which it is to be shipped, the required information will be shown.

Space "STOCK No."—Show stock number listed in Federal Stock Catalogue.

Space "ARTICLES."—Include sizes required. Show purpose numbers applicable to an article or group immediately above the article or group concerned.

Space "ON HAND AND DUE."—Show the quantity on hand plus the quantity approved on previous requisitions and not yet received.

Space "CONSUMED."—Show quantity consumed during the previous period.

Space "REQUIRED."—To be the quantity asked for by the requisitionist.

Space "APPROVED."—To be the quantity approved by the approving officer.

This form may be used in lieu of Q. M. C. Forms Nos. 402, 409, and 410 by appropriate modification.

IN THE SPACE BELOW SHOW BASIS FOR REQUISITION, i. e., Strength of Command, Number of Animals, Number of Animal-Drawn and Motorized Vehicles, Armament, or such other data as may be required by instructions issued by approving authorities.

THIS SPACE FOR ACTION OF APPROVING OFFICER

o10—25037-1

Declassified E.O. 12356 Section 3.3/NND No. 785019

WAR DEPARTMENT
Q. M. C. Form No. 400
(Revised Apr. 5, 1931)

REQUISITION

To: ..... No. of Sheets 1 Sheet No. 1

Requisition No. ..... Date 17 Dec. 1943 Period Special

SHIP TO Società Generale Elettrica della Sicilia, Palermo, Sicily.
Per Utilities Section, A.M.G. Region 1, Palermo, Sicily.

REQUISITIONED BY (show Signature, Rank, Organization, Destination. If different from "SHIP TO" include address):

Clair F. Zaumeyer Maj. C.E.
Utilities Section,
A.M.G. Region 1,
Palermo, Sicily.

APPROVED BY:

STOCK No.	ARTICLES	UNIT	ON HAND AND DUE	CONSUMED	REQUIRED	APPROVED
	Refractory Bricks, 220x110x60 mm. Alumina 40 to 42%. Fusion point 1750° C.	Tons			40	
	Refractory Cement, Fusion point 1750° C.	Tons			10	
	Satisfactory material is said to be available in Sardinia.					

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U. S. GOVERNMENT PRINTING OFFICE 0 10—25027-1

Declassified E.O. 12356 Section 3.3/NND No. 785019

INSTRUCTIONS FOR PREPARATION OF REQUISITION

Space "TO."—To show the approving office to which requisition is submitted.

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16—25037-1

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Declassified E.O. 12356 Section 3.3/NND No. 785019

WAR DEPARTMENT
Q. M. C. Form No. 400
(Revised Apr. 6, 1931)

REQUISITION

To: ..... No. of Sheets 1 Sheet No. 1

Requisition No. ..... Date 17 Dec. 1943 Period Special

SHIP TO Società Generale Elettrica della Sicilia, Palermo, Sicily.
Per Utilities Section, A.M.G. Region 1, Palermo, Sicily.

REQUISITIONED BY (show Signature, Rank, Organization, Destination. If different from "SHIP TO" include address):

Clair F. Bowman Maj C.E.
Utilities Section,
A.M.G. Region 1,
Palermo, Sicily.

APPROVED BY:

STOCK No.	ARTICLES	UNIT	ON HAND AND DUE	CONSUMED	REQUIRED	APPROVED
	Telefunken tubes for electric transmission line carrier telephone system. RGN 1404 with the following characteristics: European screw cap, filement 4 volts, highest voltage to the plate 800 volts, continuous current 0.1 amp.	each			6	
	NOTE: American type 81 of of similar construction can be used, but preferably with a filement tension not greater than 5 volts.					
	Electrolytic condensers: 1500 m.f.-test, 60 volts rating	each			6	
	Paper condensers: 3.5 m.f., 3000 volt	each			4	
	Paper condensers: 4 m.f., 3000 volt	each			4	
					675	

U. S. GOVERNMENT PRINTING OFFICE 16—35037-1

Declassified E.O. 12356 Section 3.3/NND No. 785019

WAR DEPARTMENT
Q. M. C. Form No. 400
(Revised Apr. 6, 1931)

REQUISITION

No. of Sheets 1 Sheet No. 1

To:

Requisition No. Date 17 Dec. 1943 Period Special

SHIP TO Società Generale Elettrica della Sicilia; Palermo, Sicily.
Per Utilities Section, A.M.G., Region 1, Palermo, Sicily.

REQUISITIONED BY (show Signature, Rank, Organization, Destination. If different from "SHIP TO" include address):

Clair T. Bowman Maj. C.E.
Utilities Section
A.M.G. Region 1,
Palermo, Sicily.

APPROVED BY:

STOCK No.	ARTICLES	UNIT	ON HAND AND DUE	CONSUMED	REQUIRED	APPROVED
	Asbestos cord, 50 mm.	Kg.			200	
	" " 12 "	"			50	
	Packing for Boiler Man-hole				50	
	Red lead	Kg.			200	
	Linseed oil	"			70	
	NOTE: This material available in Palermo Navy Yard.					

674

U. S. GOVERNMENT PRINTING OFFICE 16—25027-1

Declassified E.O. 12356 Section 3.3/NND No. 785019

INSTRUCTIONS FOR PREPARATION OF REQUISITION

Space "TO."—To show the approving office to which requisition is submitted.

Space "PERIOD."—Show period for which the supplies are required.

Space "SHIP TO."—Full shipping address to be given. Where mail address is different from shipping address the former should also be shown, e. g., "Q. M., Fairfield Air Depot, Osborn, Ohio. Mail address, Fairfield." Except for established camps, posts, or stations, street or building address should be shown, e. g., "C. O. 328th Inf., National Guard, 456 Republic Bldg., Grand Haven, Mich." Where the property is to be invoiced to an organization, etc., different from that to which it is to be shipped, the required information will be shown.

Space "STOCK No."—Show stock number listed in Federal Stock Catalogue.

Space "ARTICLES."—Include sizes required. Show purpose numbers applicable to an article or group immediately above the article or group concerned.

Space "ON HAND AND DUE."—Show the quantity on hand plus the quantity approved on previous requisitions and not yet received.

Space "CONSUMED."—Show quantity consumed during the previous period.

Space "REQUIRED."—To be the quantity asked for by the requisitionist.

Space "APPROVED."—To be the quantity approved by the approving officer.

This form may be used in lieu of Q. M. C. Forms Nos. 402, 409, and 410 by appropriate modification.

IN THE SPACE BELOW SHOW BASIS FOR REQUISITION, i. e., Strength of Command, Number of Animals, Number of Animal-Drawn and Motorized Vehicles, Armament, or such other data as may be required by instructions issued by approving authorities.

THIS SPACE FOR ACTION OF APPROVING OFFICER

Declassified E.O. 12356 Section 3.3/NND No. 785019

WAR DEPARTMENT
Q. M. C. Form No. 400
(Revised Apr. 6, 1937)

REQUISITION

To: ..... No. of Sheets 1 Sheet No. 1

Requisition No. ..... Date 17 December 1943 Period Special

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Per Utilities Section, A.M.G. Region 1, Palermo, Sicily.

REQUISITIONED BY (show Signature, Rank, Organization, Destination. If different from "SHIP TO" include address):	APPROVED BY:
Clair F. Bowman Maj C. E. Utilities Section, A.M.G. Region 1, Palermo, Sicily.	

STOCK No.	ARTICLES	UNIT	ON HAND AND DUE	CONSUMED	REQUIRED	APPROVED
	Transformer oil, suitable for use in substation transformers with operating voltage of 70,000 volts.	Metric tons			10	
	Specifications for General Electric No. 12 transit oil or Cities Service transformer oil will be satisfactory substitute.					
					67½	

U. S. GOVERNMENT PRINTING OFFICE 16—25027-1

Declassified E.O. 12356 Section 3.3/NND No. 785019

WAR DEPARTMENT
Q. M. C. Form No. 400
(Revised Apr. 6, 1931)

REQUISITION

To: _____ No. of Sheets 1 Sheet No. 1

Requisition No. _____ Date 17 Dec. 1943 Period Special

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Per Utilities Section, A.M.G. Region 1, Palermo, Sicily.

REQUISITIONED BY (show Signature, Rank, Organization, Destination. If different from "SHIP TO" include address):

Clair F. Bowman Maj C.E.
Utilities Section,
A.M.G. Region 1,
Palermo, Sicily.

APPROVED BY:

STOCK No.	ARTICLES	UNIT	ON HAND AND DUE	CONSUMED	REQUIRED	APPROVED
	Sheet iron, 8 mm. thick	sq.meter			240	
	" " 5 " "	" "			180	
	" " 4 " "	" "			20	
	" " 3 " "	" "			85	
	" " 2 " "	" "			20	
	Angle iron, 90x90x10 mm.	meter			45	
	" " 70x70x7 "	"			70	
	" " 60x60x10 "	"			60	
	" " 50x50x5 "	"			200	
	Tee iron, 80x80x11 "	"			30	
	Channels, 80x45x6 "	"			60	
	Flat bar iron, 70x10 "	"			300	
	" " " 50x10 "	"			150	
	Steel boiler pipes, drawn Diam. ext. 102 mm. " int. 91 " Length 5500 mm.	each			600	
	Steel boiler pipes, drawn Diam. ext. 82 mm. " int. 72 " Length 6750 mm.	each			50	
	NOTE: Random lengths can be used providing total length of tubing equals 350 meters in length.				672	
	This material is available in the Palermo Navy Yard.					

U. S. GOVERNMENT PRINTING OFFICE 0 10—22637-1

Declassified E.O. 12356 Section 3.3/NND No. 785019

ALLIED MILITARY GOVERNMENT
SICILY REGION HEADQUARTERS
APO 394

LWL/gdb

File: 004A RTC

19 December 1943

SUBJECT: Material Requirements for S.G.E.S. Plant

TO : Colonel James P. Growden C.E. Chief Electric Power Mission.

1. Reference is made to your letter 13 December 1943 pertaining to letter from Società Generale Elettrica della Sicilia, dated 3 December 1943 on the matter of materials and supplies for Power Plant facilities.

2. a. Boiler tubes:- An examination was made of the material stocks now under control of the U.S. Navy at Palermo on 15 December and sufficient boiler tubes of correct diameters were located to fill the needs of the Palermo Plant. In the case of Item No. 20 calling for 50 - 82mm. tubes it will, however, be necessary to weld an additional 7mm. to each of the available tubes to obtain the length of 6750mm. required.

b. Condenser tubes:- Some tubes are in the stock but none of small enough diameter to meet the specifications of the Catania condenser.

c. Electrical brushes:- Reference is made to the list attached to the G.E. letter of 4 November 1943. A check of the captured Naval Supplies at Palermo discloses that Items No. 5, 9, 14 and 31 can be obtained. All other items on the list will have to be located elsewhere.

d. Radio parts (carrier current telephone system):- None of this material has been located in Army, Navy, or captured Italian stocks in Palermo. It has been suggested that a check be made of captured German material 671 located on the island of Sardinia. This is a possible source for those items since the captured stocks are reported to contain radio material.

e. (1) Refractories:- No material of this class has been found. Facilities are available in Palermo to manufacture the brick providing the raw material can be brought in including fuel. The Island of Sardinia has a good quality Clay as well as fuel. Also the facilities for manufacturing the brick. Securing the finished product from

Declassified E.O. 12356 Section 3.3/NND No. 785019

Sardinia is considered the most favored plan to meet the situation in order to conserve as much shipping as possible.

(2) An English warrant officer is being sent to the island of Sardinia to investigate the possibilities of getting the necessary bricks for the steam plants and the results of this trip will be reported on at a later date.

3. In regard to rewinding the generators inquiry was made of G.E. engineers on the subject. They state that machine work can be done in Palermo on generators but that rewinding work would be limited to comparatively small machines not to exceed 50 Kw. in capacity.

4. Condenser tubes, Catania plant:- Enclosed herewith is a sketch setting forth the dimensional data of the condenser tubes and screw caps.

a. Information is not available in Palermo on the total number of tubes installed in each of the Catania condensers. The quantity of tubes requested does not constitute a complete retubing job. This information is being secured from Catania and will be forwarded later.

b. Inquiry of G.E. indicates that in the case of one of the condensers the tubes could be rolled. This is being checked at Catania. It was suggested that old tubes removed from the larger condenser be cut off on the neds and rolled into place on the smaller condenser. The quantity of ferrules called for on the list provides sufficient for replacement of ferrules in bad condition where the existing tubes are still OK. The matched quantities of ferrules and tubing has no real significance.

c. The G.E. Company now has sufficient packing material for use with the ferrules.

d. No information is available in Palermo office of G.E. on the chemical composition of the present tubes and is being obtained from Catania.

e. The attached sketch on tubes and ferrules was prepared at the Catania plant and agrees with the dimensions given in the material list.

5. Firebrick Catania plant:- It will be necessary to obtain a dimensional drawing from Catania similar to

Declassified E.O. 12356 Section 3.3/NND No. 785019

that supplied for Palermo. The bricks used at the two plants are not the same. A request has been made for the dimensional information and will be forwarded later. This sketch is being prepared at Catnia. Refer to paragraph 2-c-1 above on Warrant officer's trip to Sardinia.

6. a. Palermo Naval yard supplies:- An actual physical check has been made at the Palermo yard and all Items of packing material, plates, and structural shapes are on hand.

b. In the case of paint and varnish no such material is available. There is a good supply of linseed oil available. The attached requisition, therefore sets forth as a substitute the use of red - lead and linseed oil.

c. No tin or solder is available. There is, however, a stock of lead on hand from which solder could be made if tin can be located elsewhere.

7. Steel shape material is now being removed and it is suggested that the material which has been located be requisitioned pending determination of correct procedure to follow in releasing and selling this material to the G.E. Co.

8. Transformer oil:- It is reported to us that the refinery at Bari is capable of processing crude oil and is therefore a possible source of needed transformer oil. Approximately 10 metric tons of this oil is urgently needed for the electric systems on the island of Sicily especially for large substation transformers. The Bari sources should be verified and information furnished.

9. High speed steam turbine oil:- An ample supply of steam turbine oil has been located and is now in transit to the Catania Plant.

10. Attached are requisitions which have been prepared providing for the immediately needed Items mentioned in this letter.

670

By order of Lt. Colonel Charles POLETTI, R.O.A.O.

2 Incls.

1. Skecth of Condenser Tubes
2. Requisition

CLAIR F. BOWMAN
Major, C.E.,
Region Utilities Officer

Declassified E.O. 12356 Section 3.3/NND No. 785019

Copy filed under Memo for Record

Minutes of conferenoe between SGES and ACC on 10 December 1943

In attendance:

1. CHAIRMAN: Col. James P.Growden,C.E. Electric Power Mission,ACC .
2. Lt.Col.C.B.Bolick,F.A. head of T.C.U.P.W.,M & S Div. region of Sicily.
3. Maj.Clair F.Bowman,C.E. Region of Sicily Utilities Officer.
4. Ingr. Dott. Rosario Tricomi,Managins Director SGES.
5. Ingr. Cesare Scimemi, SGES.

Other engineers and accountants were called in from time to time by Ingr.Tricomi.

The following orders and statements of ACC policy were given by Col. Growden for enforcement by the Region Utilities Officer:

1. Financing of repairs -

a. Money to be made available by the Italian Government through the Bank of Sicily.

b. Each project and the amount to be made available is to be approved by the RUO.

c. No payments are to be made to refinance floating debt.

2. Financing of operating deficit.

a. A statement is to be made to give the operating deficit for each month to the RUO. The RUO will order the Bank of Sicily to make the advance to cover the deficit.

b. There is to be included nothing for
(1) Taxes
(2) Interest or dividends.
(3) Payment of debts.

c. Orders are to be issued by RAMG to protect the Co.against penalties which might be incurred because of such defaulting.

3. a. All repairs will be made as far as possible with local materials.

b. Order of priority of repairs is to be specified by RAMG.

c. Frozen materials needed will be released through the RUO.

d. A procedure to permit the release of essential allied government materials available (Army,Navy or requisitioned stocks) is to be arranged by the ACC.

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e. All steam plants are to be cleaned up.(Porto Empedocle).is now in good shape).

f. Transport required is to be requisitioned through civilian channels.

g. Petrol is to be obtained through normal provincial supply channels.

4. No increase in rates will be allowed by the AMG, but the study of the rate situation is to be continued by RAMG, This question will be left for the Italian Government.

5. Fuel problems are to be handled through RAMG.

a. Only Sardinian Coal can be expected.

b. Continuation of supplies to be insured by RAMG clearing again with Region Economics Supply and ACC Fuel Subcommission for supplies for Catania,Palermo,and Porto Empedocle electric plants and the Palermo and Trapani gas plants.

c. The questions of price and delivery points are to be clarified by RAMG.

6. It was directed by Col. Growden that

a. The SGES was to receive all orders as to policy through the RUO.

b. The SGES would make all requests for supplies or instructions from Allied Sources through the RUO.

DISTRIBUTION:

2 - Electric Power Mission
1 - Public Works & Utilities Sub-Commission
1 - Region 1 Hq.
1 - T.C.U.P.W. and Mining Div.

Clair F. Bowman
Maj. C.E.

Declassified E.O. 12356 Section 3.3/NND No. 785019

ALLIED MILITARY GOVERNMENT
SICILY REGION HEADQUARTERS
APO 394

LWL/sdb

File: RTC 004A

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565

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By order of Lt. Colonel Charles POLETTI, C.A.O.

665

Clair F. Bowman
CLAIR F. BOWMAN
Major, C.E.,
Region Utilities Officer

2 Incls.

1. Skecth of Condenser Tubes
2. Requisition

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All of foregoing included in list of materials which I purchased on 3 Jan. 1947. Vol.

All. n° 1

LISTE OF THE BRUSHES

n°	Use of brushes	Quality	Measure in m/m	Necessary n°
1	Motors for distillers	Copper-coal	30 x 35 x 14,5	50
2	Alternator CürliKon Kv. 8580	Graphite	36 x 30 x 20	500
3	Siemens Motor for feeding pump	Bronze-coal	30 x 35 x 12	50
4	Motor for circulating pump of turbo n° 2	Copper-coal	41/36,6 x 30 x 15	50
Palermo Nav. Ord. Letter 19/12/5 (5)	Altern.Gans KVA 13.500	Graphite	19 x 20,5 x 20,5	200
6	Motors for stokers of boilers n.1 and n.2	Coal	29 x 31,5 x 6,5	50
7	Aspiring motors for boilers n.1, n.2 and n.3	Elettro-graphite	37 x 32 x 19	150
8	Lifting motor of croue	Coal	30 x 25 x 10	30
Palermo Nav. Ord. Letter 19/12/5 -9	Motor for Marelli feeding pump	Bronze-coal	50 x 25 x 15	20
10	Dynamo for charging accumulators	Elettro-graphite	35 x 30 x 15	20
11	Motor for charging accumulators	Copper-coal	50 x 25 x 15	30
12	Rotary converter C.C.E. 120 V. 400 Amp;	Graphite	45 x 32 x 16	20
13	Motor C.C.E. for circulating pump	Linen-copper	55 x 25 x 25	20
Palermo Nav. Ord. Letter 19/12 -14	Motor C.C.E. for cooling pump	Copper-coal	35 x 22 x 10	20
15	Motor C.C.E. for condensed steam pump	Linen-copper	115x 14 x 8	-
16	Secondary ventilator for Babcock's boilers	Elettro-graphite	36 x 31,6 x 12,5	100
17	Aspiring motor for pulverized boiler	" "	38 x 32 x 13	-
18	Motors for coal mills of pulverized boiler	Copper-coal	31,5 x 25 x 15,8	20
19	Auxiliary exciter of turbo n. 1	Elettro-graphite	16 x 9,6 x 7,9	100
20	Motor for stoker of 3th boiler	Graphite	40 x 31,5 x 8	50
21	Motor for Marelli ventilator	Copper-coal	38 x 2 x 12,5	50
22	Motors blowing ventilators of 1st and 2nd boilers	Copper-coal	40 x 30 x 20	20
23	Sincronons C.C.E.	Elettro-graphite	55/40 x 32 x 16	50
24	Sincronons alternator	graphite	55 x 32 x 40	30
25	Sincronons for rings of starting motor	Copper-coal	55 x 25 x 25	30
26	Sincronons exciter dynamo	Copper-coal	30 x 25 x 16	50
27	Motor B.Boveri for circulating pump of 3th turbo	Copper-coal	30 x 30 x 30	50
28	(Sincronons) Auxiliary exciter	Elettro-graphite	60/57 x 32 x 12,8	20
29	Motor for condensed steam pump of turbo n. 3	Copper-coal	15 x 30 x 45	50
30	Marelli aspiring motors for boilers n.5 and n.6 (bringe)	Copper-coal	19,5 x 40 x 40	100
Palermo Nav. Ord. Letter 19/12/5 31	Marelli aspiring motors for boilers n.5 and n.6 (collector)	Elettro-graphite	31,8 x 8 x 26	300
32	Marelli blowing motors for boilers n. 5 and n.6	Copper-coal	9,8 x 30 x 40	300
33	C.C.E. motor for the ventilator of 3th boiler	Bronze-coal	35 x 25 x 12,5	20
34	Principal exciter for turbo n.1	Graphite	V.campione a parte	200

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Sample part 50

Declassified E.O. 12356 Section 3.3/NND No. 785019

This material is wanted absolutely for the Steam Plant of Catania.
It is sufficient for 1 year.

1°) Motor brushes (see enclosed list) ← Included in list of materials prepared by me 3 Jan. 1944-VIth.

Urgent → 2°) Lubricants

a) Yellow grease - consistent type for lubricators kg. 1.000

b) Oil for steam turbine at 3000 r.p.m. → Located & Consumed in Plant according to Dec. 19 letter VIth. " 3.000

3°) Refractary material - From 40 to 42% of alumina-Fusion point 1750°C

a) Special shaped bricks for boilers n.3 n.5 and n.6

b) Bricks model 2 n° 30.000

c) Bricks model 3 " 15.000

d) Refractary cement for bricks Ton. 40

(ask the Steam Plant of Catania for the designs)

Additional details obtained according to the letter of Dec. 19th

Urgent → 4°) Spare parts for the engines

a) Pipes of brass in Admiral type for marine condensers

I°) Pipes of external diameter 25 m/m, interior 23 m/m and length 4655 m/m (15'.3") .985"(63/64) .905"(29/32) .75"(3/4) .67"(43/64) n° 4.000

II°) Pipes of external diameter 19 m/m, interior 17 m/m and length 4577 m/m " 5.000

III°) Screws for pipes 25/23 m/m " 8.000

IV°) " " " 19/17 " " 10.000

(ask samples at Steam Plant of Catania)

Included in list of materials prepared by me 3 Jan. 1944-VIth.

b) Spare parts for the B.P.H. engine

I°) Complete blading for the 17th and 18th wheel

II°) All the ball-bearings for the governing gear

III°) All the elements for the labyrinth with their springs

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5°) Steel balls for coal-mills

Brinnel hardness from 250 to 300 Kg 3.000

Urgent → 6. 10 Tons Transformer oil for 40/70 kV Sub. near Catania.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Dic. 10 1943

LIST OF MATERIAL THAT IS WANTED FOR THE STEAM PLANT OF PALERMO.-

1°)	Iron plate of 8 m/m	m².	240
2°)	" " " 5 "	"	180
3°)	" " " 4 "	"	20
4°)	" " " 3 "	"	85
5°)	" " " 2 "	"	20
6°)	Iron ∠ of 90 x 90 x 10 m/m	meters	45
7°)	" ∠ " 70 x 70 x 7 "	"	70
8°)	" ∠ " 60 x 60 x 10 "	"	60
9°)	" ∠ " 50 x 50 x 5 "	"	200
10°)	" T " 100 x100 x 11 "	"	30
11°)	" U " 80 x 45 x 6 "	"	60
12°)	Flat bar iron 70 x 10 "	"	300
13°)	" " " 40 x 10 "	"	150
14°)	Asbestos cord of 50 m/m	Kg.	200
15°)	" " " 12 "	"	50
16°)	Rustproof varnish	"	150
17°)	Oil white lead	"	30
18°)	Gray varnish	"	100
19°)	Steel drawing pipes for boiler external diameter 102 m/m interior " 91 " length 5500 "	nº	600
20°)	Steel drawing pipes for boiler external diam. 82 m/m interior " 72 " length 6750 "	"	50
21°)	Packing for boiler man-hole	"	50
22°)	Refractary bricks 220 x 110 x 60 m/m with 40 + 42 % of alumina fusion point 1750°C	Tons	40
23°)	Refractary ciment for bricks	"	10

All items this page included on requirement sheet which I prepared on Jan 3, 1944, as per attached list for Dec 19 letter. ejc

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Declassified E.O. 12356 Section 3.3/NND No. 785019

Telephone

THIS MATERIAL IS WANTED FOR THE RADIO STATIONS SIEMENS AND TELEFUNKEN INSTALLED IN THE POWER PLANTS AND IN THE PRINCIPAL SUBSTATIONS OF THE HIGH-TENSION SYSTEM.-

A) For Siemens Stations

1°) Radio tubes Siemens Ca — n° 30

2°) " " " Ba — " 15

3°) " "" " Ea — " 7

For thise tubes we do not know the characteristics.

4°) Resistance in Vacuum type EW 1106 with mignon screw cap. Volts 6 to 17 Amp. 1,1 — " 14

* 5°) Radio rectifier tubes monoplate Telefunken R.G.N. 1404 with the following characteristics: europeeu screw cap, tension of filament 4 Volts, highest tension to the plete 800 Volts, continuons current 0,1 Amp. — " 20

Poper condensors

6°) Capacity 0,5 MF - test tension 1.000 Volts — " 10

7°) " 1 MF - " " 1.000 " — " 70

8°) " 3,5 MF - " " 1.000 " — " 35

9°) " 1 MF - " " 2.000 " — " 10

* 10°) " 3,5 MF - " " 3.000 " — " 10

* 11°) " 4 MF - " " 3.000 " — " 10

* 12°) Electrolytic condensors 1.500 MF - test tension 60 Volts — " 12

13°) Safety fuses with possibility of regerenation (as somple)

a) 1,5 Amp. — " 25

b) 3 " — " 25

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B) Spore material for telephon stations type Telefunken

14&) Tubes type Telefunken REN 1 — " 20

15°) " " " RV 222 — " 40

Of all this material ore absolutely necessary and urgent the following:

a) Telefunken tubes RGN 1404 (see n.5) — n° 6

In sobstitution of these may be used with opportune modification the type 81 or of similar Ameri _

* Items so marked are called for, in less quantity, on Requisition dated Dec. 13. Suplemented by Major Brennan.

Declassified E.O. 12356 Section 3.3/NND No. 785019

can construction (preferably with tension of filament non superior to 5 Volts).

b) Electrolytic condensors (see n.12) 1500 mF-test ten sion 60 Volts — nº 6 .

c) Poper condensors

3,5 mF (see n. 10) " 4

4 mF (see n. 11) " 4

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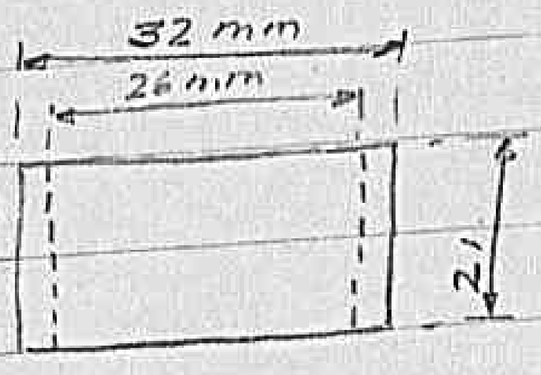
ESTIMATE OF BRASS WEIGHT
NECESSARY AS RAW MATERIAL
TO MAKE CONDENSER FERRULES,
CATANIA STATION



8000 Pcy.

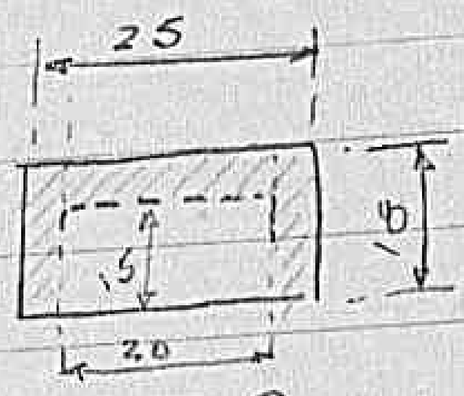
$8{,}000 \times .7854 \times \frac{32^2}{25.4^2} \times \frac{21}{25.4} \times .307$

= 2530# Raw Mat.

Approximate wt. of machinys-

$8{,}000 \times .7854 \times \frac{26^2}{25.4^2} \times \frac{21}{25.4} \times .307$

= 1675# Scrap



10,000 Pcy.

$10{,}000 \times .7854 \times \frac{25^2}{25.4^2} \times \frac{16}{25.4} \times .307$

= 1655# Raw Mat.

Approximate wt. of machinys-

$10{,}000 \times .7854 \times \frac{20^2}{25.4^2} \times \frac{15}{25.4} \times .307$

= 885# Scrap.

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1675#
885#
2560# Scrap →

2530#
1655
4185# Total Raw Mat. Needed.
2560
1625# Total brass needed.

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Estimate of Number of Sq. Ft.
Condenser Surface necessary at Catania.

Assuming ~~13~~ 12 Ft² surface needed/kw.

Capacity of Machines		Area needed in Ft²	
~~9,900~~ kw	10,000	~~12,870~~	12,000
~~6,600~~	6,000	8,570	7,200
~~12,000~~	10,000	15,600	12,000
Total ~~28,500~~ kw.	26,000 kw	~~37,040~~ Ft²	31,200 Ft².

Area requested -

4000 tubes. 4655 mm long. 25 mm OD x 23 mm ID:

$$4000 \times \frac{4655}{25.4 \times 12} \times \frac{25 \times 3.1416}{25.4 \times 12} : \quad 15,750\ Ft^2$$

5000 tubes. 4577 mm long. 19 mm OD x 17 mm ID.

$$5000 \times \frac{4577}{25.4 \times 12} \times \frac{19 \times 3.1416}{25.4 \times 12} : \quad 14,700$$

Total : 30,250 Ft².

Weight of tubing asked for.

4000 tubes - 25 mm OD x 23 mm ID x 4655 mm/lg 658#.

$$4000 \times \frac{\pi}{4}(25+23)(25-23) \times 4655 \times 1.307/25.4^3 \quad 25,300\#.$$

5000 tubes. 19 mm OD x 17 mm ID x 4577 mm/lg.

$$5000 \times \frac{\pi}{4}(19+17)(19-17) \times 4577/25.4^3 \times 1.307 = \quad 24,200\#$$

Total 49,500#

= About 25 tons.

VBR 3/1/44.

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4000 Tubes. (25 mm. O.D. / 23 mm. I.D. / 4653 mm. Long.) — lbs
weight of ea Length. 6.6.
Total weight 26,400

5000 Tubes. (19 mm. O.D. / 17 mm. I.D. / 4377 mm. Long.) — lbs
weight of ea length. 4.97
Total weight. 24,867

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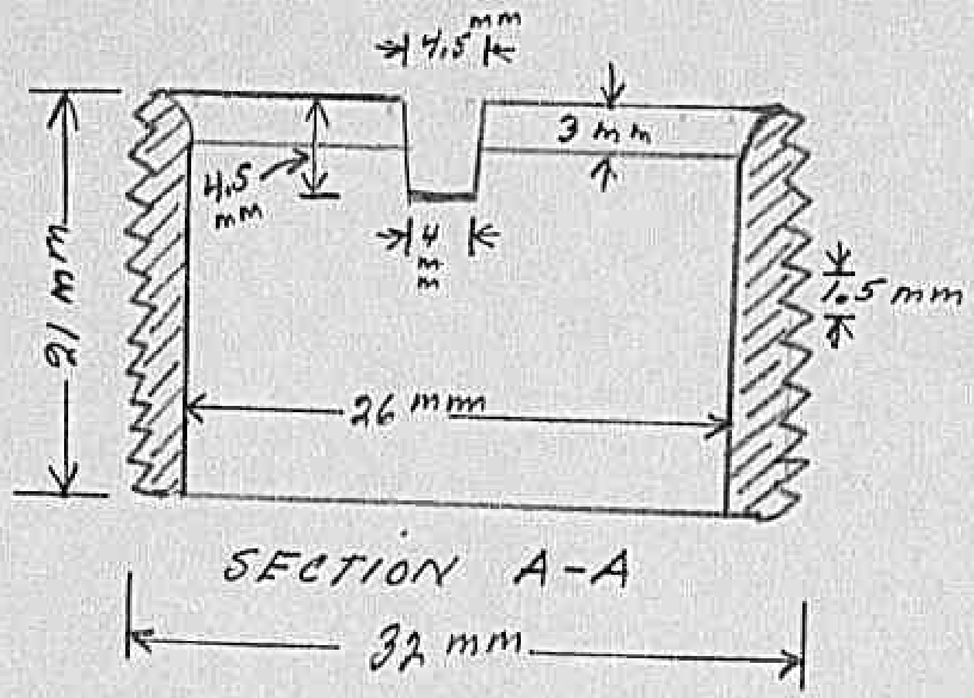

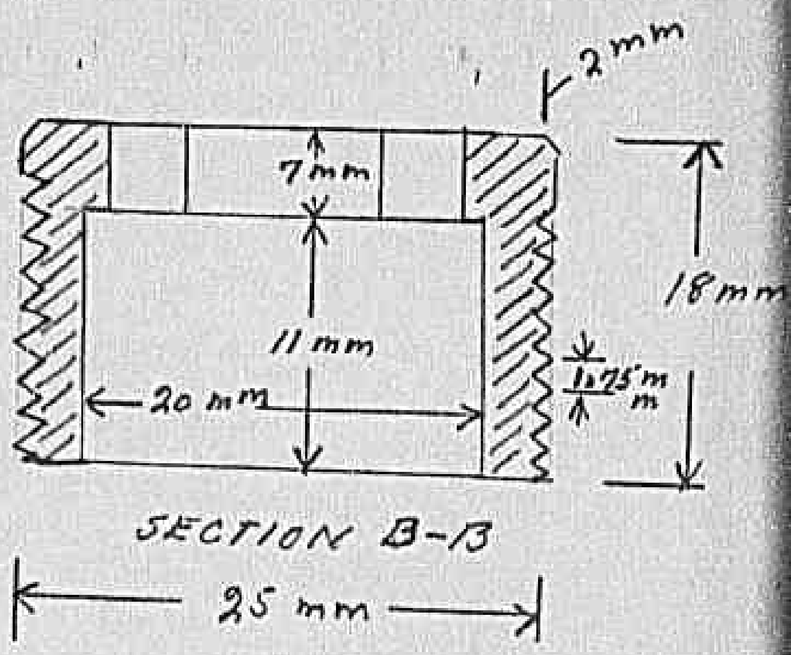

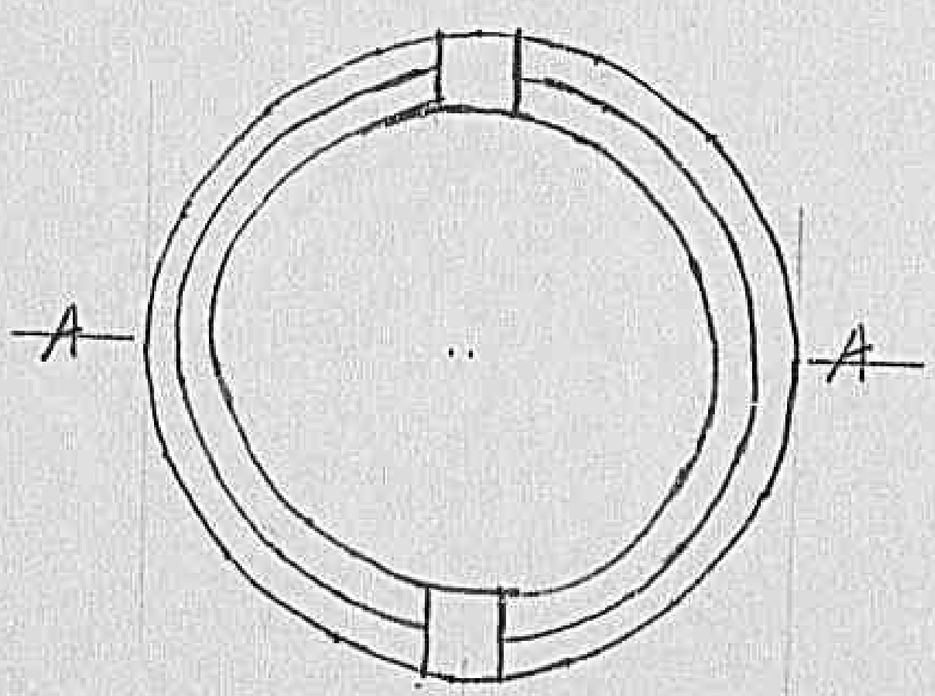

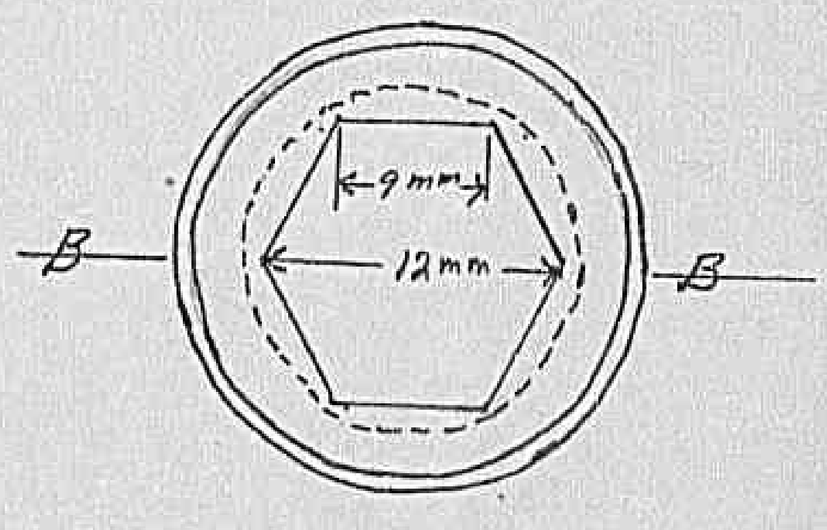

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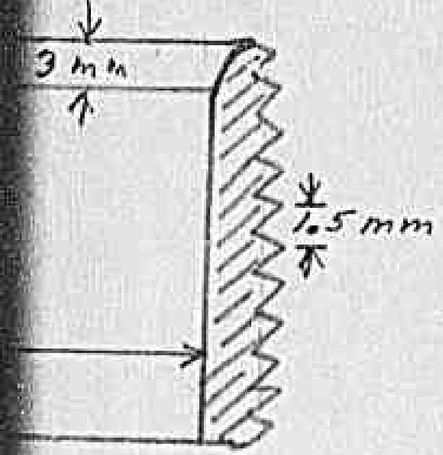

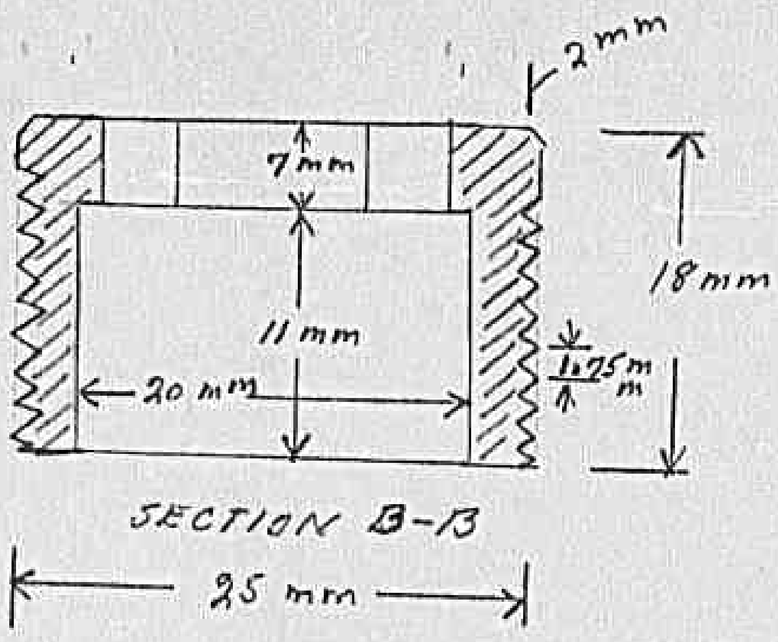

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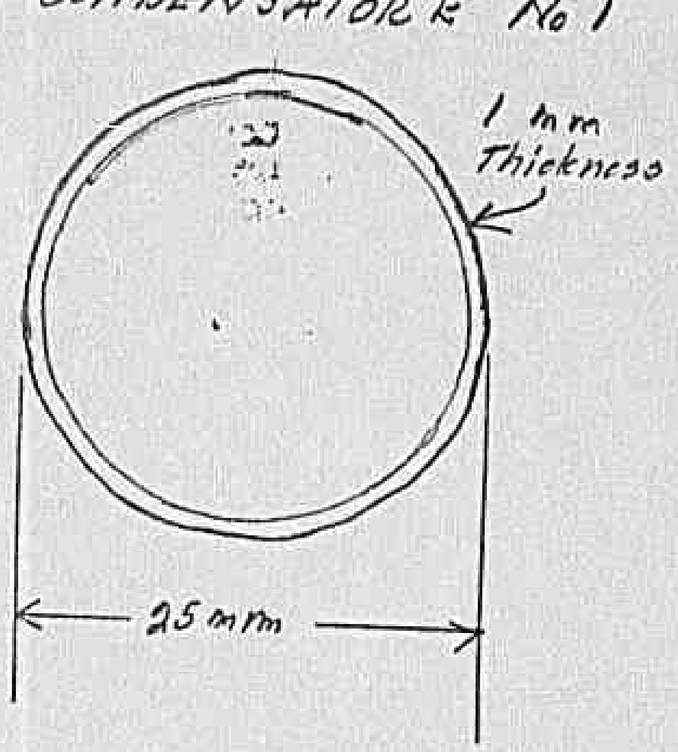
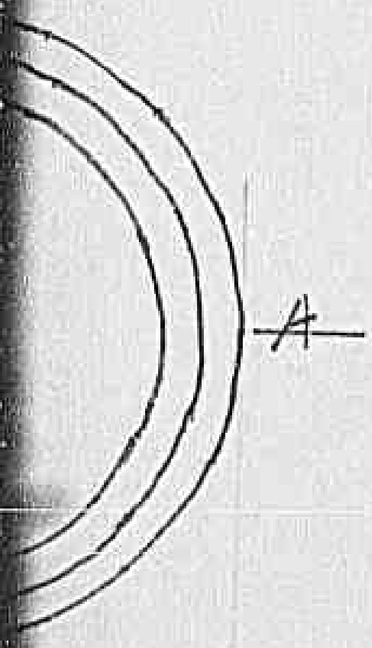
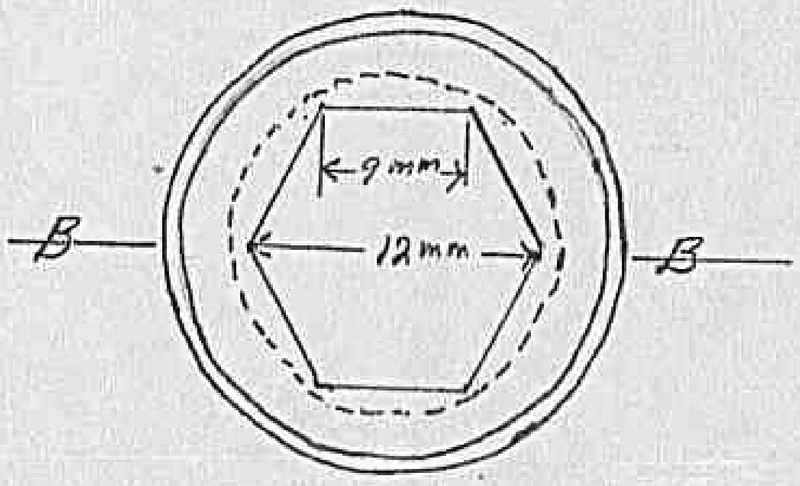
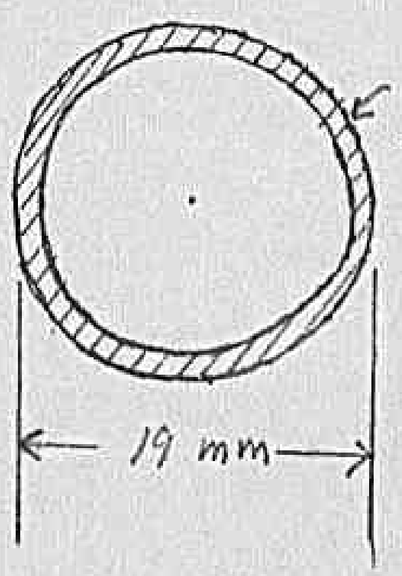
CONDENSATOR E No 1









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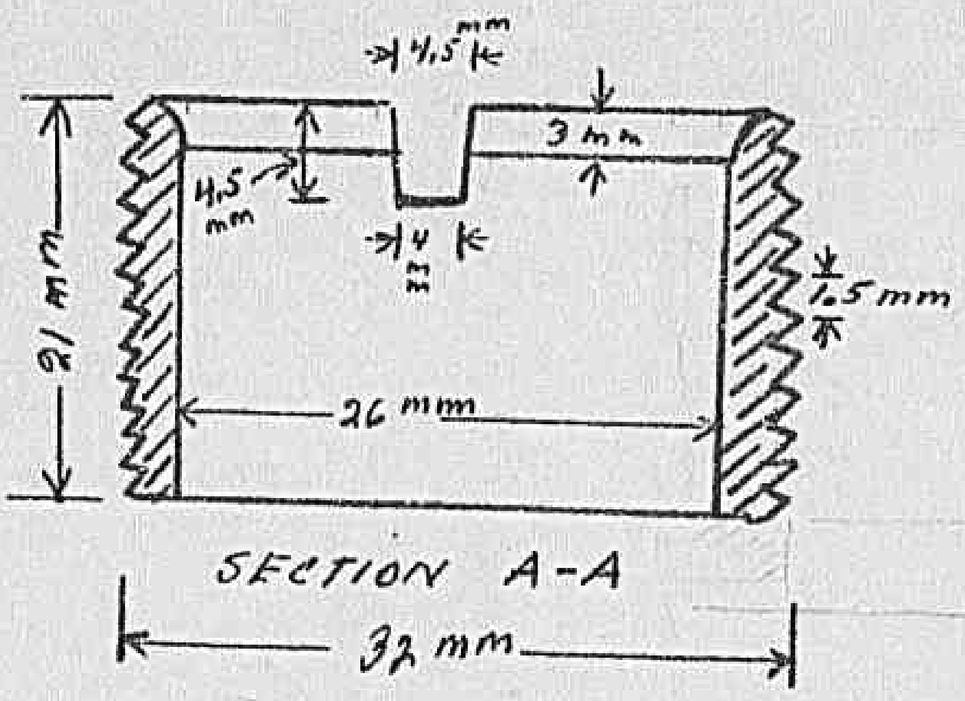

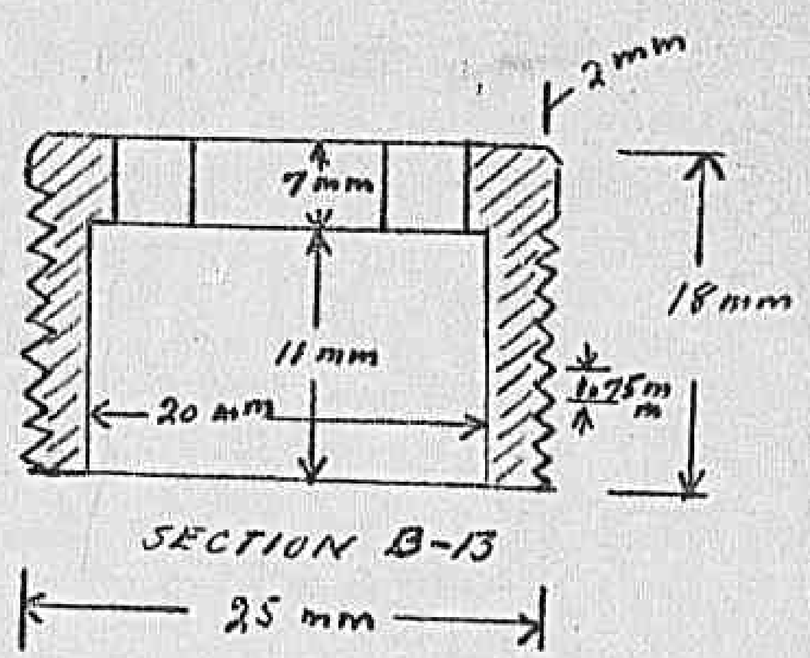

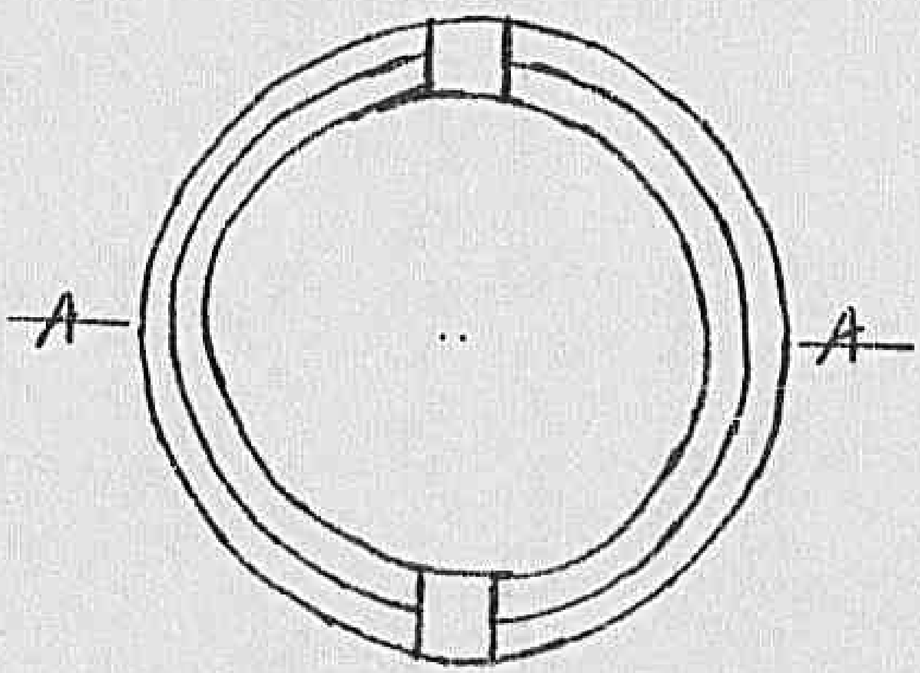

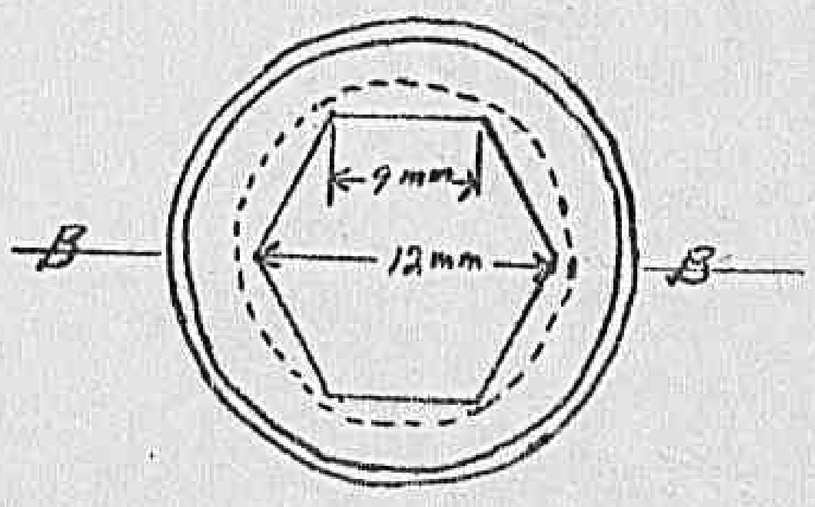

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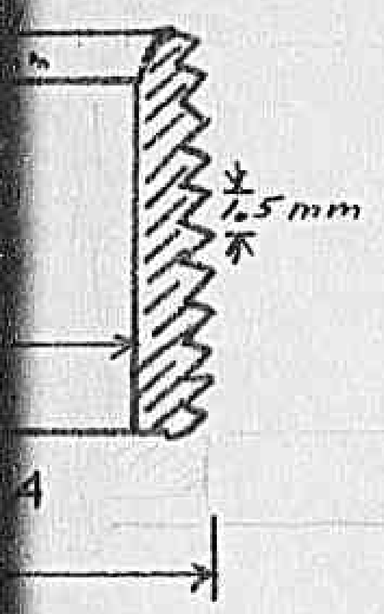
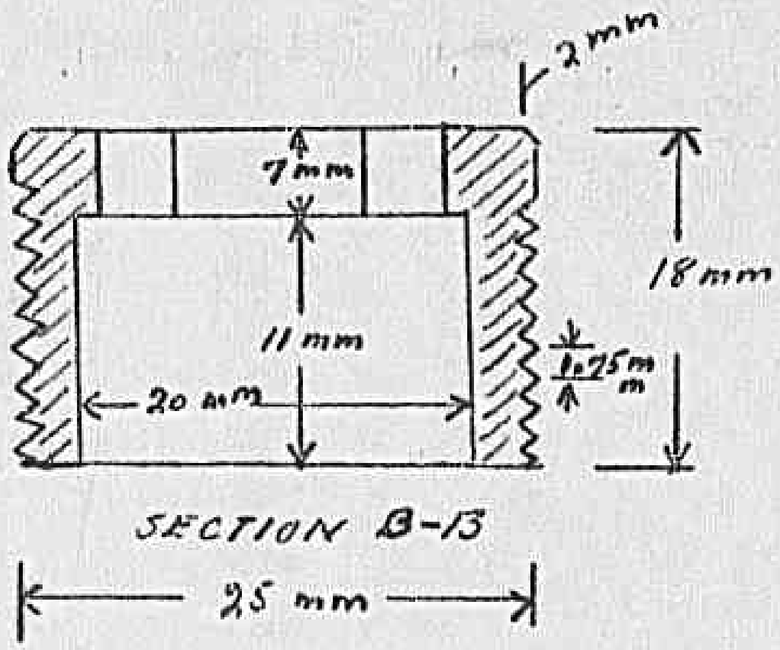
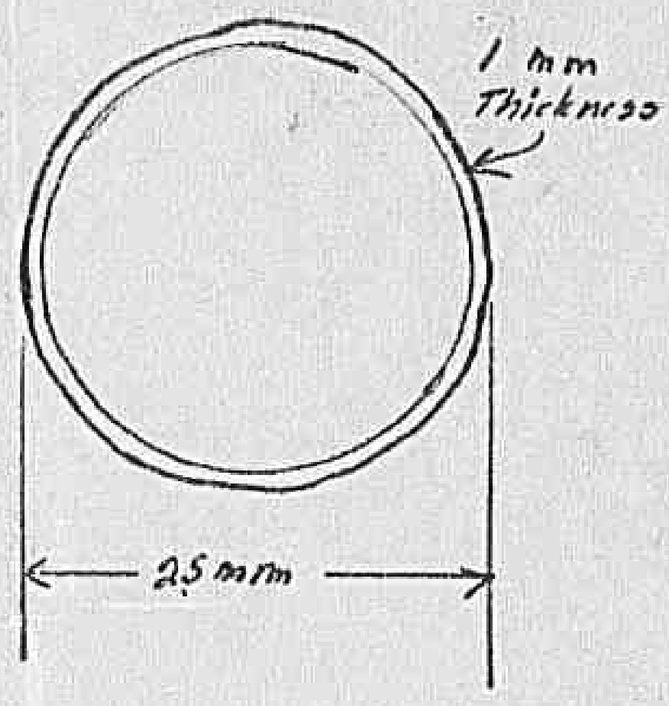
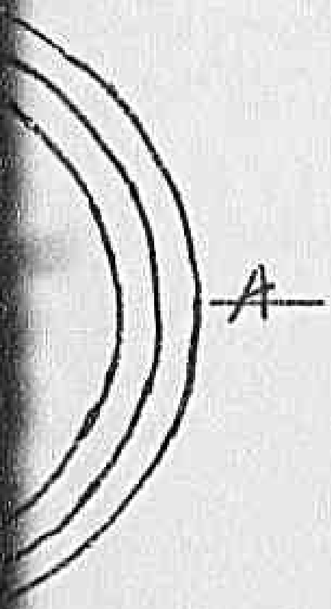
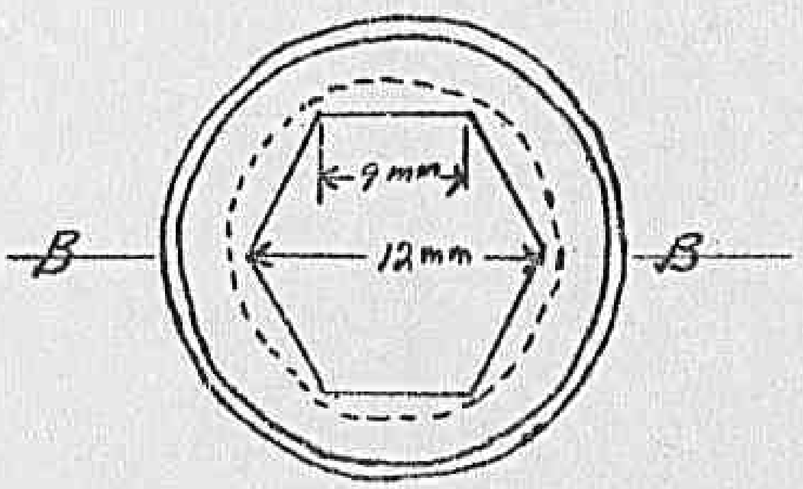


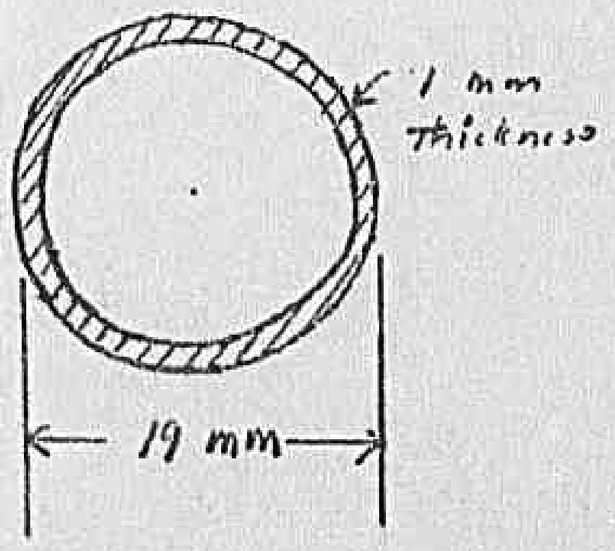


CONDENSATORE No 1









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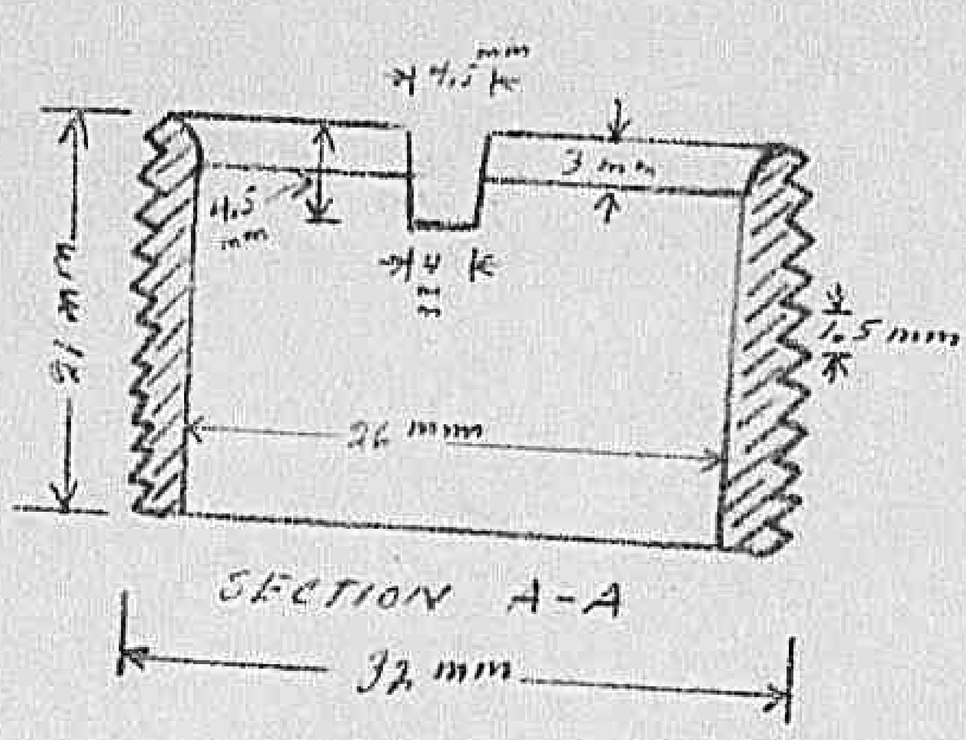
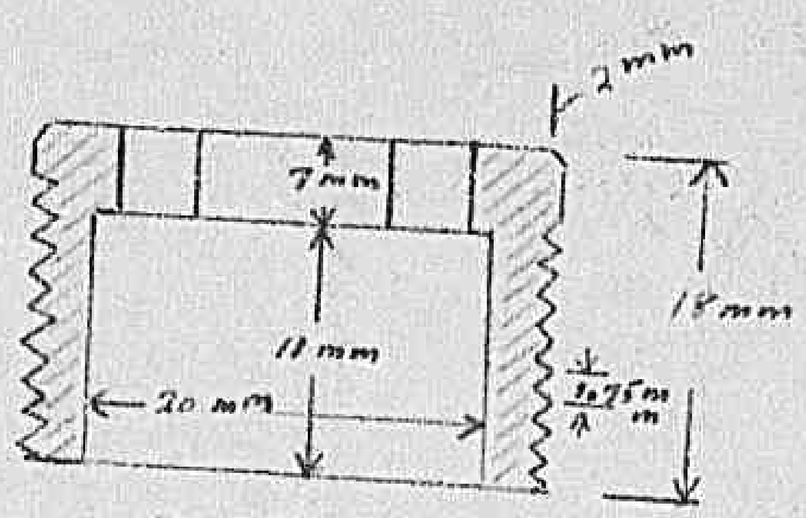
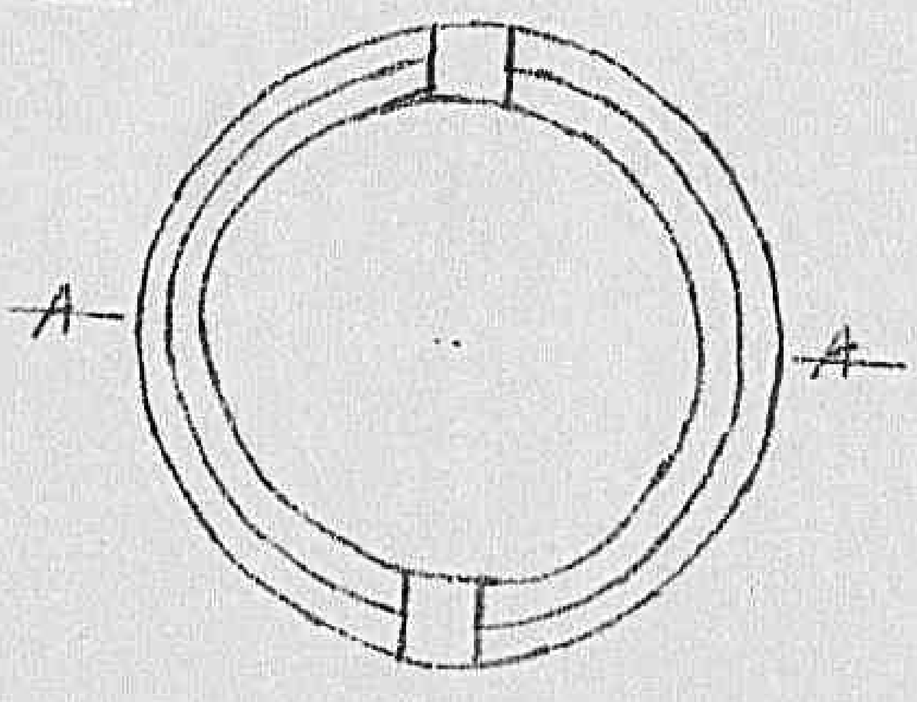
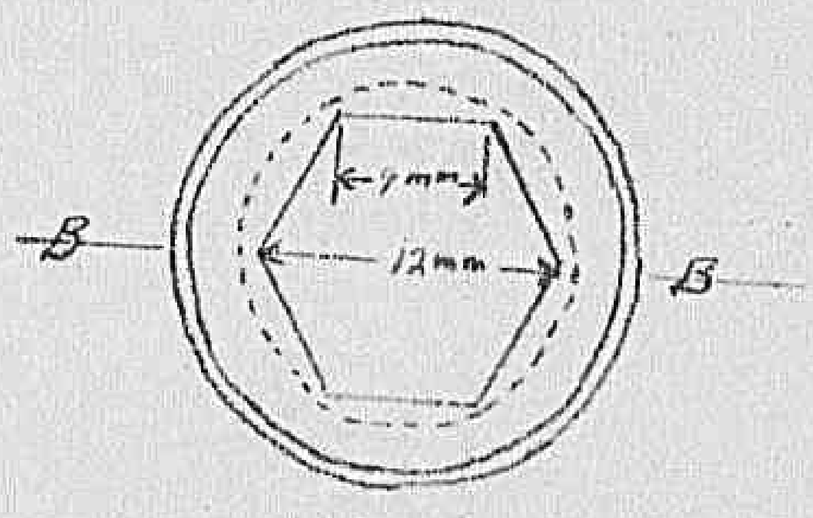


SECTION A-A



SECTION B-B





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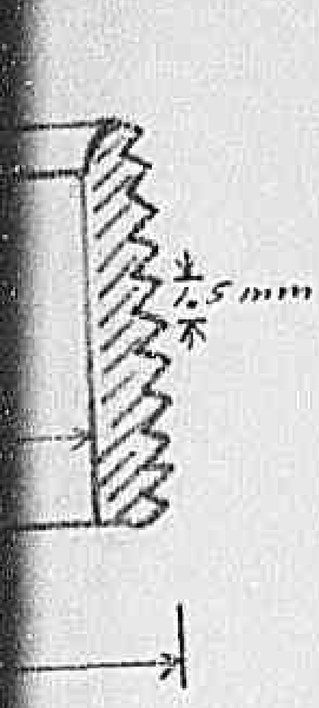
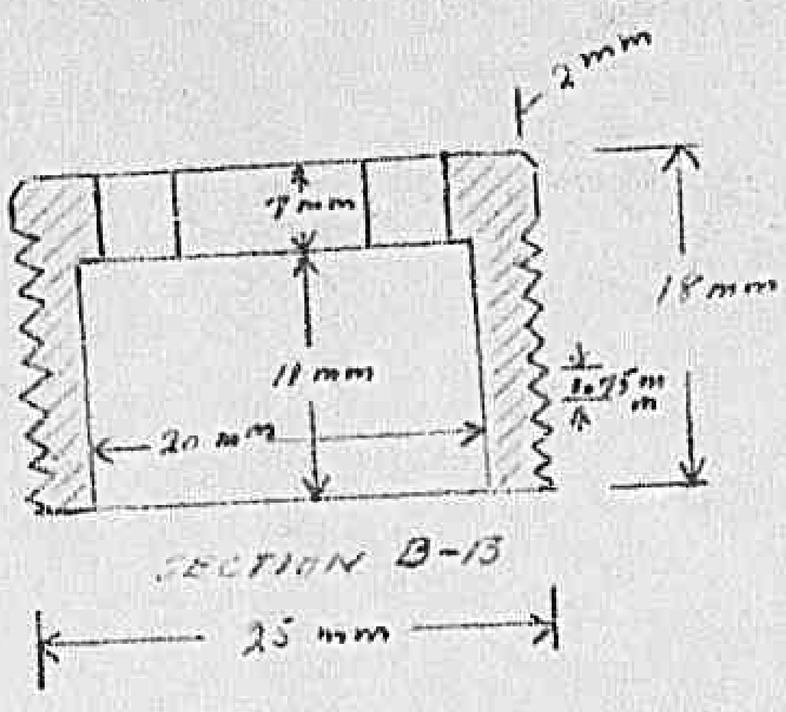
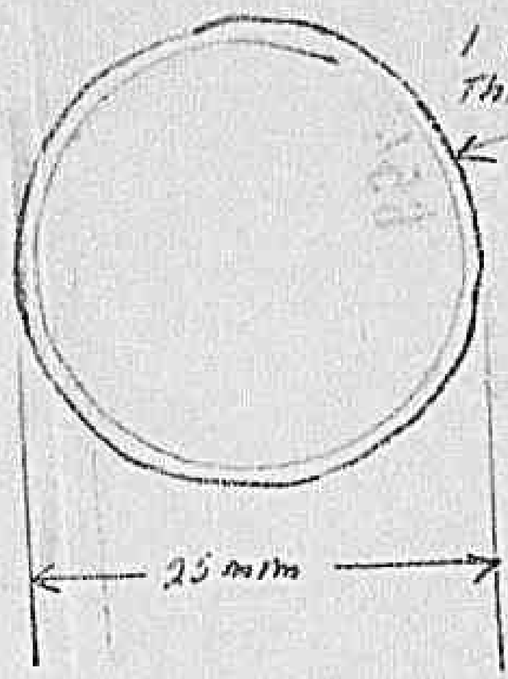
CONDENSATOR E No 1

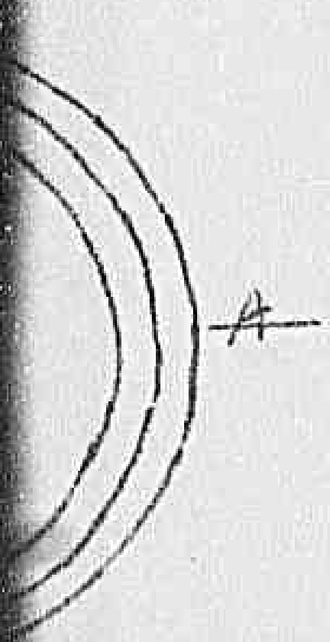


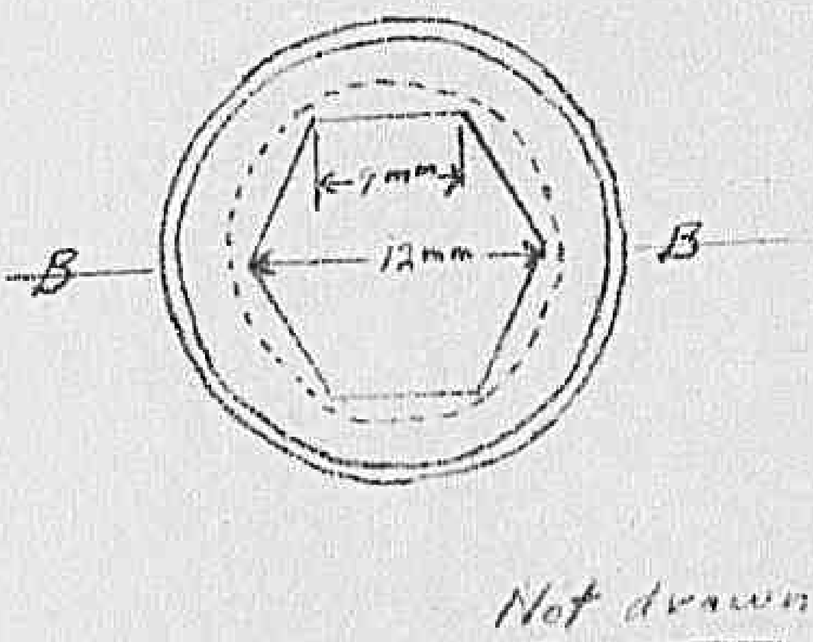


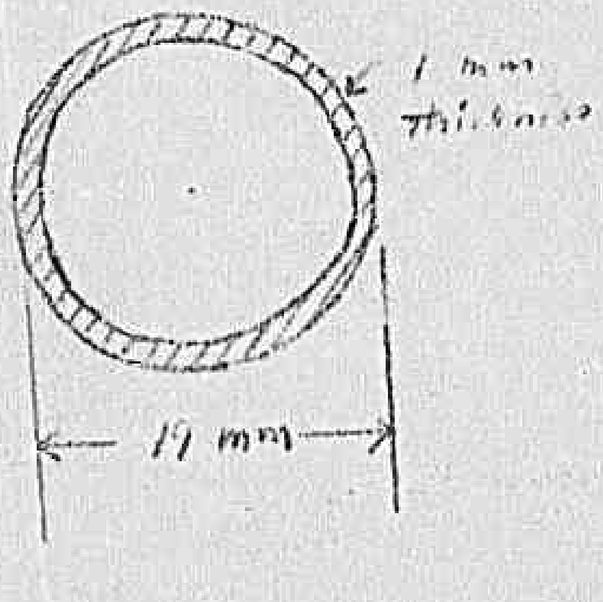
SECTION B-B

25 mm









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{ Condenser tubes } - Try Alva Steel Works
{ Steel tubes - }

Refractory brick { Alva steel works
Alfa-Romeo Co. at Pomigliano

Lubricants - Try Navy at Palermo

Tin - " " " "

dcc copper wire } not generally available here
flat copper wire } according to best information

Cast iron - Alva steel works
(Bagnoli)

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HEADQUARTERS

ALLIED MILITARY GOVERNMENT

ELECTRIC POWER MISSION

VSR

13 December 1943

Subject: Material Requirements for S.G.E.S. Plants

To : Lieut Colonel C.P Bolick

1 Reference is made to the letter from Societa Generale Elettrica della Sicilia dated 3 December, 1943 which transmitted a list of materials required in their facilities.

2 A check is now being made in Southern Italy to determine the availability of the following materials:

a. Boiler tubes.

b Condenser tubes

c. Electrical brushes

d Radio parts

3 Information concerning the availability of these items will be sent you as soon as obtained.

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It is also understood that facilities exist here for the rewinding of generators. This is being checked.

4 Condenser tubing, which was requested for the Catawba Generating Station, is particularly scarce and in order to facilitate the search for it, it is requested that the following specific information be obtained at the Catawba plant through examination of the condensers:

a. The approximate number of tubes required for immediate repairs. The number requested by the company appears to be that required to completely retube both condensers.

b. Whether the tubes of either condenser are rolled into the tube sheets. Although the number of ferrules requested (the company called them "screws") is double the number

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of tubes called for, it is believed that in of lieu of one of the condensers, the tubes are rolled into the sheet, and ferrules would not be needed. It is necessary to know definitely whether the tubes are to be rolled into the sheet in order that they may be furnished with the proper quantity.

5 Whether corset lace, or similar packing, is available for use with the ferrules.

d The chemical composition of the tubes if available.

e A verification of the tube dimensions which were given by the company as

1- 4,000 tubes, 25mm OD, 23 mm ID. 4655 mm long.

2- 5,000 tubes, 19 mm OD 650
17 mm ID, 4577 mm long.

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(4)

5. Please obtain details of the firebrick used at the Cotaxtla plant. Details have been furnished concerning those used at Palermo.

6. It is recommended that a check be made at the Palermo Navy Yard to determine whether the tin, packing material, white-lead plate and structural shapes specified for the Palermo Generating Station are available there.

7. It is requested that the Electric Power Mission be informed of the markings of the Cotaxtla Generating Station and the Palermo Navy Yard as soon as possible.

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JAMES P GROWDEN
COLONEL, C.E.
CHIEF, ELECTRIC POWER MISSION

Declassified E.O. 12356 Section 3.3/NND No. 785019

ALLIED MILITARY GOVERNMENT
SICILY REGION HEADQUARTERS
A.P.O 394

OPB/el

10 December 1943

File : RTC 675

MEMORANDUM TO : Lt. Col. Charles Poletti, A.C.A.O.

SUBJECT : Electric Power - Western Sicily.

1. Unless there are fairly heavy rains in the vicinity of Trieste within the next day or two, radical steps will be necessary to select the loads to be cut off to reduce the load to the capability of the generating machines.

2. a. On the basis of a heavy rain in late November, and hoping for continuation of the rain, certain loads were permitted, of types which required large amounts, but which could be cut off again quickly if necessary. (e.g. tramways, mines, domestic lighting). There have been no effective rains since that time.

b. The system loads have been approximately as follows:

October - 90,000 Kwhrs/day.
November- 135,000 " "
December- 180,000 " "

c. The November increase included olives and lemon crop processing. The December increase includes mines, trolleycars, cement plant, and civilian lighting.

3. a. On 1 December the supply was obtained approximately as follows:

(1) Coal plant - Palermo - 30,000 Kwhrs/day. (Coal on hand at the plant is sufficient to operate until 16 December at present rate of use).

(2) Hydro plants at S. Carlo -
Steady supply - 45,000 Kwhrs/day.
From reservoir- 30,000 " "

(6 days supply in the reservoir with 12 more days supply in a reservoir normally held for summer).

(3) Hydro plant near Palermo - 15,000 Kwhrs/day. (This plant is operated normally for

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late summer supply only. This plant should not operate at all, but can "borrow" from next summer at this rate for a month if required. The use of this water now prevents its use for irrigation next summer).

b. Recapitulating:

Current water supply gives 45,000 Kwhrs/day.
Current coal supply gives 30,000 " "
"Borrowed" water supply gives 105,000 " "
180,000 " "

c. It is estimated that the military and civilian load which we would approve would total 250,000 to 275,000 Kwhrs/day.

d. "Current water supply" if there are heavy rains at the proper place and times, could give about 275,000 Kwhrs/day.

4. The following steps are being taken to improve the situation:

a. Additional coal for December has been requested.

b. Repair of the 70,000 volt line near Catania is being pushed to the utmost to permit the use of power from western Sicily. Estimated completion 1 March 1944 with maximum supply between 50,000 and 100,000 Kwhrs/day.

c. The machine from Arte Empedocle is in the Navy Yard for attempted repair, with strong possibility of success. This will make possible about 30,000 to 40,000 Kwhrs/day. Estimated completion, 19 January 1944, if at all.

d. Increase in the capacity of the Palermo steam plant could be obtained by making extensive repairs. Necessary materials and authorizations are being sought through the A.C.C.. The dates, and increases possible, are too dependent on conditions that are unknown to permit estimates.

e. A river diversion project is being reactivated and pressed to completion to increase water storage for next summer. It is estimated that the water equivalent to perhaps 1,000,000 Kwhrs, will be stored for next summer's use.

5. In case rains do not come promptly the following steps will be necessary beginning 11 or 12 November and to continue in effect until steady rains come:

a. Reduce or eliminate civilian lighting.
b. Stop mine operations.
c. Stop tramway operations.

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C 3 ALAN P. [illegible]
Major, C.E.

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C.P.C. Palermo 9575-282

NOD 7 SEGRETERIA

Società Generale Elettrica della Sicilia

Sede Palermo - Capitale L. 300.000.000 - versato L. 228.000.000

Direzione Generale

Indirizzo telegrafico: Direlectron Palermo

Telefono: 15.600

Riferirsi al N. 5220 /V

Palermo li 3 December 1943 /

46, Via Libertà

A.M.G.O.T.
Palazzo delle Ferrovie
PALERMO

To the attention of the Lt. Col. Bolik

Following to our letter No. 5022 of November 4th, we send you enclosed to this letter:

1) list of material that is wanted for the Steam Plant of Palermo.
2) list of material that is wanted for the radio stations instelled in our Plants and principal substations.

We are preparing also a list of material for the steam Plant of Porto Empedocle and a list of material that is wanted to put in efficiency our Plants; these lists should be sent to you very quickly.

We hope that you may be give to us all your help, since, without this help, we cannot provide for the wants of our Plants.

With our best regards.

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SOCIETA' GENERALE ELETTRICA DELLA SICILIA
Direzione Generale

Ing. Stolajanni

Declassified E.O. 12356 Section 3.3/NND No. 785019

operation base

THIS MATERIAL IS WANTED FOR THE STEAM POWER PLANT OF PALERMO - IT IS SUFFICIENT FOR 1 YEAR.-

1°) Steel drawing pipes for boilers	external diameter	m/m	102 - 4"		
	interior	"	" 91 - 3.58"		
	length		" 5185 17'-0"	n°	60
				"	60
2°) The same but length m/m 5500 - 18'-0"					
3°) Steel drawing pipes for boilers	external diameter	m/m	82 - 3.23"		
	interior	"	" 72 - 2.84"		
	length		" 6750 22'-2"	"	60
(these pipes are necessary for the boilers that are in very bad conditions for corrosion)					
4°) Refractary bricks m/m 220 x 110 x 60 steam proof				H°	30.000
(With 40 ÷ 42% Alumina - Fusion point 1750°C about)					
5°) Refractary bricks idem idem kind n° 1 (see design n° 2145 C.)				"	2.000
6°) Refractary bricks idem idem kind n° 2 (see design n° 2145 C.)				"	2.000
7°) Refractary ciment for bricks				Kg	20.000

Lubricants (enclosed indication)

8°) Oil for steam turbines at 3000 r.p.m.		
(Two good oils for steam turbine are: D.T.E. Ligth and D.T.E. Heavy Medium; both of Vacuum Oil Co. The Engler number of these oils at a temperature of 50°C in about 2,7 for the first and 4,5 for the second. Any other corresponding oil could be used).	"	3.000
9°) Oil for drives over 750 r.p.m.	"	4.000
10°) Oil for drives under 750 r.p.m.	"	500
11°) Cilynder Oil	"	1.000
12°) Yellow grease-consistent type	"	3.000
13°) Pure tin	"	20
14°) Copper wire for motor windings with double spiral cotton covering		
a) Diameter 9/10 m/m	"	200
b) " 23/10 "	"	100
15°) Flat copper wire with rounded ends and with double spiral cotton covering		
a) m/m 1,2 x 4	"	120
b) m/m 1,7 x 6	"	120
16°) Cotton shred white or colored	"	1.000
17°) Steel pulverising ring for coal mill, Brinnell hardness 300 to 350 Conical external surface worked with precision (see design enclosed). 645	n°	4
18°) Cast-iron for fusion	Tons	50

Declassified E.O. 12356 Section 3.3/NND No. 785019

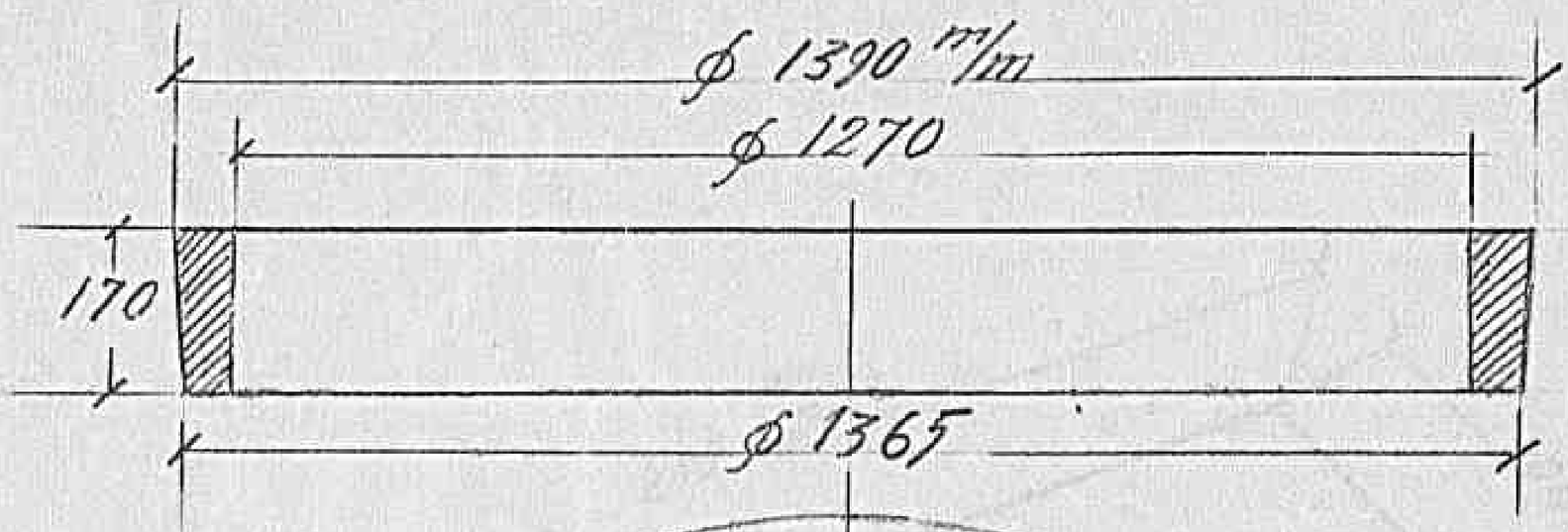
Characteristics of Lubricants

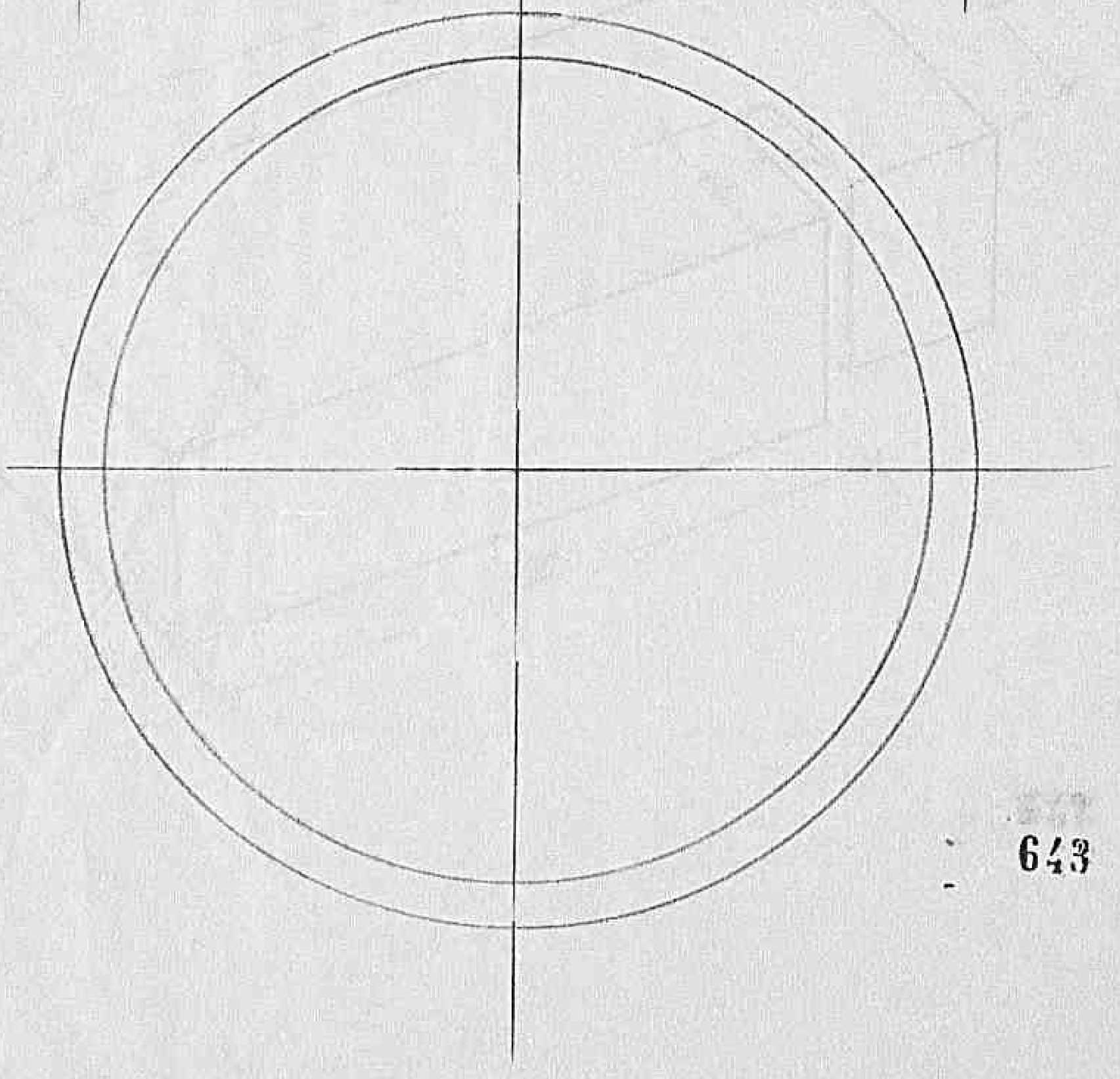
1°) Oil for Steam turbines	
Density at 15°C	0,85 to 0,90
Viscosity at 50°C	2,5 to 5 Engler
Inflamability	210°C
Mineral acidity and alcalinity	absent
Organic acidity	max 0,05
Ashes	max 0,5 %
Ossidation proof	max 0,25
The freezing point is of no interest	
2°) Oil for drives over 750 r.p.m.	
Umidity	absent
Viscosity at 50°C	3,5 to 5,5 Engler
Inflamability	minimum 170°C
Mineral acidity and alcalinity	absent
Organic acidity	max 0,20 %
Ashes	max 0,5 %
3°) Oil for drives under 750 r.p.m.	
Umidity	Absent
Viscosity at 50°C	5,5 to 10 Engler
Inflamability	minimum 185°C
Mineral acidity and alcalinity	Absent
Organic acidity	max 0,20 %
Ashes	max 0,5 %
4°) Cilynder Oil	
Umidity	Absent
Viscosity at 50°C	min. 4 Engler
Inflamability	250°C
Mineral acidity and alcalinity	Absent
Organic acidity	max 1,50 %
Ashes	0,15 %

Declassified E.O. 12356 Section 3.3/NND No. 785019

SGES. Palermo Steam Plant.

Steel pulverising ring for coal mill



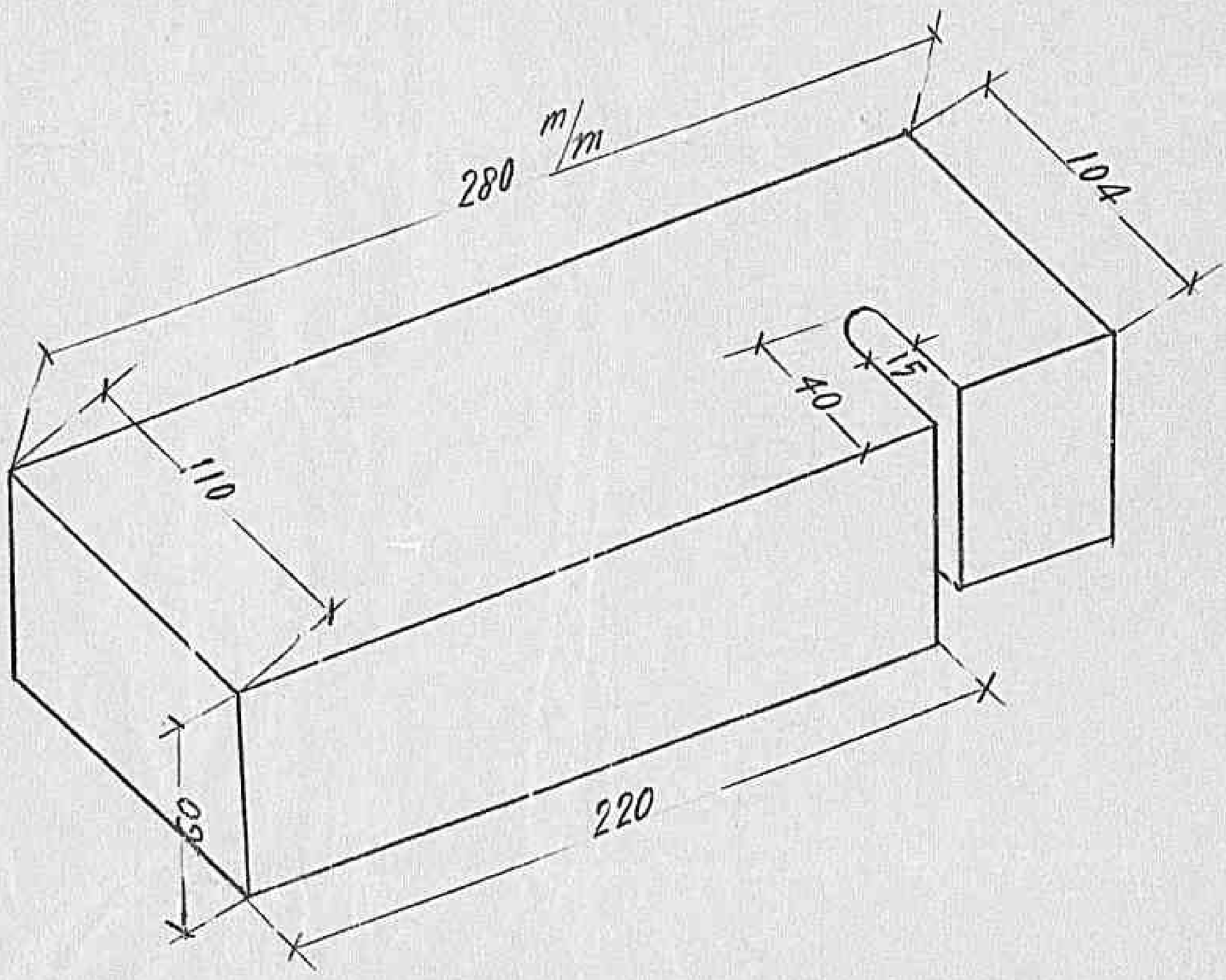


Declassified E.O. 12356 Section 3.3/NND No. 785019

Design N° 2145

S.G.E.S Palermo_ Steam Plant

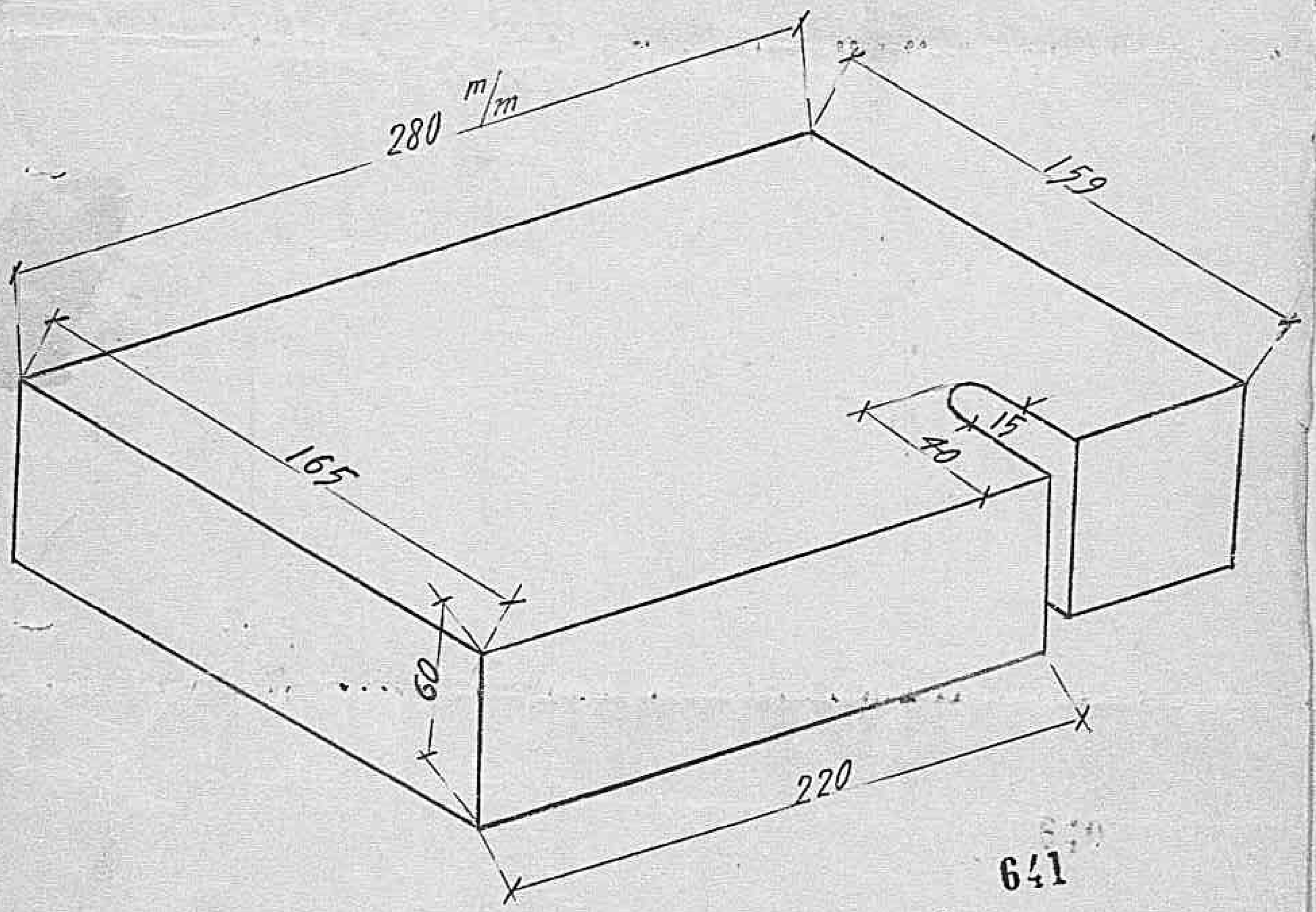
Kind N° 1



Design Nº 2145

S.G.E.S. Palermo Steam Plant

Kind Nº 2



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Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
ELECTRIC POWER MISSION

WLC/ver

AC/150/EPM

December 1943

SUBJECT: Electric Power Generation, Transmission and Transformation in Sicily

TO : All Concerned

1. Effective this date at 1200 hours, the Electric Power Mission assumes responsibility for electric power generation, transmission and transformation in Sicily. All matters involving these facilities shall be referred to this mission for action.

JAMES P. GROWDON
Colonel, C. E.
Chief, Electric Power Mission

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ISLAND BASE SECTION
A.P.O. 550

2 December 1943

A G R E E M E N T

between

ISLAND BASE SECTION

and

ALLIED MILITARY GOVERNMENT--SICILY REGION HEADQUARTERS

relative to

Electric Power Generation, Transmission, and Distribution

It is agreed that:--

a. Effective 0001 hours, 3 December 1943, the control, supervision and direction of electric power generation, transmission and distribution in central and western Sicily i.e. that area formerly under the jurisdiction of the Island Base Section including the provinces of Palermo, Trapani, Agrigento, Caltanissetta and the western portion of Enna province, are transferred to Allied Military Government Headquarters.

b. All orders regarding operations of the Soc. Gen. Electtrica de Sicilia and inter-connected companies, including direction for furnishing of electric service, use of employees, etc., will, effective the date of this agreement be given only by Allied Military Government Headquarters.

c. All military requirements for electric power will be given first priority. Commanders of military units will submit their requirements to the Engr. Section IBS who after approval of same, will, present those requirements to Allied Military Government Headquarters.

d. The Engr. Section IBS will keep Allied Military Government Headquarters currently informed of any expected changes in military power requirements and will also recommend whenever it appears advisable, changes in power operations necessary to guarantee meeting of military power requirements.

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R. SEARS,
Colonel, Ordnance Dept.
Commanding, IBS

F. G. McBERRY,
Brigadier General,
Commanding General, AMG-Sicily.

Declassified E.O. 12356 Section 3.3/NND No. 785019

3 Copies Rec'd

HEADQUARTERS
ALLIED CONTROL COMMISSION
ELECTRIC POWER MISSION

WLG/vbf

AC/150/EPM

5 December 1943

SUBJECT: Sicilian Manufactured Gas Facilities

TO : Colonel D. B. Adams

1. Manufactured gas plants are located at Palermo, Catania and Messina. All are now out of service due to war damage and lack of fuel. These plants normally supply gas service for cooking and heating purposes. They are owned and operated by the municipalities.

2. The Palermo plant has the least damage and could be restored to service within a short time and without extensive repairs. No fuel is in stock. The condition of the distribution mains in the streets is unknown.

3. The Catania plant has had considerable damage requiring a much longer time to repair and greater use of materials. This gas service is used in the hospitals for sterilizing purposes in addition to other uses. No fuel is in stock and the condition of the distribution mains in the streets is unknown.

4. The Messina plant has been almost wholly wrecked and probably requires complete rebuilding. It was not inspected to the same degree as the first two plants.

WALTER L. GISLER
Lieut. Col., A. U. S.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
ELECTRIC POWER MISSION

WLC/vet

AC/150/EPM

December 1943

SUBJECT: Delegation of Authority

TO : Lieutenant Colonel C. F. Bolick

1. Effective this date at 1200 hours, there is delegated to the Transportation, Communications, Utilities, Public Works and Mining Division, Region I, the responsibility for electric power generation, transmission and transformation in Sicily.

2. In carrying out this function, immediate steps should be taken to:

a. Restore to service the 70 kv transmission line from Catania to Caltanissetta. This involves repair and replacement of poles or towers, repair and replacement of conductor and insulators, and repair of transformer and switching facilities at the Catania 70 kv switching station.

b. Restore to service Number 2 (5,000kw) unit at the Porto Empedocle Generating Station. This involves replacing the Number 2 generator stator with Number 1 stator and repairing the war damaged Number 2 field rotor. Due to the lack of turbine blades, the capacity is limited to 5,000 kw. Steps should be taken to ascertain if the new set of blades on order in Switzerland can be obtained through diplomatic channels and if so, if a second set can be obtained. If the blades are obtainable, it should be determined if they should be installed on the No. 2 turbine shaft, or the No. 1 shaft which might be used in No. 2 Unit. Also repairs should be effected on the service damaged No. 2 generator stator and No. 1 generator rotor. 2 stator

c. Definitely determine the condition and requirements for condenser tubes at the Catania Generating Station. Replacement tubes are reported to have been shipped but lost.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

d. Overhaul the boilers and firing equipment at the Palermo Generating Station. Also, repairs should be made to the 7,500kw unit, the coal preparation and conveying equipment. The pulverized coal boiler should be made servicable which will involve extensive repairs to the boiler and mill.

JAMES P. GROWDON
Colonel, C. E.
Chief, Electric Power Mission

Declassified E.O. 12356 Section 3.3/NND No. 785019

MINISTERO DELLE FINANZE

N. 1411

Risposta alla lettera:
N. _____ del _____

P.M. 151. December , 1943

To THE ALLIED CONTROL COMMISSION

OGGETTO:
War Damages.

Colonel J.. Crowden has asked me to consider jointly with him and with Col. Foley and Col. Bernstein the problem of rehabilitating the electric power system in Sicily.

I beg to enclose copy of the lette which I am addressing to-day to the Societa Generale Elettrica della Sicilia and I wish to add that any temporary advance made by either AMG or ANFA to the above mentioned Company in order to speed the work of reconstruction will duly reimbursed to them by the Italian Government.

IL SOTTOSEGRETARIO DI STATO
Signed Guido Jung.

CERTIFIED A TRUE COPY

Clair F. Bowman

CLAIR F. BOWMAN
Major, C.E.,
Region Utilities Officer

6635

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
A.P.O.512
ELECTRIC POWER MISSION

SUBJECT: Financing the operating deficit of the Società Generale Elettrica della Sicilia.

TO : Brigadier R.A. Hamlyn 2nd December 1943

1. Under present conditions the operating revenue of the Società Generale Elettrica della Sicilia is inadequate to meet operating expenses. The company has no reserve funds available with which to meet this deficit.

2. The continued operating of the company's system and a supply of electric power are essential both for military requirements and civilian needs.

3. The company must be sibsidized by a grant of funds to meet its operating deficit.

4. Operating revenue and operating expenseswill vary widely from month to month with consequent variation in the deficit.

5. A fund of 25.000.000 lire is required from which the monthly deficit can be paid to the company. Payment of the amount of the monthly deficit will be made to the company upon presentation of a properly prepared and authenticated statement showing the operating income and the operating expense for the preceding month.

6. Operating practices will be supervised by officers of the Allied Military Government or by officers of the Italian Government.

JAMES P. GROWDEN
Colonel.C.of E.
Chief of Electric Power Mission

Certified true copy
The original was Signed
Clair F. Bowman
Clair F. Bowman
Maj. C.E.

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P.M. 151

MINISTERO DELLE FINANZE

N. 1421

Risposta alla lettera:
N. _____ del _____

OGGETTO:
War Damages.

DIREZIONE GENERALE della
Società Generale Elettrica
della Sicilia
Palermo.

Col. J.P. Crowden of A. .G. in Palermo has submitted the problem of a prompt rehabilitation of the production and transport of electric power in Sicily after distructions caused by the war, and this Ministry considers it necessary that such work of reconstruction be taken in hand as soon as possible.

Col. Crowden has summed up as follows the financial needs of your Company:

£. 50.000.000. = for repairs and reconstructions intended to obtain a provisional reorganisation of the steam plants, and repairs of the transportation grid.
All this in order to obtain the production and transport of about KWh.175.000.000 yearly on the whole, (including hydroelectric plants).
A maximum total sum of

£. 25.000.000. = i.e. about £.4.000.000. = a month to meet the monthly operative deficit over a period of six months. Within this period and probably before, the increase in the power production and the raise in rates must make it possible to balance the income and expenditure incurred in current operations.

This Ministry intends to finance through advances, financial requirements such as those needed by your Company in order to resume its functions in Sicily, and appropriate legis-

Declassified E.O. 12356 Section 3.3/NND No. 785019

transport of electric power is fully after distructions caused by the war, and this Ministry considers it necessary that such work of reconstruction be taken in hand as soon as possible.

Col. Crowden has summed up as follows the financial needs of your Company:

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£. 25.000.000. = i.e. about £.4.000.000. = a month to meet the monthly operative deficit over a period of six months. Within this period and probably before, the increase in the power production and the raise in rates must make it possible to balance the income and expenditure incurred in current operations.

This Ministry intends to finance through advances, financial requirements such as those needed by your Company in order to resume its functions in Sicily, and appropriate legislation is being provided to that effect.

In the meantime your Company will do well to devote at once its most energetic efforts to the work of reconstruction, which is the primary and most urgent task of all Italians and to which the Government gives and will give its support with confidence which goes beyond the sorrows of the present hour.

I fully rely on the devotion of your Company to the task which is entrusted to you. The Country needs that any individual interests be superseded by the supreme necessity of the utmost solidarity in the effort to attain a better future.

THE UNDERSECRETARY OF STATE
Signed Guido Jung.

C33

CERTIFIED A TRUE COPY
Clair P. Bowman
CLAIR P. BOWMAN
Major, C.E.,
RegionUtilities Officer

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ISLAND BASE SECTION
A.P.O.550

2 December 1943

A G R E E M E N T

between

ISLAND BASE SECTION

and

ALLIED MILITARY GOVERNMENT--SICILY REGION HEADQUARTERS

relative to

Electric Power Generation, Transmission, and Distribution

It is agreed that:--

a. Effective 0001 hours, 3 December 1943, the control, supervision and direction of electric power generation, transmission and distribution in central and western Sicily i.e. that area formerly under the jurisdiction of the Island Base Section including the provinces of Palermo, Trapani, Agrigento, Caltanissetta and the western portion of Enna province, are transferred to Allied Military Government Headquarters.

b. All orders regarding operations of the Soc. Gen. Electtrica de Sicilia and inter-connected companies, including direction for furnishing of electric service, use of employees, etc., will, effective the date of this agreement be given only by Allied Military Government Headquarters.

c. All military requirements for electric power will be given first priority. Commanders of military units will submit their requirements to the Engr. Section IBS who after approval of same, will, present those requirements to Allied Military Government Headquarters.

d. The Engr. Section IBS will keep Allied Military Government Headquarters currently informed of any expected changes in military power requirements and will also recommend whenever it appears advisable, changes in power operations necessary to guarantee meeting of military power requirements.

R. SEARS,
Colonel, Ordnance Dept.
Commanding, IBS

F. G. McSHERRY
Brigadier General,
Commanding General, AMG-Sicily.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
ELECTRIC POWER MISSION
APO 152

JTG/pjm

2 December 1943

Subject: Imported equipment and supplies required by the Electric Power System of Sicily

To: Brig. R. A. Lovatt

1. It is believed that most of the temporary repairs required to permit the electrical power system of Sicily to meet necessary military and civilian demands can be effected in large part by local labor and equipment and supplies available on the island. It is the policy of the Electric Power Mission to utilize material and supplies available locally to the maximum possible extent.

2. Some supplies such as lubricating oil and transformer oil are not available locally and must be imported when required. Certain repair parts are not available locally and are unlikely to be obtained by "cannibalization" and must be imported.

3. It is the understanding of the writer that essential equipment and supplies ordered from the United States will be purchased and financed by "Lend Lease" and that immediate payment by the Italian Government will be unnecessary.

JAMES F. GROSDON
Colonel, C. E.
Chief, Electric Power Mission

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Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
MINERIO POWER MISSION
AMG 152

JTG/pjm

2 December 1943

Subject: Preservation of Electrical Generation - Transmission and Transformation Facilities

To: Brig. R. A. Hamlyn

1. Power generated by hydro electric plants located in the Province of Calabria is required to carry the electrical load in all of Southern Italy south of Naples and due to war damage to other plants may be essential as far north as Rome.

2. Electric power is an essential military requirement in all of the mainland of Italy under Allied control. It is believed that this condition will continue for an indefinite period.

3. To insure satisfactory service, the generation transmission and transformation of electric power in the area stated in par. 2 must be operated as a unified system, controlled by a single authority.

4. It is recommended that all of the electric power generation transmission and transformation facilities located on the mainland of Italy be reserved for Allied military control, when such territory is returned to the control of the Italian Government.

JAMES T. GORDON
Colonel, C. E.
Chief, Electric Power Mission

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Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
ELECTRIC POWER MISSION

VSR/ver

AC/150/EPM

2 December 1943

SUBJECT: Recent Progress of Electrification in Sicily and Southern Italy

TO : Acting Secretary, Allied Intelligence Committee

1. Transmitted herewith as the answer to Question 7 of the questionnaire sent with the letter from Allied Military Government, dated 29, November, 1943, Subject: Attached questionnaire, is a report, prepared by the Electric Power Mission, Allied Control Commission, and entitled "Progress of Electrification in Sicily and Southern Italy Since 1937".

J. P. GROWDON
Colonel, C. E.
Chief, Electric Power Mission

Incl.

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
ELECTRIC POWER MISSION

VSR/vsr
2 December 1943

PROGRESS OF ELECTRIFICATION IN SICILY
AND SOUTHERN ITALY SINCE 1937

During the past seven years, electrification in Sicily has shown gradual but steady progress. Electrical energy is supplied to the island almost entirely by the Societa Generale Elettrica della Sicilia. The amount of electrical energy produced by this company has, almost without exception, shown a steady increase for a number of years. In 1937, there were generated 181 million kilowatt-hours, and by 1942, this figure had increased to 233 million kilowatt-hours. Table I, attached, shows a tabulation of energy generated since 1937.

In order to satisfy the increasing electrical demand, three hydroelectric generating stations, having a combined effective output of 11,480 kilowatts, were built on the Fiume Sosio, in southwestern Sicily, during 1939-41. The principal addition to the steam electric generating stations since 1937 was the installation of a boiler at the Porto Empedocle plant. A hydroelectric plant, operated by the Societa Anonima Elettrica Meridonale, and electrically connected to the Generale Elettrica was built north of Catania in 1938.

An interchange of energy between the eastern and western parts of the island is made possible by a 70 kilovolt transmission line, running between Caltanissetta and Catania, completed in 1939. The operation of this line provided greater reliability of service, as well as a means of transmitting electrical energy from the new hydroelectric plants to the east. Because of war damage, this line is presently out of service.

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HEADQUARTERS
ALLIED CONTROL COMMISSION
ELECTRIC POWER MISSION

VSR/vsr
2 December 1943

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Southern Italy, from Reggio north to a line from Gaeta on the west coast, to the middle of the "spur" on the east coast, is supplied by the Società Meridionale di Elettricita. Improvements have been made by this company to meet an increased demand for electrical energy. In 1937, this company distributed nearly a billion and a half kilowatt-hours, and at that time was making preparations to increase this figure

Declassified E.O. 12356 Section 3.3/NND No. 785019

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Improvements in electric generating facilities made by the Meridionale company since 1937 include the completion of the San Mango hydroelectric plant on the Calore River, and an increase in the capacity of the Ampollino development on the Sila River.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

A transmission line between Foggia and Benevento was completed in 1938. Another transmission line between Pescara and Frattamaggiore, near Naples, has been under construction. The present status of this line is not known.

MILLIONS OF KILOWATT-HOURS GENERATED BY
SOCIETA GENERALE ELLETTRICA DELLA SICILA

Year	Kw-hr from Hydro Plants	Kw-hr from Thermal Plants	Total Kw-hr
1937	69.6	111.7	181.3
1938	77.5	116.9	194.4
1939	107.3	101.6	208.9
1940	115.5	91.3	206.8
1941	118.1	91.6	209.7
1942	120.4	112.6	233.0

TABLE I

Declassified E.O. 12356 Section 3.3/NND No. 785019

MILLIONS OF KILOWATT-HOURS GENERATED BY
SOCIETA GENERALE ELLETTRICA DELLA SICILA

Year	Kw-hr from Hydro Plants	Kw-hr from Thermal Plants	Total Kw-hr
1937	69.6	111.7	181.3
1938	77.5	116.9	194.4
1939	107.3	101.6	208.9
1940	115.5	91.3	206.8
1941	118.1	91.6	209.7
1942	120.4	112.6	233.0

T A B L E I

Declassified E.O. 12356 Section 3.3/NND No. 785019

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
ELECTRIC POWER MISSION

WLC/vsr

AC/150/EPM

2 December 1943

SUBJECT: Material Requirements for Sicilian Electric Power Facilities

TO : Brigadier R. H. Hamlyn

1. To restore the 70 kv Catania-Caltanissetta transmission line to service may require that some stranded conductor, insulators, and transformer oil be obtained from outside Sicily.

2. To repair the Number 2, 5,000kw steam unit at Porto Empedocle to permit carrying full load will require that replacement blading and possibly a new shaft be brought in from the outside. To repair Number 1 Unit, more extensive requirements from the outside will likely be necessary. This involves a complete set of turbine blades, generator stator coils and repairs to the generator rotor.

3. Condenser tubes may be required from the outside to permit greater loading of the Catania Station. It is understood that these tubes were shipped and may be in a sunken ship along the coast.

4. Boiler tubes, superheater tubes, refractories, coal pulverizing mill or repair parts, and condenser tubes for the Palermo Station may be required from the outside.

5. Various repair parts for diesel engine equipment for both the grid connected and isolated stations may be required from the outside.

Transmitted by W.L.C. 12/3. VSR

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6. In locating the materials from the outside, the following order should generally be followed: (1) the Italian mainland, (2) North Africa, (3) the United States, or the United Kingdom.

JAMES P. GROWDON
Colonel, C. E.
Chief, Electric Power Mission

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HEADQUARTERS
ALLIED CONTROL COMMISSION
ELECTRIC POWER MISSION

WLC/vsr

AC/150/EPM

2 December 1943

SUBJECT: Material Requirements for Sicilian Electric Power Facilities

TO : Brigadier R. H. Hamlyn

1. To restore the 70 kv Catania-Caltanissetta transmission line to service may require that some stranded conductor, insulators, and transformer oil be obtained from outside Sicily.

2. To repair the Number 2, 5,000kw steam unit at Porto Empedocle to permit carrying full load will require that replacement blading and possibly a new shaft be brought in from the outside. To repair Number 1 Unit, more extensive requirements from the outside will likely be necessary. This involves a complete set of turbine blades, generator stator coils and repairs to the generator rotor.

3. Condenser tubes may be required from the outside to permit greater loading of the Catania Station. It is understood that these tubes were shipped and may be in a sunken ship along the coast.

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624

Declassified E.O. 12356 Section 3.3/NND No. 785019

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JAMES P. GROWDON
Colonel, C. E.
Chief, Electric Power Mission

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Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
ELECTRIC POWER MISSION

WLC/ccb

AC/150/PWU

1 December 1943.

Subject: Sicilian Electric Power Facilities.

To: Brigadier R. H. Hanlyn.

1. Electric power facilities in Sicily are largely under the control of the Societa Generale Elettrica della Sicilia which utility in 1942 generated and purchased for distribution to domestic, commercial and industrial customers a total of 233,017,201 kw. hrs., an increase of 11.13% over 1941. Small isolated facilities serve areas not connected to the main system.

2. The generating stations consist of three steam plants totaling about 48,000 kw; 8 hydro plants totaling about 36,000 kw. and four diesel plants totaling about 3,000 kw. The total generating capacity is approximately 87,000 kw. The 1942 peak load was 47,000 kw. occuring in the evening of 30 November.

3. The steam stations are not in good condition and suffer from lack of maintenance and repair and some war damage. At the present time probably not more than 20,000 kw. of sustained load could be carried by the two plants in operation. The third plant is entirely out of service. It is highly important that increased effective steam capacity be made available from these plants before the lack of water during the dry season makes less power avvilable from the hydro plants.

4. The hydro stations are in good condition. The operation of these is largely dependent on run of river flow as storage facilities are restricted. This capacity cannot all be depended upon to carry sustained loads and will be greatly affected by a lack of normal rainfall.

5. The transmission and transformation facilities were on the whole adequate. However it is extremely important that immediate steps be taken to restore to service the war damaged 15 mile section of the main high voltage transmission line in order that power may be interchanged east and west, thus permitting use of hydro power during the rainy season, which will otherwise be wasted, an increase in availability of power, opportunity to do needed repairs in the steam plant, and a saving in coal.

6. The importation of foreign coal to meet all fuel requirements in the steam stations is not justified. Greater use of Sardinia coal should be insisted upon particularly in that equipment which has been designed to use it.

Declassified E.O. 12356 Section 3.3/NND No. 785019

7. The resumption and continued operation of Sicilian industry, which normally utilizes a large part of the electric power produced, is dependent, insofar as power is concerned, upon a carrying out of the measures herein outlined in a general way to increase load carrying generation capacity and the restoration of transmission and transformation facilities. So far as possible materials on the island should be used. It may require that certain materials and equipment be brought in from elsewhere.

J.P. GROWDON,
Colonel, C.E.
Chief, Electric Power Mission.

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED CONTROL COMMISSION
ELECTRIC POWER MISSION

WLO/cob

AC/150/PWU

1 December 1943.

Subject: Sicilian Electric Power Facilities.

To: Brigadier R.H. Hanlyn.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

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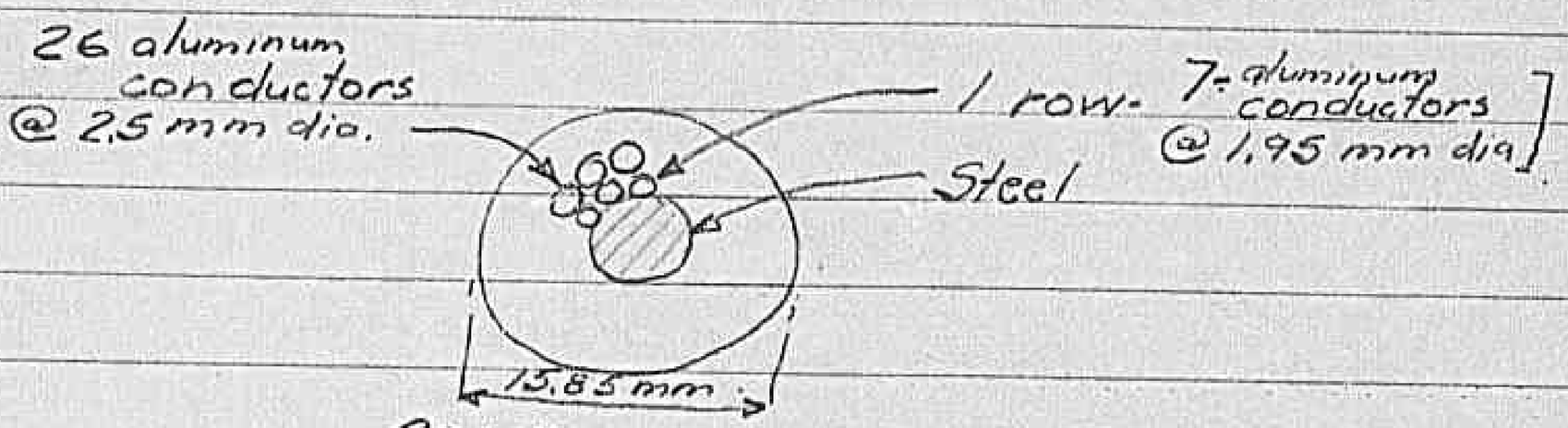
J.P. GROWDON,
Colonel, C.E.
Chief, Electric Power Mission.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Caltanissetta - Catania
Transmission Line.
70 KV., 6000 KVA capacity.



CONDUCTOR CROSS-SECTION

Computed Cross Section of Aluminum Conductor:

7 aluminum conductors @ 1.95 mm in dia:

Area: $1.95^2 \times .7854 \times 7$: 20.9 mm²

26 aluminum conductors @ 2.5 mm in dia:

Area: $2.5^2 \times .7854 \times 26$: 127.8 mm²

Total Cross Section Area 148.7 mm².

NOTE: THIS FIGURE COMPARES WITH VALUE OF 148.53 mm² GIVEN YESTERDAY.

$Mm^2 \times .00155 = in^2$

$148.7 \times .00155 = .23\ in^2$ - Area of Aluminum Conductor -

$\frac{\pi d^2}{4 \times 10^6} = .23$

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$d^2 = 292,500$ c/m (CROSS-SECTION OF ALUMINUM).

OVER

Declassified E.O. 12356 Section 3.3/NND No. 785019

WITH LINE CARRYING 6,000KVA, CURRENT:

$$\frac{6,000}{70 \times 1.73} = 49.5 \text{ amps.}$$

$$\frac{292,500}{49.5} = 5910 \text{ cm/amp.}$$

Conductor diameter = 15.85 mm.

$$= \frac{15.85}{25.40} = .625 \text{ in.}$$

If the conductor was solid, it would have area of 390,000 cm.

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HEADQUARTERS
ALLIED MILITARY GOVERNMENT
ECONOMIC DIRECTORATE JEG/pjm
APO 512

30 November 1943

Subject : Emergency Financing Electric Power Companies

To : Brigadier R. A. Healyn, Economic Director

1. The island of Sicily is served with electric power with minor exceptions, by the Societa Generale Elettrica della Sicilia. The power system consists of three steam generating stations and seven hydroelectric stations interconnected by a transmission grid.

2. Certain parts of the physical plant have suffered severe war damage, amounting to approximately 200 million lira.

3. Repair of some parts of the war damage is essential to permit the supply of electric power to essential military and civilian loads and to prevent waste of hydroelectric power. Some of the repairs should be temporary but should be completed as promptly as possible.

4. The company is unable to pay for the necessary repairs from their own resources.

5. Funds to pay for essential repairs are urgently required.

6. Under present conditions, the operating revenue of the Societa Generale Elettrica della Sicilia is inadequate to pay operating expenses which have been met by subsidies in some form.

7. Funds to continue meeting the company's operating deficit are required.

JAMES P. CROWDON
Colonel. C.E.
Chief, Electric Power Missio

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Certified true copy
The original was signed
Clair F. Bowman
Clair F. Bowman
Maj. C. E.

Declassified E.O. 12356 Section 3.3/NND No. 785019

ALLIED MILITARY GOVERNMENT
SICILY REGION HEADQUARTERS
APO 394

CFB/sdb

File: RTC 004.

30 November 1943

Memorandum to: Regional Finance Officer

Subject: War Damage Claims of Utilities

1. Electric Utilities

a. The electruc service in Sicily is dominated by the S.G.E.S. which generates, transmits, and distributes electric energy throughout the island, but not to every commune. There is a second group of "retailers" who buy wholesale from S.G.E.S. and distribute to one or more communes. A third class generate and distribute locally and may or may not have connections with the grid. All of these furnish power for water supply, vital food supplies and most of them for preparation of export items needed by the Allies. All are capable of reparation and should be aided, though complete restoration of their facilities is not warranted.

b. The S.G.E.S. furnishes power for important Army, Navy, and Air Corps bases and industries serving them. Their estimate od damage is 150,000,000 Lira, 1942 prices, or 40% higher for present labor and material costs.

c. Other companies have suffred damages which can and should be repaired. The estimated requirement of funds for these is 10,000,000 Lira.

2. Water Systems

a. Most of the larger aqueducts are public work and are being repaired through public works projects.

b. The Palermo aqueduct has been repaired in part by their own capital and in part by public works projects.

c. There are innumerable small water companies, whose services are needed from the health standpoint; and for which repairs are needed. These are estimated to total 50,000,000 Lira.

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3. Gas Systems.

a. The two gas systems capable of repairs are municipally owned and have been largely repaired. No funds are recommended for gas repairs, the two privately owned plants being beyond repair.

C.P. BOLICK
Lt. Col., F.A.,
Chief, T.C.U.P.W.
& Mining Div.

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Declassified E.O. 12356 Section 3.3/NND No. 785019

ALLIED MILITARY GOVERNMENT
SICILY REGION HEADQUARTERS
APO 394

RST/sdb

File: RTC 311

30 November 1943

Memorandum to: Regional Finance Officer

SUBJECT: Societa Esercizi Telefonici

1. This private company is at present responsible for the installation and maintenance of military telephones in the cities of Palermo, Catania, Messina, Trapani, Agrigento, Siracuse. Under supervision SET personnel operate the "Cadet" switchboard in Palermo, plus the Catania switchboard. SET personnel maintain the highly important Air Formation telephone circuits Palermo-Trapani. SET also maintains in all the larger cities and towns, an inter-urban civilian service. At present the SET are doing work which relieves no less than three Signal Units for more active theatres. The economic importance to SICILY of SET is incalculable. Without the inter-urban service Government and Trade offices would be isolated.

2. SET has suffered heavily from war damage. The long distance toll-board in Palermo and its associated High Frequency equipment was completely destroyed. The SET building was half demolished. In Palermo alone, 50 miles of multi-pair cable was demolished. The exchange at Marsala was destroyed. In 25 towns the exchanges were damaged. 400 miles of pole-line were detroyed. 12 automobiles were completely destroyed. Approximately 70 million Lires worth of damage was caused.

3. In the event of the War Damage claim being allowed it would be possible to repair or rehabilitate nearly the whole of the SET system.

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4. Approximately 90 million Lires would be necessary to repair the system.

C.P. BOLICK
Lt. Col., F.A.,
Chief, T.C.U.P.W.
& Mining Division.

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS
ALLIED MILITARY GOVERNMENT
ECONOMIC DIRECTORATE
APO 512

JFG/pjm

30 November 1943

Subject: Contracts Outstanding with Electric Power Mission

To: Brigadier R. A. Healyn, Economic Director

1. With reference to your announcement at the Staff meeting of 30 November relative to subject matter, there are none outstanding with the Electric Power Mission.

JAMES F. GROGAN
Colonel, C. E.
Chief, Electric Power Mission

Declassified E.O. 12356 Section 3.3/NND No. 785019

ALLIED MILITARY GOVERNMENT
SICILY REGION HEADQUARTERS

RFD/134 29 November 1943

Subject: Provision of Financing to Public Utility Companies under the Italian State War Damage Compensation Act.

To : Brigadier Maulyn, C.F.O.
Fin. Sub. Com., AMG HQ.

Through: RCAO

1. Various public-utility companies in Sicily are urgently in need of financing, both for current operations and for repairs and replacements necessary to increase output. I believe there is agreement that continued private operation by existing Italian personnel is desirable.

2. Income of these companies has been drastically reduced by war damages to their properties and to consumers' properties, and by military control and use of the companies installations. Expenses of operation have increased due to wage increases and other causes.

3. It is agreed that direct loans by AMG are not desirable, nor would they furnish a proper solution to the problem. Loans by Italian banks are not feasible; as the various situations are not such as to justify the banks in making loans willingly.

4. The responsibility for remedial measures is clearly that of the Italian State, because of the public need for the services.

5. This responsibility is envisaged in Law NO. 1543 of 26 October 1940 "Risarcimento Dei Danni di Guerra." (War Damage Compensation Act). This law provides for the granting of funds by the Italian State for the restoration of war-damaged properties.

The essential provisions of the law are (briefly stated):

Art. 1-The Government grants compensation for loss, destruction or deterioration of fixed or movable properties consequent upon any action of war.

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Art. 2-Defines action of war as direct or indirect result of action of armed forces, friendly or enemy, coordinated in preparation or carrying out of war operations.

Art. 3-Only Italian-owned properties are included. (Foreign controlled companies may be considered on the basis of treaties to be made).

Art. 4-Excludes convicted persons.

Art. 5- Grants for damages are payable to mortgage holders in cases of foreign or convicted owners (art. 3 and 4)

Art. 6-Movable articles are to be valued at their price in "Common Commerce" at the time of damage, less the value of the residual part. The State has the right to make restoration of the items themselves.

Art. 7-Real property will be valued at their price in "common commerce" as of on month before declaration of war, less the residual part.

Art. 8-In the case of real property or industrial plants, compensation is conditional on re-employment of the funds in the restoration of the damaged or destroyed properties.

For public-services companies; the foregoing applies also to movable articles necessary for operation.

Failure to carry out the obligation to re-employ the funds as stated above deprives the company of the right of compensation and permits the State to request re-imbursement. Such re-employment must be effected within two years from the end of the war or from the date the grant is made by the State.

Art. 9-The State paying offices (uffici liquidatori-see Art. 13) may order re-employment in form other than provided in Art. 8, if in the public interest.

They may also exempt the damaged party from the obligation to re-employ, when manifestly this is not useful or possible.

Art. 10-Mortgages or liens which existed on the real property remain applicable to the reconstructed or repaired property.

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Art.11 War damage grants cannot be transferred, unless with the consent of the "Uffici Liquidatori". Grants cannot be sequestered except for "alimentary credit".

If the real property is ~~leased~~ leased or mortgaged, the compensation, if made payable for purposes other than re-employment in the property under Art. 9, is pledged in favorof the holders of the lien or the mortgage. The State, in such cases, will give such creditors or mortgage holders 60 days notice by publication in the "foglio degli annunzi" (law notice gazette) of the Province to interpose their demands to the Intendente di Finanza; after the termination of such period without opposition by the creditors the State is freed from the obligation in favor of such creditors.

Art. 12 The compensation granted is not in addition to damages due from others on the same property (such damage compensation from others is to be deducted from the State grant).

Art.13 Claims for damages must be presented within 6 months from the end of the war to the Intendente di Finanza of the Province.

Art 14 If the owner does not make claim, renters, creditors, etc. may.

Art.15 The Intendente di Finanza having received the Claims, and having had them revieved where necessary by the Officio Tecnico Erariale, or in cases of special appraisals by appropriate State Offices, proceed to the liquidation of the indemnity which they consider due. For compensation up to 265,000 lire the liquidation is subject to the approval of the regional commission, etc. (doesn't apply to our uses)

Art.16 If the commission agrees the grant becomes definitive. If not the Commission may determine the amount.

Art.17 For grants over 200,000 lire, approval must be obtained from a central commission in Rome, in the Ministry of France, composed of three judges of the courts appointed by the Ministry of Justice, four representatives of the Ministry of France, Two members of the Fascist Confederation of Industrial Employers, etc.

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Art. 18 (Not important in our case)
Art. 19 " " " " "
Art. 20 " " " " "
Art. 21 " " " " "

Art. 22 Grants for purposes other than re-employment in the property may be paid immediately upon approval, subject to the conditions of Art. 11.

Grants for re-investment in the property will be made upon request up to the 50% of the amount agreed upon. The remaining 50% will be paid after the total re-employment is ascertained.

Art. 23 Any grants by any State agency to the damaged concern will be deducted from the amount granted.

Art. 24 The damaged concern may enter protest to the Ministry of Finance within 30 days of notice of grant, if dissatisfied with the grant.

Art. 25 - 28 (Not important to us)

Art. 29 The Government may issue regulations for the carrying out of the present law.

6. Brief reports on several utility concerns are attached.

7. The Societa General Elettrica has in the past indicated its desire to make claims under the war damage compensation act cited above. Thus far no definite request for a loan, nor any specific claim, has been presented to us. This will no doubt be arranged by the T.C.U.P.U. Division on due course.

8. This memorandum is submitted in advance of any such request, so as to obtain a decision on the question of policy as to whether AMG can make advances under theabove law under the above act in the name of the Italian State, especially having in mind the requirement in Art. 17.

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9. In a "test case" of the Società Anonima Trasporti Siciliani, submitted by me to the Prefect, the approval of the Intendente and Prefect were given to a loan under the above act without meeting the requirement of Art. 17. No committment has been made by AMG Sicily Region, but a precedent is created which might open the way.

10. It is suggested that the Public Utility Division ask Società General Elettrica to work out a concrete request and claim and put it up, if you are in accord with the general principle of AMG making a grant under the law.

By Order of Lt. Colonel Charles POLETTI:

R.B. MENAPACE
Lt. Colonel
R.C.F.C.

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HEADQUARTERS
ALLIED MILITARY GOVERNMENT
APO 512

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29 November 1943

SUBJECT: Attached questionnaire

TO : Acting Chief, Agriculture Sub-Commission
" " Public Health Sub-Commission
" " Labor Sub-Commission
" " ~~Transportation~~ Sub-Commission

1. The attached questionnaire has been forwarded to the Chief of Staff, A.M.G., by H.Q.S., A.F.H.Q., for appropriate action.

2. You are directed to reply to questions marked in red, and forward same to Allied Intelligence Committee, Room 59, A.M.G. Hq., by 1700 hours, Friday, 3 December 1943.

3. Comment is invited but not required, on unmarked questions.

By command of Brigadier General McSHERRY:

John V. Hinkel

JOHN V. HINKEL,
Major., M.I.,
Acting Secretary, Allied
Intelligence Committee

Incl.

Col J.P. Growdon.
73 via R. Settimo.

Forwarded (as arranged with Maj. HINKEL)
for your dealing with Social Economic. Question 6.

for Chief 1605 Comms. Sect.
Capt R.A.
C.O. Comms. Sect.

Answered by letter dated Dec 2. 1943 VSR.

1215 hrs.
30 Nov. 43.

Declassified E.O. 12356 Section 3.3/NND No. 785019

Questions Relating to Political, Social and Economic Forces in Sicily and South Italy.

Political.

1. Are there signs of a Catholic political movement among the peasants and/or the lower clergy?

2. What signs are there of other types of political movement, e.g., liberal, socialist, communist, in the towns and the country?

3. How strong is nationalism?

4. Is there any sign of a desire for local autonomy?

Social and Economic.

1. Is there any definite information on the views of Italians in (a) Sicily, (b) South Italy, (c) Sardinia on Emigration after the war? Have the Italians great expectations about the possibilities of emigration?

2. What has been done in (a) Sicily, (b) South Italy, (c) Sardinia during the last seven years (1) to improve the water supply, (2) to drain the land, (3) to check malaria?

3. When the latifondi are broken up, would some form of co-operative farming among peasant-owners be desirable? e.g., a Co-operative Society for purchase of machinery, seeds, fertilizers etc. and for sale of produce?

4. Is there a strong movement for (a) State-ownership of land? or (b) Co-operative Society ownership? or (c) Peasant ownership?

5. Have any new industries taken root in Sicily or South Italy during the last seven years or as a result of the war?

6. Has electrification made any progress in South Italy or Sicily during the last seven years?

7. What are the conditions of the sulphur industry as regards (a) output, (b) conditions of labour?

8. Is there any evidence of the economic effects of Allied occupation? (e.g., Has the fruit-juice industry been encouraged?).

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Cpl GRONDON

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(Questions on political, social, & economic forces in Sicily and South Italy, continued)

9. Are there signs of a wish to establish regular trade unions among (1) agricultural (2) industrial workers?

10. Do the South Italians expect that all their economic difficulties are going to be solved rapidly by the United Nations?

11. What is the food situation like? Are relief measures urgent?

Declassified E.O. 12356 Section 3.3/NND No. 785019

HEADQUARTERS VSR/T.E.

ALLIED MILITARY GOVERNMENT

Public Works & Utilities Sub-Commission

22 Novembre 1943

Subject: Palermo Electric Generating Station .

To : Acting Director, Public Works and Utilities Sub-Commission.

The Palermo Electric Generating Station is about twenty years old. It contains two stoker-fired boilers, now operating, a pulverized coal boiler which needs repairs before it can be utilized, and two steam turbine-generator units,having a total capacity of 12,500 kw. One unit is operating; the other is awaiting repair parts. Plant employees estimated that the present coal rate is about 1.5 kilograms(3.3 1b)per kilowatt-hour Based upon the station recording loadmeteer,the average load carried is about 2.000 Kw,the peak, 3,500 kw. Auxiliaries are driven by direct current motors, supplemented in some cases by steam turbines for emergency operation.

Coal

Prior to the war,British coal was used. Coal is presently being procured by the Island Base Section from American army quartermaster sources. It is run-of-mine;its original source and analysis are unknown.

About 2,000 tons of coal can be stored adjacent to the plant. En route to the stokers,the coal is hand-shoveled to a belt conveyor in the yard,is bypassed around the crusher which is out of service, is lifted to the top of the boiler room by bucket hoist,and is carried by belt conveyor to a bunker over the stoker hoppers.One bunker was damaged by bombing,and the remaining one is serving both boilers.

Coal to one of the boilers passes down a make-shift chute from

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Declassified E.O. 12356 Section 3.3/NND No. 785019

the bunker to the operating floor from whence it is manually carried to the stoker hopper in wicker baskets. Six men were found to be engaged in this activity.

The belt on the storage yard conveyor appeared to be in fair condition. The overhead belt conveyor in the boiler room was not inspected. There is but little storage capacity in the boiler room bunker and a prolonged stoppage of the conveyor belts or the bucket hoist would force a station shut down.

The coal crusher was put out of service by bombing . A sledge hammer is now being used to break the large lumps of coal but in spite of this,big pieces are still reaching the stoker hoppers.A representative of a foundry in Palermo estimated that it would require at least thirty days to repair the damaged crusher.It was his thought that a new crusher should be built.It is not believed however that his examination was made under favorable conditions;the crusher is covered with dust,it is in a dark place,and there was no light available.

Boilers

The two stoker-fired boilers of Babcock and Wilcox manufacture were originally rated as being capable of continuous steam generation of 24,000 kilograms(52,800 lb)per hour at 15 atmospheres(207 lb per sq in gage),and 360 C (680 F).There are two induced draft fans and one forced draft fan per boiler.The fans are motor driven.Because of a damaged motor,one of the boilers is operating with only one induced draft fan.

Station employees stated that the boilers are capable of carrying loads of 2,000 and 1,500 kw respectively.
Assuming a turbine steam rate of 14 lb per kw-hr,which is believed to be liberal for this situation,each boiler,if operating according to original expected performance,should be capable of supplying steam for 52,800/14,or 3,770 kw.Inquiries as to the considerations

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which limited the present boiler output to the low value of 2,000 kw elicited only vague replies.It is believed that the actual reasons are that those responsible for the operation of the station are reluctant to force the boilers further because(a) of the age of the equipment, (b). Boiler tubes occasionally fail and (c) the tubes are not cleaned frequently.

During the inspection,it was noted that the boiler furnaces sometimes contained large clinkers.There was also a large amount of coke in the ash. It is believed that these conditions result,in part from the fact that the coal crusher is not operating,and that large lumps of coal are thereby permitted to enter the furnaces.The furnace walls of both stoker-fired boilers appeared to be in good condition.

The foregoing suggests that if the stoker-fired boilers were in good condition,and were operated properly,the present peak load of 3,500 kw should be sufficiently low to be carried on one boiler instead of the two which are now being operated.If such a possibility could even be approached at the present time, a greater load could be carried on the two boilers of the station,and water could be stored in the hydro reservoirs of the system in greater quantities until sufficient had accumulated to permit taking one of the boilers out of service for inspection and repairs.

In the event that it might be desired to limit the output, of the plant to 3500 kw, it is very likely that the operation of one boiler would prove more economical than the present use of two.

A steam gauge is mounted on the front of each boiler and is the only guide for boiler operation.There are no furnace draft gauges.

An employee stated that"when the steam pressure drops,we turn on more air".No smoke was seen issuing from the plant stacks,and it is therefore likely that a considerable amount of excess air is being passed through the furnaces.Furthermore,it is likely.that a noticeable quantity of electrical energy is needlessly expended in operating the

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fan at a greater capacity than necessary. Gas and flame is being forced out the furnace side access doors, indicating a positive pressure in the furnaces. The mechanical draft fans are located above the boilers. It was found necessary to terminate quickly the inspection of this equipment because of the volume of sulfurous gases escaping from the boiler settings and possibly from the breeching. It was noted that the commutators of the mechanical draft fans were sparking badly. Because of the unpleasant fumes present in the vicinity of the fans, even cursory daily supervision of their operation is an extremely unpleasant chore.

The pulverized coal boiler has been out of service for some time. It was rated originally at 45,000 kilograms (99,000 lb) per hour. The back wall is bulged outward. The pulverizer needs repairs. The condition of the tubes and drum are not known.

Turbine Room

The 5,000 kw turbine generator unit of Escher Wyss manufacture is presently on the line. It runs smoothly, although when observed, was operating somewhat below its rated speed of 3,000 rpm. Station employees state that no blades have been removed but that clearances are worn in the machine. The 7,500 kw Ljungstrom unit is presently out of service as the result of a defective oil pump, and damaged circulating water piping.

It is understood that efforts are being made to secure another pump; new circulating water piping is expected to be delivered to the plant within a week. It is not definitely known whether there is anything else wrong with this unit; it is planned to try it as soon as the necessary equipment is received.

The condenser tubes are cleaned by wire brushing when the turbines are out of service, and after the vacuum has been observed to be below normal. It was noted that the exhaust hood of the 5,000 kw turbine felt very warm when the machine was carrying a load of 3,500 kw. Coincidentally it was noted that the vacuum, as indicated by a Bourdon gauge was ~~then~~ 999

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67 centimeters,and that there was an appreciable rise in the temperature of the circulating water after it had passed through the condenser, suggesting that the water flow is lower that original design conditions.Station employees expressed the belief that the circulating pump is in good condition.

Direct current for the auxiliary drives is obtained from a mercury arc rectifier unit located in the basement.

The electrical equipment of the station appeared to be in good condition,although a detailed inspection was not made of the oil circuit breakers or control equipment.

Recommendations

In order that the station may be operated reliably and economically,it is respectively recommended that the steps mentioned below be taken.It is believed that if recommendations 1,2,5,7 and 9 are carried out,increased generating capacity will be most easily realized ,making it possible either to carry a greater system load or to conserve more water in the hydro reservoirs.

1. Check boiler safety valves for operation at prescribed pressure;check overspeed trip on 5,000 kw turbine-generator unit now operating.

2. Calibrate essential existing instruments,both mechanical and electrical,against standards known to be accurate.It is suggested that such standards may be available at the Navy Yard in Palermo.

3. Provide sufficient portable lights for the station operating personnel.

4. Relocate the existing makeshift coal chute from the boiler room bunker to No.2 boiler stoker hopper.It is further recommended that when time permits,the original overhead bunker supplying No.2 boiler be replaced.

5. Repair the damaged coal crusher.Thought should be given

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to utilizing as much of the existing machinery as possible. In the meantime,it is recommended that a temporary grating be built and installed as the discharge end of the yard coal conveyor,for the purpose of separating lumps of coal larger than 1 ½ inches in diameter.

6. Clean up the inside of the station.There are many piles of debris scattered about.

7. Install furnace draft gauges to show(a) Pressure under grate,(b)Pressure over fire,(c)Pressure at boiler outlet flue.It is suggested that the gauges might consist of glass tubing,bent to a " U " shape,containing water.These gauges should be used as a basis for controlling the mechanical draft fans,so that the over-the-fire pressure is held slightly negative,and so that the excess air to the furnace is held to a minimum.

8. Make the 7,500 kw turbine-generator unit available for operation as soon as possible.

9. Make the induced draft fan,now out of service,available for operation as soon as possible.

10. Borrow instruments to measure the temperatures of the flue gases and the steam leaving the boiler,and note any deviations from the original expected performance.
Original expected performance figures are shown in specifications on hand at the plant.

11. Examine stoker operated boilers and(a)Clean tubes,(b)Replace bad tubes,(c) Check condition of drums,(d)Repair setting,(e) Check location and condition and make necessary repair of baffles (f) Check and repair grates.It is recommended that a drawing of the boilers as originally installed,be obtained if possible,and that the present installation be compared with the original design to note any changes which might curtail boiler output or efficiency.

12.Elimate sparking commutators on mechanical draft fan motors.

13. Check circulating water system to determine whether rated

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quantity of water is flowing through the condenser of the 5,000 kw turbine generator unit.

14. Inspect pulverized fuel boiler and pulverizer to determine its availability for emergency use.

15. Study the possibilies and adv antages of burning fuel oil in the pulverized fuel boiler, balancing the desirability of repairing the pulverizer against the cost and availability of fuel oil.

In this connection, it is to be noted that the full out put of both turbines - generators units will not be secured through the operation of the two stoker-fired boilers alone.

The foregoing recommendations are the results of an inspection of the Palermo Electric Generating Station, made on the 13, 15 and 16 of November, 1943 by Majors Barry and Renton. Lieutenant Colonels Cisler and Lapper also participated in the inspection but were not present for the entire time.

This report is being submitted in quadruplicate.

A summary report has also been made.

Edmund J. Barry

EDMUND J. BARRY
Major, C. E.

Vinal S. Renton

VINAL S. RENTON
Major, Infantry

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HEADQUARTERS
ALLIED MILITARY GOVERNMENT
Public Works & Utilities Sub-Commission

VSR/efe

21 November 1943

Subject: Summary Report, Palermo Electric Generating Station.

To: Acting Director, Public Works and Utilities Sub-Commission.

At a time when it is desirable to economize both in the use of coal and electricity, the Palermo Electric Generating Station is burning coal at an inefficient rate and is generating less than 30 percent of the electrical energy it was designed to produce. These conditions arise largely from the fact that the station equipment has not been properly maintained for a long period of time.

The plant, about 20 years old, contains two stoker-fired boilers now operating, a pulverised coal boiler which needs repairs before it can be utilized, and two steam turbine-generator units having a total capacity of 12,500 kw. The present coal rate is estimated to be 3.3 lb per kw-hr. The station is carrying an average load of about 2,000 kw and a peak of about 3,500 kw.

Run-of-mine coal is stored adjacent to the plant and is conveyed to the boiler room by means of belt conveyors and a bucket hoist. The coal crusher has been damaged by bombing and is presently not in use. An attempt is being made to use a sledge hammer to break the larger lumps of coal manually, but big

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pieces are still reaching the stoker hoppers.

The two Babcock and Wilcox stoker-fired boilers were designed to produce 52,800 lb of steam per hour each at 207 lb per sq in gage, and 680 F. The mechanical draft system for each boiler includes two induced draft fans, and one forced draft fan, all motor driven. One induced draft fan is presently out of service because of a damaged motor. The boilers are presently being limited to steam outputs equivalent to electrical loads of 2,000 and 1,500 kw respectively, and both are therefore required to carry the present load. It is believed that one boiler should be capable of generating sufficient steam to carry 3,500 kw if it were in good condition and operated properly.

It is believed that the boilers are limited to the present low steam outputs because of their age, because tubes have failed occasionally, and because the tubes are not cleaned frequently.

The stoker-fired boilers were found to contain large clinkers and there were noticeable coke in the ash. It is believed that this condition results, in part, at least, from the introduction of large uncrushed lumps of coal into the stokers.

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A steam gauge on each boiler is the only guide 594 boiler operation. There are no furnace draft gauges, and

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based upon the fact that flame and gases are being blown through the boiler setting into the building, and past the furnace side access doors, and also upon the fact that the stacks are not smoking, it is believed that a greater amount of air is being supplied than is needed for efficient combustion, resulting both in a decrease in boiler efficiency, and in an unnecessary expenditure of electrical energy in driving the mechanical draft fans. The breeching appeared to leak and the commutators of the mechanical draft fan motors are sparking badly. Sulfurous fumes from the boiler setting, and probably from the breeching are so strong in the vicinity of the fans that even a cursory daily inspection of them is an extremely unpleasant task.

The pulverized fuel boiler has been out of service for some time. It was originally designed to generate 90,000 lb per hour of steam at conditions similar to the two other boilers. The backwall is bulged outward. The pulverizer needs repairs. The condition of the tubes and the drums is not known.

The turbine room contains two turbine-generator units, a 5,000 kw Escher Wyss machine now operating, and a 7,500 kw Ljungstrom unit out of service because of a damaged oil pump and circulating water piping. The 5,000 kw unit runs smoothly. Station employees state that the blades are intact but there is considerable internal steam leakage through worn clearances. It is understood that efforts are being made to

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obtain a new oil pump for the 7,500 kw unit; the new circulating water piping is expected to be at the plant within a week.

At a load of 3,500 kw, the exhaust hood of the 5,000 kw unit felt very warm; the vacuum was 67 centimeters, and there was an appreciable rise in the temperature of the circulating water, suggesting that the flow of circulating water through the condenser is less than original design conditions.

A mercury arc rectifier unit in the turbine room basement furnishes direct current for the auxiliary drives.

The electrical equipment of the plant appeared to be in good condition.

Recommendations

In order that the station may be operated reliably and efficiently, it is respectively recommended that the steps mentioned below be taken. It is believed that if recommendations 1, 2, 5, 7 and 9 are carried out, increased generating capacity will be most easily realized, making it possible to carry a greater system load; or to store a greater amount of water in the hydro reservoirs.

1. Test boiler safety valves for operation at prescribed pressure; check overspeed trip on 5,000 kw turbine-generator unit.

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2. Calibrate essential existing instruments, both mechanical and electrical, against accurate standards.

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3. Provide sufficient portable lights for the station operating personnel.

4. Relocate the existing makeshift coal chute from the boiler room bunker to No. 2 boiler so that coal is discharged directly to No. 2 boiler stoker hopper. Replace the original bunker which supplied coal to No. 2 boiler when time permits.

5. Replace the damaged coal crusher and in the meantime, place a grating at the discharge end of the yard coal conveyor to remove the larger lumps of coal.

6. Clean up the inside of the station.

7. Install furnace draft gauges which may consist of glass tubing, bent to a "U" shape, and filled with water.

8. Make the 7,500 kw turbine-generator unit available for operation as soon as possible.

9. Make the induced draft fan, now out of service, available for operation as soon as possible.

10. Check the temperatures of the flue gas and the steam leaving the boilers and note any deviations from design conditions.

11. Examine and clean stoker fired boilers, paying particular attention to the location and condition of the baffles, and to the condition of the tubes.

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12. Eliminate sparking commutators on mechanical draft fan motors.

13. Check the circulating water system to determine whether flow is up to design figure.

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14. Inspect the pulverized fuel boiler and pulverizer to determine their availability for emergency use.

15. Study the possibilities and advantages of burning fuel oil in the pulverized fuel boiler as opposed to repairing the pulverizer.

The foregoing recommendations are the results of an inspection made of the Palermo Electric Generating Station, made on the 13, 15 and 16 of November, 1943 by Majors Barry and Renton. Lieutenant Colonels Cisler and Lapper also participated in the inspection but were not present for the entire time.

This report is being submitted in quadruplicate.

EDMUND J. BARRY
Major, C. E.

VINAL S. RENTON
Major, Infantry

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UTILITIES: SICILY

Part I. Electric Utilities

A. The transmission Grid.

The electric service in Sicily is dominated by the Societh Generale Elettrica della Sicilia (hereafter referred to as "S.G.E.S.") a private enterprise. Their map showin g the system is inclosed as "Inclosure No. 1" on which the proposed lines and Stations ("in progetto") have not been built.

In certain towns on the island secondary, independent companies purchase wholesale and distribute to one or more communities. Others have generating stations which can be interconnected with the grid if desired. These are shown in green on the map "Incl. No. 1."

There are about 80 towns known to have their own independent plants with no connection to the grid. These are hydro or diesel plants and are not shown on the map.

There are also industrial plants which have their own power plants operating by steam or diesel engines. These are mostly mines in the Agrigento-Enna region. They have no facilities for connection with the grid, but the engines do no operate satisfactorily on interconnection with the grid. They have been used during this emergency to supply local loads, by disconnecting them from the grid.

The damage to the grid is essentially as shown on the map, "Incl. No. 1" which shows repairs completed on 1 Nov. 1943. All these repairs were made by S.G.E.S. using supplies on hand.

Primary distribution is 10,000 volts with secondaries 4 wire star 150/260 volts. Lighting is 150 volts; power 260 volts, three phase; all at 50 cycles. Exceptions: certain towns in N W Sicily which were purchased by S.G.E.S. and added to the grid operate at 110/220 volts 50 cycles.

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B. Power Plants.

The S.G.E.S. operates from three steam plants, seven

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hydro plants and four diesel plants; the diesel plants being small and so old as to be none too reliable. Maintenance of the steam plants had not been too good, while maintenance of the hydro plants had been excellent.

The hydro plants operate from water source of widely varying characteristics, presenting a complicated problem of choice of plants to carry the load. Some have constant spring flow 365 days per year, while one is entirely from a large reservoir. None of the hydro plants were damaged in any way. Two even transmitted power through the battle lines for several days.

A summary of the plants: their location, electric interconnection, damage, equipment and fuel requirements are shown on the map "Ingal No. 2". For each item of equipment there is a note as to its condition as follows:

(a) No damage; or such slight damage as to warrant no mention of the fact.

(b) Considerable damage, but repaired as of Nov. 1 1943.

(c) Seriously damaged and capable of only partial operation.

(d) Damaged beyond possibility of immediate repair.

C. Observations thought to be of possible value for planning.

1. The utilization of electricity or "saturation" is only about 10% or 15% of that in the U.S. measured in KWHs. per capita. The essential loads (drinking water, food preservation and preparation such as refrigeration and flour mills; hospitals; sewage movement; etc.) may be estimated as 30% to 50% of a equivalent use in the U.S. There is therefore about three times as large a proportion of the supply which cannot be diverted without introducing counterbalancing problems of supply or health.

This sharply reduces the amount of civilian power which may safely be diverted to semi-military use such as ice cream production for Army messes, AAC operations, lighting for billets, etc. There has been overestimation of the amount of use to which civilian uses can be curtailed safely. As

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an example, one result is the possibly permanent ruin of a large sulphur mine in Sicily from lack of pumping power, when the sulphur of this mine and others is needed for export to U.K.

Supply plans should include:

a. Adequate fuel and lubricants for the plants to be operated, including allowances for isolated plants not of record. Fuel should include coal, diesel oil, gasoline; and lubricants should include supplies for large turbines. One large turbine is now inoperative from lack of oil.

b. Insulators; especially suspension units which can be used in strings as necessary for use on 5KV to 100 KV circuits. These are favorite targets for "marksmen", even in rear areas: and are a common need.

c. Tapes, compound, and lead sheets for sleeves for use in splicing underground cable.

d. An adequate supply of lamps for the systems to be taken over with proper bases and voltage ratings; and wiring materials to match.

e. Transformer oil: much is lost by small arms fire puncturing tanks and radiators without damaging coils, and the tanks are readily mended by welding.

f. Transformers to provide proper secondary power for use on radio, lighting and other military electrical equipment in which frequencies are immaterial but for which civilian power is desired to save army generators.

g. Bombing shatters glass and most power plants are built with large areas of windows. Supplies of blackout materials and colloglass would speed up repairs.

h. Emergency financing may be required to keep employees at work. This may at times include paying by rations in kind for entire families where civilian supplies are difficult to obtain.

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i Labor policies as to rates should be fixed

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in line with normal local prices to avoid labor eruptions, strikes and shutdowns. Fixing of rates by army unit commanders should be prevented.

3. To prevent diversion of equipment it is suggested that all utility property - including stores, office supplies, transportation and equipment, be promptly frozen by the engineer of an invasion unit; and that notice of the freezing be given by thoroughly posting the utility premises. Otherwise power poles may be used for fuel while a needed line cannot be repaired; or a motor may be taken for a repair shop, which cuts off a circulating pump in a power plant and thereby reduces plant capacity; and there is a lack of electricity to run the motor.

4. Favorable factors which may not be met elsewhere:

a. Being somewhat isolated, Sicilians had been able to hoard supplies, concealing them from the Italian government and the German Military authorities. Believing the American recources to be unlimited and immediately available they have made use of their hidden reserves in the belief that they now have unlimited resources available from America and U.K. Furthermore, the occupation was welcomed by 90% of the population and their cooperation on the whole nearly as good as though in liberated American Territory. This cannot be assumed for other regions.

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PART II WATER UTILITIES

A. Aqueduct systems and condition.

The normal water supplies in Sicily are entirely inadequate during the dry season, as measured by American Standards.

Rationing in various forms is almost universal and is accepted as normal. Perhaps because there is such widespread recognition of the results of water shortage, no cases of deliberate sabotage are known to have occured; although there were innumerable cases of puncturing pipes, to get water from the main where service was shut off because of damage to branch lines.

There were serious difficulties from improper tapping of water supplies for military uses, especially where it was done by other than Engineer water supply units. A primary supply conduit passing through a bivouac area would be broken to allow water to escape for use, the unused water being allowed to waste.

The water systems in all the larger towns suffered seriously from bomb damage. These had been given emergency repairs to allow serving most of each town before or immediately after occupation by the troops. In Palermo for example, out of approximately 200 breaks in the larger mains, 130 had been repaired before occupation by the Americans on July 23rd. and the system was repaired by 1 Sept. 1943 excepting in completely demolished areas.

As an example, the dates of breaks and of repairs to mains in Palermo are given in the table "Incl. No.3". By 1 Sept. the Company was able to place a repair crew on a break the day it was reported. Some work is being done currently in demolished areas.

B. Repairs to systems, and emergency operations.

It can be safely stated that there was full cooperation between all parties, Army Units, AMGOT, Italian City officials, Water Companies and constructionfirms in efforts to restore service; although not all Sicilian personnel have been fully capable, many have not been too aggressive.

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Since water supply affects health, and troops were always present in and around the larger towns, the Army provided emergency assistance through Utilities Detachments, Engineer troops and some Engineer supplies for immediately required repairs.

The majority of the work was done by civilian contractors, through special civic projects controlled by AMGOT CAO's, by the Engineer Seventh Army; or the C.R.E., Eighth Army.

Supplies of pipe were on hand in sufficient quantities to complete all vital repairs, although concrete pipe was subsituted in places for steel or cast iron. (N.B. It is probable that the reserve stores in Sicily were greater than will be found elsewhere in Italy). Labor was available from prisoners of war and "relief workers" on the city charity rolls.

C. Organization and Control.

Water systems include:

1. Individual supplyefrom a spring or well for a home, farm villa, or castle.

2. Village fountains from which each person carries his own.

3. Municipally owned and controlled aqueducts and distribution systems.

4. Privately owned, municipally controlled systems.

5. The Ente Aqueduct of Sicily, a TVA type of State enterprise authorized and financed to acquire, maintain, extend and operate the larger aqueduct systems supplying groups of towns, particularly where poverty in a region limited the ability of the population to care for themselves (Under investigation).

D. Supply Problems

As was given above, sufficient stores for emergency 584
repairs were found in Sicily, with some minor assistance from stocks under Army control.

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Shortages were keenly felt in hand tools, power tools and transport. It was occasionally necessary to lift large blocks of stone from above breaks or to clear heaps of rubble and otherwise handle bulky or heavy loads for which heavy equipment was essential.

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PART III. GAS UTILITIES

A. There are five gas plants in Sicily, three operated by cities or communes (Palermo, Catania, and Trapani) and two by the S.G.E.S. (Messina and Agrigento). All were seriously damaged by bombs.

Because there was no visible supply of coal sufficient for their needs (est. at 5500 T/mo. for full operation of 5 plants) the situation of the gas plants was at first given only cursory consideration. The Engineer, Seventh Army, established the following policies which have not been essentially changed:

1. Guards were established at important Gas works.

2. The facilities for manufacturing certain chemicals and gasses were put into operation for Army supply.

3. Gas departments were authorized to proceed with repairs on their own initiative with such resources as were available to them:

Assistance in making repairs, on a non-priority basis, was given by A.M.G. officers.

B. Present status of gas plants.

1. The Palermo Gas Department reports that its mains and equipment are essentially ready to operate, the mains having been either repaired or cut off the system. Some repairs are unfinished in the plant.

2. The Trapani Gas plant is giving service in a limited area.

3. The Agrigento plant is small and capable of functioning on a limited basis.

4. The Messina and Catania plants are labelled "total loss" by the A.M. officers familiar with them.

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