ACC 052/PWU 10000/150/4

10000/150/4

ELECTRICITY SARDINIA
JAN. 1944 – SEPT. 1945

Tel : 478906 HEADQUARTERS ALLIED COMMISSION VSR/sg
APO 394
Public Works and Utilities Sub-Commission

127

052/PWU. 19 Sep 45

Subject: Electricity Supply to Cold Store - BASTIA CORSICA

To : Engineer Section (Br) A.F.H.Q.

125

1. In reply to your letter dated 5 September 1945, Ref ENG/2160, same Subject, the Electrical Division Public Works and Utilities Sub-Commission regrets that it can not assist in the matter of electricity supply to the Bastia installation, since the Allied Commission does not have jurisdiction in matters of this nature on the island of Corsica.

For the Chief Commissioner :

Lt. Col. Inf.
GEORGE F. PARKER,
Lt-Col. Inf.,
Chief, Elec. Div.

Gen office - CC/prepare letter - R (1+3) R

052/PWJ

Subject: Electricity Supply to Coal Stores - Bastia Corsica 126

To : Engineer Section (Br) AFHQ

1. In reply to your letter dated 5 September 1945, ~~Same Subject~~ Ref ENG/2160, Same Subject, the Electrical Division Public Works and Utilities ~~Sub-Com~~ Sub-Commission regrets that it cannot assist in the matter of electricity supply to the Bastia installation, since the Allied Commission does not have jurisdiction in matters of this nature on the island of Corsica.

For the Chief Commissioner

Col Parker

794

ENGINEER SECTION (BR)
A.F.H.Q.
C.M.F.
Tele : Freedan 972.

125

Subject:Electric supply to Cold Store - BASTIA, CORSICA ENG/2160

To : H.Q. Allied Commission
(Public Works & Utilities Sub Commission
Electrical Division) 5 SEP 45.

1. It is understood from C.C. R.A.S.C. Corsica/Sardinia that the electric supply is only available for short periods to the civilian cold store at BASTIA, CORSICA, making impracticable, the use of this cold store for the purpose of storing meat.

2. Is a continuous electric supply to this cold store possible or does the fuel position and the state of the generators make this impossible ?.

127 refers 10/9/45 Copy of letter to be discussed with Dist 3. Corsica is under French and therefore beyond Province of A.C. with foregoing note.

L. JOHNSON,
Capt. R.E.
for Brigadier,
Director of Works

Copy to : D.S.T., A.F.H.Q.
C.E. 3 District.

793

INDUSTRY SUB-COMMISSION
ROUTING SLIP

Date 28.3.45...

FROM	TO
[illegible] W. S. VAUGHAN	
✓ LT. COL. W. J. MASKERY	
✓ ADMIN. OFFICER: MAJ. R.W. REEVE	
ADJUTANT: CAPT. T. F. HUNTER	
LT. COL. [illegible] . [illegible]	
MAJ. [illegible] . [illegible] . KIMMINS	
MAJ. W. N. [illegible]	
~~MAJ. G. REID~~	
MAJ. J. ROSENBAUM	
LT. CMDR. J. SCHLEE	
MAJ. McNAUGHTON-WRIGHT	
CAPT. D. S. KINGSEY	
CAPT. T. G. ELLIOTT	
CAPT. D. B. ROBERTS	
CAPT. N. R. L. MACDONALD	
CAPT. R. B. BULLOCK	
LT. J. E. [illegible] . DURY	
LT. L. [illegible]	
DR. R. S. OPATOWSKI	
MR. S. T. BRODTZFOOS	
MR. V. DOMKOVICH	
SIG.RA [illegible] . CAVALLI	
CHIEF CLERK - T/SGT.D. GIARDINA	✓
ECONOMIC SECTION	

FOR

_______ Necessary Action
_______ Investigation & Report
_______ Recommendation & Remarks
_______ Information
_______ Approval
_______ To note & return/pass on 792
_______ Signature
_______ Discuss
_______ File
_______ B/F

REMARKS ~~This is a P.W. & A. [illegible]~~ [initials]
project - pass letter
to them [initials]

HEADQUARTERS ALLIED COMMISSION
APO 394
Labor Sub-Commission

28 MAR 1945
5686
P.W. & U. S/C

123

TEL : Ext. 204 DCS/rmw

REF : LSC/807 26 March 1945

SUBJECT: Labor

TO : Industry Sub-Commission

1. I am transmitting to you herewith for action, memorandum from Regional Commissioner, Sardegna, dated 18 March 1945 (IPN/1610) reference the above subject.

W H Braine
W. H. BRAINE
Director
Labor Sub-Commission

Encl. 1

Lt Col Rapper
See attached
29/3

LP Bour s/c

3141

LSC/807

HEADQUARTERS
ALLIED COMMISSION
SARDINIA REGION

18 March 1945

REFERENCE: TPM/1610

SUBJECT: Labour

TO: Headquarters, Allied Commission

1. I carried out an inspection in March 1945 of the hydro electric project for the upper FLUMENDOSA River in SARDINIA. Very briefly, the electrical distribution position before the war involved a load of about 45,000 kws which was near the maximum from existing sources.

2. The FLUMENDOSA project is to provide electricity for the future development of the Island including, in particular, development of mining and the full project involves the installation of plant to produce an additional 62,350 kws. Ampr.

3. Work commenced in 1941 and has never been entirely stopped. At the present time the bulk of the rock tunnels and rock chambers for the power houses are completed as far as excavation is concerned and partly completed as regards cement lining. No machinery has been installed though it is hoped that the machinery may be found intact in Northern Italy.

4. The immediate importance of this work is to give useful employment and assist the rehabilitation of SARDINIA.. At present between 200 and 300 men are employed but work is available for up to 1,500 men for about two years.

5. Immediate requirements are cement, transport and coal. The cement, of which 500 tons are required monthly, can be obtained in CAGLIARI where the cement works now turn out 4,000 tons a month and could increase production.

6. Transport is either by schooner to ARBATAX thence by rail to VILLAGRANDE Station and lorry from VILLAGRANDE Station to VILLANOVA, a short haul of 5 or 6 miles, or by lorry direct from ARBATAX to VILLANOVA, 25 miles, but the road is bad. Alternatively, the cement can be taken by rail from CAGLIARI to VILLAGRANDE and thence by road to VILLANOVA.

7. The capacity of the railway, which is 96 cm gauge, is limited and both alternatives will probably be necessary. Requirements are estimated at 300 tons of coal a month for the railway and three large 7-ton trucks with an allowance of Diesel oil or petrol.

8. The project is run by a private company, the "Societa Elettrica Sarda" but the State makes a contribution and the organisation appeared efficient and well run. Wages are approximately 100 Lire a day with free lodging, and food costing about

2. The PLUMENDOSA project is to provide electricity for the future develop-
the Island including, in particular, development of mining and the full project involves the installation of plant to produce an additional 62,350 kws. Ampr.

3. Work commenced in 1941 and has never been entirely stopped. At the present time the bulk of the rock tunnels and rock chambers for the power houses are completed as far as excavation is concerned and partly completed as regards cement lining. No machinery has been installed though it is hoped that the machinery may be found intact in Northern Italy.

4. The immediate importance of this work is to give useful employment and assist the rehabilitation of SARDINIA.. At present between 200 and 300 men are employed but work is available for up to 1,500 men for about two years.

5. Immediate requirements are cement, transport and coal. The cement, of which 500 tons are required monthly, can be obtained in CAGLIARI where the cement works now turn out 4,000 tons a month and could increase production.

6. Transport is either by schooner to ARBATAX thence by rail to VILLAGRANDE Station and lorry from VILLAGRANDE Station to VILLANOVA, a short haul of 5 or 6 miles, or by lorry direct from ARBATAX to VILLANOVA, 25 miles, but the road is bad. Alternatively, the cement can be taken by rail from CAGLIARI to VILLAGRANDE and thence by road to VILLANOVA.

7. The capacity of the railway, which is 95 cm gauge, is limited and both alternatives will probably be necessary. Requirements are estimated at 300 tons of coal a month for the railway and three large 7-ton trucks with an allowance of Diesel oil or petrol.

8. The project is run by a private company, the "Societa Elettrica Sarda" but the State makes a contribution and the organisation appeared efficient and well run. Wages are approximately 100 Lire a day with free lodging, and food costing about 25 to 30 Lire a day. Workmen get the normal ration and "A" supplementary ration.

9. In view of the importance of providing useful employment in Italy I recommend consideration of the comparatively small demands for transport and coal. [illegible] is not available locally nor are old Italian military vehicles suitable for the steep roads and severe conditions to be met with.

This matter has already had the attention of the Advisory Committee. It is a post war job. A.H.

A.H.C. Pennycuick Lt Col

HEADQUARTERS
21 MAR 1945

Lt Col [illegible]

J. A. C. PENNYCUICK,
Colonel,
Regional Commissioner.

JACP/gch

This seems to be something for your Advisory Committee to look into. [illegible], 27/3

WML/ce

DO/052/PWU.

HEADQUARTERS ALLIED COMMISSION
Public Works & Utilities Sub-Comm.
APO 394.

13 March 1945.

Dear Mr. Fiorelli,

I am writing this as a personal note to you to thank you for your very kind assistance during our visit to Sardinia. I feel the Advisory Committee on Electric Power will be most useful in the future and will be a means for you to present your case to the Ministry.

Please give my kindest regards to Mrs. Fiorelli, Francis and "Ted".

With best wishes

Sincerely yours

Mr. Tommaso FIORELLI,
Director Società Elettrica
Sarda,

CAGLIARI

Tel.489081
Ext.317.

WML/ce

121

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

052/PWU.

12 March 45.

SUBJECT: Electricity Sardinia, Sicily
Southern Italy.

TO : Ministry of Public Works,
Electrical Division (att: Eng.Asta)

1. In order that the Electrical Division of the Public Works and Utilities Sub-Commission of A.C. could keep a close contact with the Electricity situation in Sardinia, Sicily and Southern Italy, arrangements were made whereby the Electrical Companies made a monthly return giving relevant information.

2. As this will shortly be Italian Government territory, it is considered advisable that all information relating to electrical generating facilities which we have been receiving in schedule form from the electrical companies should be taken over by your Department.

3. I am handing over to you files on this subject and would suggest that you write to the electrical companies of Sardinia, Sicily and Southern Italy informing them that arrangements have been made with us that all information appertaining to electricity supplies in these areas should be sent direct to you, for the future.

4. It is hoped that your Department will be able to tabulate the data in such a manner, so that if it is necessary, to ask for information on the electrical position in any part of these areas, it will be possible to supply this without delay.

W.M. LAPPER,
Lieut-Colonel,
Chief,Electrical Division.

788

C.c. to Col. Jenny.

Tel.489081

HEADQUARTERS
ALLIED CONTROL COMMISSION
PUBLIC WORKS AND UTILITIES SUB-COMMISSION
APO 394

LWL/ec

120

30 Sep. 1944

ACC/05 2/PWU

Subject : Electricity

To : HEADQUARTERS SICILY REGION
Attention Regional Engineer

1) - Reference is made to your letter 22 Sep. 44 - File RTC/675.

2) - In view of the present situation we will not permit the removal of any power station equipment whatsoever from Sardinia to Sicily.

3) - Therefore please cancel the permit for this trip.

E.J.BARRY
Major, C.E.
Acting Chief Elec.Div.

Copy file 150

787

26 SEP Recd

052 CEB.

ALLIED CONTROL COMMISSION
SICILY REGION HQ
APO 394

DAB/cb

22 Sept 44.

In reply refer to : RTC 675.

SUBJECT : Electricity.

TO : Public Works and Utilities Sub Commission.

1. Reference attached copy CEB/ 16/ 5 dated July 12,1944 from Central Electrical Board A.A.I.

2. Ing. Modica thinks if he paid a visit to Sardinia he might be able to find some spare materials for the Sicily plants.

3. As for the transfer for a generating plant from Sardinia to Sicily my own opinion is that you would have a greater need for it in Italy.

4. May I have your views please.

For the Regional Commissioner

DAVID A. BOYD
Major R.E.
Regional Engineer.

Enc. 1
1. letter

HEADQUARTERS
26 SEP 1944
A. C. C.

786

COPY

A.A.I.
CENTRAL ELECTRICAL BOARD
HQ AAI CMF

REF: CEB/I6/5
12 July 1944

TO :- AMG/ ACC, SICILY
AMG/ ACC, SARDINIA

1. The bearer of this letter, Ing. Alfonso MODICA, identity card N° 648400, Chief of Power production, G.E.C. Coy, Sicily, has been instructed by the AAI Central Electrical Board to proceed from Sicily to Sardinia to inspect steam power generating equipment in Sardinia and to report to the AAI Central Electrical Board the feasibility of transferring a turbine electric generator from Sardinia to Sicily.

2. You are requested to do everything requisite to facilitate the journey of Ing. Modica from Sicily to Sardinia and return, and furnish such other assistance as may be required.

JAMES P. GROWDON,
COLONEL CE,
Vice Chairman, AAI C.E.B.

Copy to: Lt. Col. W.M. LAPPER, PW&U Sub Commission ACC.
Ing. Modica.

Ltr

LWL/nc 119

,Tel 489081

HEADQUARTERS
ALLIED CONTROL COMMISSION
PUBLIC WORKS AND UTILITIES SUB-COMMISSION
APO 394

ACC/052/PWU 26 Sep. 44

Subject : Electricity Report - Sardinia

To : Regional Commissioner - Region VI

1) - Reference your letter 12 Sep. 44 file tptn/1610.

2) - Enclosed are three copies of final map showing layout of Sardinian Electric System which you requested.

E.J.BARRY
Major, C.E.
Acting Chief, Elec.Div.

enclosures 3 maps

784

16 SEP Recd
CCB.

HEADQUARTERS
ALLIED CONTROL COMMISSION
REGION 6

12th September 1944.

To : Headquarters, Allied Control Commission, Public Works and Utilities Sub-Commission, (for the Attention of Lt-Col. W.M. LAPPER)

Subject : Electricity Reports - Sardinia.

Reference : Tptn/1610.

With reference to your ACO/150/PWU of 31st August 1944, I return herewith the SARDINIA Electricity Report. I have now visited the 4 main power palnts.

1. COGHINAS } Hydro Electric
2. TIRSO }

3. S. CATERINA } Steam
4. S. GILA }

There are some minor inaccuracies in the Report but it is generally a good and concise summary and its loan has been very useful.

I should be most grateful if I could be sent a copy of the final map showing the layout with the pencil notes that are on it.

Lt Col Lapper
16/9

J.A.C. Pennycuick
Colonel

J.A.C.PENNYCUICK.
Colonel.
Regional Commissioner.

JACP/ajs.

783

Maj Barry
thought you would like to see these comments please return

15 SEP Recd 0520 Opns

RESTRICTED

ALLIED CONTROL COMMISSION

P W B U file 118

INCOMING MESSAGE

5287 Sardegna

INFO - ACTION

TO: ~~XFHQ/SGD/ZKCNED/~~ ACC REG 6 INFO FILPOT HQ ACC

SIGNAL MESSAGE CENTER No: 16/15

FROM: AFHQ SGD SACMED

CLASSIFICATION: RESTRICTED

REFERENCE No: FX25314

PRECEDENCE: ROUTINE

DATE AND TIME OF ORIGIN: SEP142205

OFFICE OF ORIGIN: CITE/ FHORB

YOUR SIGNAL 51/22 OF AUG 22 MATERIALS NEEDED MONTEPONI COY CONNECTION MANUFACTURE ZINC OXIDE PERIOD GIVE FOLLOWING DETAILS REGARDING ELECTRODES GRAPHITE ACHESON THREE QUARTER INCH 12 INCHES LONG PERIOD TYPE AND MAKE OF MACHINE FOR WHICH REQUIRED PERIOD AC OR DC PERIOD VOLTAGE PERIOD TYPE OF FITTING FOR WHICH ELECTRODE REQUIRED PERIOD QUANTITY REQUIRED PERIOD SECOND ADDRESSEE FOR DDOS

HEADQUARTERS 15 SEP 1944 A. C. C.

ACC DIST

INFO-ACTION-P WORKS 2

INFO-A/CC

ECON SEC

FILE 2

FLOAT

INFO - ACTION

782

DATE and Time of RECEIPT SEP150910

Distribution:

RESTRICTED

HEADQUARTERS
ALLIED CONTROL COMMISSION REGION 6
SARDINIA

++++++++25 AUG Recd

TPTN/1612

SUBJECT : Transformer Oil.

TO : Public Works and Utilities Sub-Commission
Hq. ACC - APO 394.

1.. Request has been made by the Elettrica Sarda of Sardinia for 12 1/2 tons of transformer Oil for use at thier Saint Antioco Plant to put in operation a reserve bank of transformer.

2.. Unless the above - mentioned oil is received at an early date, serious damage to transformers will result.

3.. The POL representative of the Petroleum Section, Advanced AFHQ has been contacted and stated that he has no such quantity on hand and that the request will have to made to his section by you.

HEADQUARTERS
2 = AUG 1944
A. C. C.

23/8/1944.

For the Regional Commissioner
Edward E Smith
EDWARD E. SMITH.
Captain S.R.
Regional Engineer.

781

EES/em/

116

LGP/tr

Tel:489081

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

1 Sept.44.

AGO/052/ZZU

SUBJECT : Electricity .

TO : Societa Elettrica Sarda
Societa per Azioni
Roma

1. Herewith letter A-D/18/317/45 dated 24 Aug 44 from your Sardinia Office which is forwarded to you for attention .

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

Aide 115

LWL/bb

Tel: 489081

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

ACC/150/PWU

31 Aug,44

SUBJECT: Electricity Report Sardinia
Col. J.A.C. Pennycuick.

TO : Regional Commissioner,
Region VI

1. While you were in my office recently, I loaned you my copy of report on electricity situation in Italy.

2. Please return it as soon as possible as it is our only copy.

3. If you desire we will arrange to have a copy made for you.

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

779

HEADQUARTERS 29 AUG Ref. 052 cc/s.
ALLIED CONTROL COMMISSION FOR SARDINIA
Regional Office of Tansportation and Public Works.

114

TO : It.Col. W.M. Lapper Chief, Util & Adm.Div.

SUBJECT : Flectricity.

REFERENCE : ACC/052/PWU.

1... Enclosed find answer from the local Office of the Soc. Elettr. Sarda to their Rome Headquarters Office.

2... This letter is requested to be forwarded to the addressee.

3... This letter is an attempt to obtain information so that U.S. standard bearings may be substituted for Italian sizes.

4... This letter answers question asked by ACC/HQ of HQ/SES as to possible length of continuation of operation of S.E.S. altho in negative form.

For the Regional Commissioner

Edward E. Smith

25/8/1944.

EDWARD E. SMITH.
Capt. S.R.
Regional Engineer.

EES/em.

Lt Col Lapper for

30/8

113

Tel. 489081

WML/mc

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

ACC/052/PWU

19 Aug. 1944

Subject: Electricity.

To : Regional Commissioner Reg.VI

Will you please pass the attached correspondence to the Sarda Company. This is a letter from their Rome Headquarters Office in connection with the supply of spare parts.

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

5 AUG Recd
052
ab

HEADQUARTERS
ALLIED CONTROL COMMISSION FOR SARDINIA
REGIONAL OFFICE OF TRANSPORTATION AND PUBLIC WORKS

EES/rg

Ref: ACC/052/PWU.

Cagliari 29 July, 1944

SUBJECT: Request for materials for Soc. Elett. Sarda.
TO : Public Works and Utilities Sub-Commission,
Attn: Lt. Col. W.M. Lapper,
Headquarters A.C.C. - A.P.O. 394.

(1) Reference letter 21 July, 1944 and letter of Ing. Piero Cassini, President S.E.S. of 11 July, 1944 requesting tires and clothing.

(2) Great difficulty is being experienced in placing the blame for non-performance under para. 5 of notes of the June meeting of Regional Engineers. The requirements of the S.E.S. for tires and clothing had never been submitted to this office prior to letter of 11 July, 1944, nor did the S.E.S. complete proper application forms to the Consiglio Economia of Cagliari Province, altho they did so for Sassari and Nuoro Provinces, and such tires are included in returns made from this office.

(3) In connection with directive Reqn. Div. 451.92, of 20 May 1944, requests from this office to the Consigli Economie of the three Provinces of Sardinia for information of needed tires on individual forms according to para. 4 were promptly forwarded after receipt of the directive. This directive was also sent to the office of the High Commissioner who also received a similar directive from the Sotto Segretario di Stato, dated 27 May 1944. The High Commissioner ordered tire information on proper forms to be collected by the Consigli Economie and sent to this office. This was correctly performed by the Sassari and Nuoro Consigli, but Cagliari sent only information on cars but no trucks. Since the letter had the suspension date of 15 June, Major Spann sent all available information to Industry and Commerce Sub-Commission at that time. This letter was dated 19 June, Ref. Tptn 1607.

(4) With regard to shoes and clothing, a formal letter

Piero Cassini, President S.E.S. of 11 July, 1944 requesting tires and clothing.

(2) Great difficulty is being experienced in placing the blame for non-performance under para. 5 of notes of the June meeting of Regional Engineers. The requirements of the S.E.S. for tires and clothing had never been submitted to this office prior to letter of 11 July, 1944, nor did the S.E.S. complete proper application forms to the Consiglio Economia of Cagliari Province, altho they did so for Sassari and Nuoro Provinces, and such tires are included in returns made from this office.

(3) In connection with directive Reqn. Div. 451.92, of 20 May 1944, requests from this office to the Consigli Economie of the three Provinces of Sardinia for information of needed tires on individual forms according to para. 4 were promptly forwarded after receipt of the directive. This directive was also sent to the office of the High Commissioner who also received a similar directive from the Sotto Segretario di Stato, dated 27 May 1944. The High Commissioner ordered tire information on proper forms to be collected by the Consigli Economie and sent to this office. This was correctly performed by the Sassari and Nuoro Consigli, but Cagliari sent only information on cars but no trucks. Since the letter had the suspension date of 15 June, Major Spann sent all available information to Industry and Commerce Sub-Commission at that time. This letter was dated 19 June, Ref. Tptn 1607.

(4) With regard to shoes and clothing, a formal letter has been written to the Regional Office of Industry and Commerce, approving the request of the S.E.S. of 11 July requesting transmission to Industry and Commerce Sub-Commission. A verbal request for salvaged shoes and clothing from local sources had been made at the time of the visit to this office of Ing. Cassini, President of the S.E.S. and had been met with refusal. This explains statement quoted in para. 2 of your letter of 21 July 1944.

776

For the Regional Commissioner.

Edw. E. Smith

Edw. E. Smith,
Capt., S.R.,
Regional Engineer,
Region VI.

File

Tel: 478200

CWA/tr

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

ACC/052/PWU

21 July,1944.

SUBJECT : Request for materials

TO : Regional Engineer; Region VI.
att. Captain E.E. Smith .

Ing. Piero Casini, President of the Società Elettrica Sarda, called at this H.Q. today with reference to his letter to you of the 11th July 1944.

He stated that with reference to items 1 (tyres and spare parts for automobiles) and 3 (shoes and clothing) you informed him you were unable to provide them and suggested that he applied to this H.Q.

If the above is correct, your attention is directed to the Notes (copy attached) on works and materials, distributed at the June meeting of Regional Engineers at this H.Q. and to para. 5 of those notes in particular. From these you will observe that the requirements of the S.E.S. should, after approval by you, have been passed on to the Regional Supply Officer for transmission to Industry and Commerce Sub - Commission together with the appropriate forms.

Further with regard to tyres, a directive No Reqn. Div. 451.92 dated 20 May 1944 addressed to Regional Commissioners, called for a comprehensive return of all requirements of tyres including Public Utility Companies. An overall requisition based on all Regional returns has already been submitted to Higher Authority and supplementary requisitions will not be entertained. Actual distribution will be based on requirements previously submitted so please informs this H.Q. what tyres for the S.E.S. were included in your return.

775

./.

Please also take immediate action on the request for shoes and clothing.

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

Encl.:Notes

CC. to : File 122

SOCIETÀ ELETTRICA SARDA
SOCIETA' PER AZIONI - SEDE IN ROMA
Capitale L. 192 575.000

Telegrammi: ELETTROSARDA
Corrispondenza: Casella Postale 132
C. P. E. di Cagliari N. 594

DA CITARE NELLA RISPOSTA

Mod. 249 7/43 - 10.000

Cagliari, July IIth, I944.

To The Allied Control Commission for Sardinia.
HeadQuarters.
Cagliari

The Società Elettrica Sarda, supplies electric power to all Sardinia (24.000 square kilometers) by means of:

5 (five) hydrogenerating and steamgenerating stations with an output of Kw. I00.000.
I297 kilometers of cables
950 employees and workmen

Due to war conditions and to the impossibility of obtaining supplies from the continent, the activity of the Società is actually going through serious difficulties for lack of the following materials:

I) Transportations (tyres and spare parts for automobiles)
2) Spare parts for the electric machinery (please refer to our previous two request-lists of spare parts we already submitted you)
3) Clothing and shoes for the personnel.

According to your suggestions, I will go personally to Naples in order to take this matter up with Colonel Lapper also.

Majpr E.J.Barry and Major M.O. Wooster also have already been informed of the above.

Enclosed herewith please find lists of tyres, clothing and shoes needed.

I desire to thank you in advance for everything you will be able to do in this connection so as to enable us to continue the regular service of the Società Elettrica Sarda.

The President
Ing. Piero Casini

774

Telefoni: DIREZIONE 24-24 - UFFICI 35-01 - 35-02 - 35-03 - OFFICINA 30-05

VISTI:

Società Elettrica Sarda

DIREZIONE

Our letter of July IIth,I944.

List nº I

Motocars, Trucks, motorvehicles.
List of existing materials:

I)	Automobile	FIAT I500	Director's Office ARBOREA
2)	"	LANCIA APRILIA	" " "
3)	"	FIAT 500	" " "
4)	"	FIAT 1500	Sassari Office
5)	"	FIAT 500	" "
6)	Motorcycletruck		" "
7)	Automobile	FIAT 52I	Coghina's station
8)	Truck	BIANCHI	Chilivani's sub-station
9)	Small truck	FIAT II00	Villasor's sub-station
I0)	Automobile	FIAT BALILLA	Tirso's central station
II)	Small truck	FIAT BALILLA	" " "
I2)	" "	FIAT 6I4	Guspini's sub station
I3)	Automobile	FIAT I500	Cagliari Office
I4)	"	FIAT 500	" "
I5)	Truck	FIAT 626	Cagliari
I6)	Small Truck	FIAT 500	"
I7)	" "	FIAT 5I4	Santa Caterina central station
I8)	Truck	FIAT 626	Flumendosa plant
I9)	Automobile	FIAT BALILLA	" "
20)	"	FIAT 500	" "
2I)	"	FIAT 500	" "
22)	Truck	BIANCHI	for line I20 KW Flumendosa
23)	Automobile	FIAT BALILLA	" " " "

List of materials needed

I
I) Truck ..... for the Sub-station of Monteponi

List of Tyres needed

no.	28	tyres and tubes	size	34x7	(Italian size)
"	I8	" " "	"	4xI5	" "
"	I8	" " "	"	5,5 x I5	" "
"	4	" " "	"	4 x I7	" "

773

Società Elettrica Sarda

DIREZIONE

our letter of July IIth,1944 - List Nr. 2

SHOES and CLOTHING
List of items needed for 900 persons

SHOES	pairs	350.
COVERALLS or Complete suits	nr.	300.
SHIRTS	"	300
DRAWERS	"	300

VISTI.

772

Mod. 244 b - 5/42 - 3000

Elect Sardinia work

106

052 RAE

HEADQUARTERS
ALLIED CONTROL COMMISSION
ECONOMIC SECTION
APO 394

JBT/iab

ES/18

21 Jun 44.

SUBJECT: Meeting.

TO : Mining Division
Coal Division
Industry & Commerce Sub-Comm.
Requisition Division
Public Works & Utilities —
Labour Sub-Commission
Mr. M. Wadleigh.

A meeting will be held in Col. Adams' office at 10:30 hours Thursday, 22 Jun 44 to discuss measures necessary for maximum production of Sulphur, i.e., food for Miners, price of sulphur, requisitions of Mining supplies, amount of electric power available, etc.

J Bruce Thompson Maj R A

J. BRUCE THOMPSON, Major R.A.,
S.O. 2 (CA), Economic Section.

(1). Capt. Langfeldt

Pl. attend with relevant figures (power etc) — which you may find in various Region I reports.

771

(2). Lt. Col. Laffman. On return — to see.

GRR.
22/6.

105

HEADQUARTERS
ALLIED CONTROL COMMISSION
MINING DIVISION
APO 394

In reply
refer to:
Mines-926

21 June 1944.

SUGGESTED AGENDA FOR SULPHUR MEETING.

I. POLICY.

A. Is policy of AFHQ (Cablegram) to produce to a maximum for present needs and stockpiling for future European needs to be activated?

B. If so how is control to be exercised, and by whom, over:

(1) Prices of products.
(2) Allocation of products to consumers.
(3) Priorities on:
  (a) Rations
  (b) Electric power
  (c) Transportation
  (d) Materials of Italian origin.
(4) Wages of workmen.

II. REQUIREMENTS FOR MAXIMUM PRODUCTION.

A. Rations for workers.

(1) Minimum of 400 grams flour per day required.

B. Wages for workers.

(1) Wage scale must be in line with general wage level and sufficient for subsistence.
(2) Are pioneers to be permitted to use prisoners only labourers?

C. Electric Power.

(1) Will sufficient electric power be available for year round operation?
(2) What will be done to enforce allocation of electric power to sulphur mines on 3rd. priority?

770

D. Financing of Rehabilitation:

(1) Is damage to producing plants and financial embarrassment as a result of enforced shutdowns to be recognized as a war damage obligation of the Italian Government?

(2) If so, will pressure be put on the Italian Government to settle these claims promptly in order to provide working capital for producers?

E. Materials and Supplies:

(1) Will requisitions for supplies from the U. S. and U. K. be filled?

(2) Will the small quantities of coal and oil required be authorized?

(3) Will materials obtainable in Italy be furnished under priority from Italian sources, (Timbers, Carbids, Explosives, non transport)?

(4) Can authority and direction be given local Italian authorities to requisition or freeze for sale to sulphur producers at regulated prices local stocks of supplies being sold on the Black Market?

D. Prices of Products.

(1) Dependent on Policy: (See 1-B)

(a) Price to producer dependent on average of all sales, not our prices alone.

(b) Price required depends on cost of materials and wages.

(2) Price at Mine (price less handling.) must be calculated as: (basis, crude or fused sulphur) price aboard ship less the following ~~aboard ship, less~~ a. warehousing handling i to and out of warehouses, insurance, interest on warehouse receipts, sales overhead approximately $.00

b. Rail freight average .100

c. Transportation to railway and loading of railway cars .125

Total shipping cost, average. $.625

(3) Materials costs are indeterminate now because:

(a) Many materials at the moment must be purchased on the Black Market. open

(b) Prices of materials we will ship in are unknown.

(c) In the absence of financial rehabilitation allowances by the Italian Government, repair and replacement of such equipment damaged by dis-use and lack of maintenance materials must be charged to current production.

769

(d) Inability to repair such items as electric motors, Mine cars, lorries, etc., causes increases in production costs.

(4) Labor costs are dependent on:

(a) Wages, which must be revised upward.
(b) Costs of company operated kitchens.
(c) Costs of transportation and/or housing workers at the mines.

(5) Unpredictable added expenses which must be allowed for by the producers are:

(a) Frequent unexpected shutoffs of electric power.
(b) Absenteeism due to upset internal conditions.
(c) Lowered productivity of workers due to low rations (before the occupation, the daily ration for heavy workers was over 800 grms of flour.
(d) Shut downs dues to equipment now in poor state of maintenance.

(6) A reasonable estimate of production costs for the coming twelve months, bearing in mind the above uncertainties, would be as follows: (or Assumptions)

(a) 25 man days per to ton of crude sulphur
£100 per day total labor cost
Labor cost 2/3 of total cost
10% allowance for unpredictable added expenses.

(b) Calculation of production cost:
Man days per ton x cost per man day x 3/2 x 110% or
25 x 100 x 3/2 x 1.1 = 4,025 lire/ton.

(7) On the above basis it is then estimated that price necessary to producers to cover production and shipping costs will be:
4,025 (production) plus 625 (shipping) or
4650 lire per ton F.A.S. ports.

J. H. POLLARD,
Lt. U.S.N.R.
Chief, Region I
Regional Mining
Division, A.C.C.

102

HEADQUARTERS
ALLIED CONTROL COMMISSION
ECONOMIC DIVISION
APO 394

21 June 1944

REMARKS ON AGENDA ITEMS AS APPLIED TO SICILY

I. POLICY.

A. (No Comment.)

B.

(1) Price control for export sulphur can be exercised directly by A.C.C. only in a free market. I.E., we can offer a price for all sulphur delivered to ports for our disposition, without specifications as to minimum quantity.

Indirect price control must be exercised thru the Italian Government. I.E., if we are to require certain percentage of production to be delivered to A.C.C. at a price set by us, enforcement of such requirements must be thru Italian Government channels.

No price direct control of sulphur sold to Italian consumers is possible by A.C.C.

(2) Allocation of sulphur to consumers, including A.C.C. must be thru Italian Government channels.

(3) If sulphur mining is to have priorities on rations, electric power, etc., some definite program of handling thru Italian Government channels. For example A.C.C. has requested the General Electric (Utility) Co. of Sicily to give sulphur mining priority ranking only below military needs and alimentation. AMG has agreed to this verbally. Nevertheless sulphur producers have been repeatedly cut off from highlines and some or thus have already been notified that power will not be available in the fall. NO MEANS OF ENFORCING REQUESTS IS AVAILABLE TO SECTION I, A.C.C. PERSONNEL.

(4) It is recognized that wages in the sulphur industry are too low for subsistence under present conditions. Labor Sub-Commission is now working on machinery to arrive at a reasonable wage. This machinery, to be effective must be activated thru Italian Government channels.

767

101

II. [redacted]

A. [redacted]. Thereon persons are occupational retainers for heavy workers assigned to quarrying, in excess of 300 grams flour per day, retainers authorized by MCA at present are 150 grams flour per day. Actual allotments of flour provide sufficient for approximately 300 grams of bread and pasta per day, equivalent to about 225 grams flour.

This allotment will expire on 1 July 1944, at which time rationing will be done entirely by Italian officials from Sicilian stocks. It appears necessary to MCA that whatever means are necessary to have sufficient ration allowed by the proper Italian Agency. It is considered that a minimum of 400 grams per day of flour is the minimum which should be considered. This represents .8 lbs of flour per day for the number of miners now working, or 4 tons per day if and when the industry is going at its maximum.

B. Italian Labor: Labor division has this question under consideration. At the present moment it is impossible to compete with agricultural demands for labor. Pay for harvest hands is relatively high and ample food is provided them. Some sulphur producers are offering piece work rates but not pay workers 60 lires, good workers up to 85 lire, bonus plus family assistance, premiums, etc.

One glorious feature of the wage situation at present is that many sulphur workers prefer to stay on relief rather than go to work on mediocre installations for the heavy work. It is recommended that steps be taken that Italian channels be known that workers refusing to accept employment taken off relief rolls. bc

C. Electric Power. It is recommended that enforcement of 3rd priority on electric power for sulphur mining be demanded thru Italian Government channels. Otherwise, it is evident that the program will not be followed.

D. Financing. The Italian Government has had for some time a recommendation from the Finance "Ragioniere" in Sicily, supported by the Sicily Chief of the Corps Reale de Miniere, for financing the rehabilitation of a few mines. It is recommended that means be taken to push this thru the government.

E. Supplies. Coal in very modest amounts (about 250 tons per month) has been repeatedly requested but has not yet been made available. Diesel oil, (100 Octane) was allocated for the first time in June and it is expected to be available each month hereafter.

F. Attached is a rough plan suggested by the Regional Commissioner, Region I, for control of sales of sulphur. If such a plan is adopted, or one of similar to the extent that sales within Italy will not be limited as to price, the price offered by A.M.G.O. can be less than otherwise. In such case, a price by A.M.G.O. of 4000 lire per ton will be sufficient to encourage maximum production.

766

J. H. [redacted], Lt. [redacted]
Chief, Region I

FILE MMO

Ref: Minos-326.

22 June 194[illegible]

Notes of Instructions Issued Verbally by Col. Adams, at Sulphur Production Conference, His Office, on the Morning of 22 June 194[illegible].

FOOD

1. Food Sub-Commission is to authorize Region I, by letter immediately, to place Sulphur Miners on Scale "A" Ration, consisting of 573 grms of flour per day (made up of 340 grms of bread plus 100 grms of pasta).

2. Lt. Pollard to give the Mining Division, A.C.C., every two weeks, the number of Sulphur Miners at work. This information then to pass thru Col. Evans, to Col. Adams and to the Food Sub-Commission, who will authorize the release of necessary additional flour to allow the issue of "A" ration to the sulphur miners.

MINE SUPPLIES FROM U. S.

3. (a) Lt. POLLARD AND Col. MARTINO to draft a wire at once for Col. ADAMS to send to Algiers pushing for arrival of the supplies requisitioned in January 194[illegible].

(b) Similar action in another wire on the supplies requisitioned in April 194[illegible].

(c) Similar follow up wires to be sent every two weeks until the supplies arrive.

4. Mining Division is to request help from Col. ADAMS if help is required on movement of 1000 tons of mine timber from Calabria to Sicily.

COAL.

5. Col. ADAMS to phone (write if necessary) to Capt. DAVIS AFHQ, Coal Section representative in Sicily and/or Coal Section Algiers to secure supply of 250 metric tons per month starting at once. (75% imported coal 25% Sardinian coal) for use by the operators at mines in running mines, and mine machinery.

OIL.

6. Lt. POLLARD, if oil supply hits any snags, to advise us, we in turn to handle with Col KING and Major FAGAN.

ELECTRIC POWER.

7. Lt. POLLARD to draft a letter for Col. ADAMS to send to Col. MARTINO to insure distribution to Sulphur Mines the power they require.

8. Public Works Sub-Commission to draft a wire with Col. MARTINO to push the arrival of power supplies on requisition from the U. S. A.

99

PRICE OF [illegible]
[illegible] IN SICILY.

9. Lt. ROLAND to locate the stuff, report it to Col. CARTER to Col. EVANS who will see to the setting of prices so Mine Operators can buy the stuff.

PRICE OF SULPHUR.

10. Price conditions to make:
(1) Recommendation of price per ton metric; (only one price to be established, covering both local and export sales.)
(2) Recommendation as to the payment of war damage claims by Italian Government to Mine Operators.

CARROLL N. CARTER,
Lt. Colonel, C.E.,
Executive Officer,
Mining Division.

764

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

CWA/hf

ACC/092/PWU

25 June 1944

Subject: Maintenance and repair material for Sardinia Electric Power Plant.

To : Regional Engineer Region VI.

Adverting to your TPTN/1610 dated 22 April 1944 and to the list of materials, dated 8 April 1944 submitted by Ing. Ruggeri, and fowarded therewith.

Exhautive enquiries have been made and of all the materials requested only a few thicknesses of the black iron steel platts are available on the mainland, ie 1/2", 3/4', 1/4' and 19 mm.

It is believed that a lot of the material required is in Sardinia.

Please submit your requirements to the Sardinia Local Resources Board, or if you have previously done so, repeat your request. It is understood that some of material may be available in some of the mining plants.

W.M. LAPPER
Lieut. Colonel
Chief, Utilities & Adm.Div.

Materials

Major Sills will

arrange for shipment of [illegible] to ~~Sicily~~ Sardinia
& Sardinia Reg VI of third [illegible] of [illegible].
that [illegible] will provide [illegible] [illegible] the ship with

the dock.

Major Sills would prefer an order from Sardinia Reg

so that no question of property will arise

Matter under Mil. Regs.

See them & try & obtain their approval to it.

Pozzuoli - Stores - Capt Phillips MRS

~~See~~ McDonald - ~~[illegible]~~ -
Engr PBS

Col One dozen (14)

No pipes available

Steel plate may be - can have what can be spared see ~~[illegible]~~

Also see Major Phillips

1624

19 MAY

093
Ra

HEADQUARTERS
ALLIED CONTROL COMMISSION
INDUSTRY & COMMERCE SUB-COMMISSION
APO 394

ASA/oc

Ref. ACC/5000/IC

19 May 1944

SUBJECT: Pipe, Pipe Fittings, Steel Plate

TO : Public Works and Utilities Sub-Commission

1. Ref. your inquiry received 12 May on above subject, information is submitted herewith concerning availability. It is believed that most of this material can be obtained from works under control of Military Railway Services. The names and telephone numbers of the officers in charge of each plant have been shown on your list.

W. P. EVANS
Colonel,
Director, Industry & Commerce
Sub-Commission

(Information submitted by hand to PWU 19 May.)

(Lt Atkins Attending)

761

95

Maj Galleos → Items 1 & 6

AMG 5th Army?

Understand Chaid has program items 1-6 for 5 Army

Mr Feemster
or
Capt Phillip
52367

4th floor
Room 86

Information received from Capt. Godley, MRS 769

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

LWI/ac 94

12 May 1944.

ACC/052/PWU

Subject : Maintenance and Repair Material for Sardinia Electric Power Plants.

To : Requisition Division.

1. The Electric Company at Sardinia "SOCIETA ELETTRICA SARDA" are urgently in need of the following material.

2. The need for this material is very urgent.

3. Black iron pipe or tubing 2" inside diameter in 20' lengths, pressure 12 kg per sq. cm. threaded both ends.
Quantity desired 1200 kg. (length and size not critical)

4. Black iron flanges for above 2" pipe. Flanges do not have to be drilled for coupling bolts. Can be blanks.
Quantity desired to be sufficient for above pipe lengths.

5. Black iron pipe or tubing 3/4" size inside diameter in 20' lengths, pressure 6 kg. per sq. cm. threaded both ends.
Quantity desired 500 kg. (length and size not critical).

6. Black iron flanges for above 3/4" pipe. Flanges do not have to be drilled for coupling bolts. Can be blanks.
Quantity desired to be sufficient for above pipe lengths.

7. Black iron steel plates. Size desired 2 meters by 1 meter.
(size not critical).

Thickness	3/4"	Quantity desired	300 kg.
"	1/2"	" "	100 kg.
"	3/8"	" "	50 kg.
"	1/4"	" "	50 kg.
"	2 Millimeters	" "	300 kg.
"	3	" "	450 kg.
"	5	" "	900 kg.
"	10	" "	200 kg.
"	1	" "	250 kg.
"	7	" "	300 kg.
"	20	" "	400 kg.

8. Antifriction babbit metal for bearings. Quantity desired 250 kg.

2. The need for this material is very urgent.

3. Black iron pipe or tubing 2" inside diameter in 20' lengths, pressure 12 kg per sq. cm. threaded both ends.
Quantity desired 1200 kg. (length and size not critical)

4. Black iron flanges for above 2" pipe. Flanges do not have to be drilled for coupling bolts. Can be blanks.
Quantity desired to be sufficient for above pipe lengths.

5. Black iron pipe or tubing 3/4" size inside diameter in 20' lengths, pressure 6 kg. per sq. cm. threaded both ends.
Quantity desired 500 kg. (length and size not critical).

6. Black iron flanges for above 3/4" pipe. Flanges do not have to be drilled for coupling bolts. Can be blanks.
Quantity desired to be sufficient for above pipe lengths.

7. Black iron steel plates. Size desired 2 meters by 1 meter.
(size not critical).

Thickness		Quantity desired
3/4"		300 kg.
1/2"		100 kg.
3/8"		50 kg.
1/4"		50 kg.
2	Millimeters	300 kg.
3	"	450 kg.
5	"	900 kg.
10	"	200 kg.
1	"	250 kg.
7	"	300 kg.
20	"	400 kg.

8. Antifriction babbit metal for bearings. Quantity desired 250 kg.

759

W.M. LAPPER,
Lieut.-Colonel.,
Chief El. & Admin. Div.

20 JUN Recd

052

HEADQUARTERS
ALLIED CONTROL COMMISSION FOR SARDINIA
Regional Office of Transportation and Public Works

Cagliari. 16 June 44

TO : Public Works and Utilities Sub-Commission, H.Q., Allied Control Commission, APO 394 (Attn. Lt. Col. Lapper).
SUBJECT : Frozen Meat Supplies, Sardinia and Corsica.
REFERENCE: IC/1833. (HQAAI -1075/1/QI)

1. Attached find copies of letters follow ng inspection of local refrigeration by Capt. Turner and Capt. Smith on 15/6/44.

2. Referring to observed condition of machinery of three sets of motors, compressors, condensers, and cooling coils, one is ready for operation as soon as power is available. The Societa Elettrica Sard has installed cable, and, 15/6/44 was preparing pot-heads and terminals for transformers.

3. Transformers 6000V/2600V are available, and work is progressing on remaining two c/c sets for refrigeration.

4. Rooms for 0°C storage, with capacity and reservation of space for 40 tons frozen meat as requisitioned by British Sard T. should be available by 1 July 1944.

5. If space for -10°C storage is essential, such reconstruction may be available by 15 July 1944.

For the Regional Commissioner:

Lapper).

SUBJECT : Frozen Meat Supplies, Sardinia and Corsica.
REFERENCE: IC/1833. (HQAAI -1075/1/QF)

1. Attached find copies of letters follow ng inspection of local refrigeration by Capt. Turner and Capt. Smith on 15/6/44.

2. Referring to observed condition of machinery of three sets of motors, compressors, condensers, and cooling coils, one is ready for operation as soon as power is available. The Societa Elettrica Sard has installed cable, and, 15/6/44 was preparing pot-heads and terminals for transformers.

3. Transformers 6000V/2600V are available, and work is progressing on remaining two c/c sets for refrigeration.

4. Rooms for 0°C storage, with capacity and reservation of space for 40 tons frozen meat as requisitioned by British Sard T. should be available by 1 July 1944.

5. If space for -10°C storage is essential, such reconstruction may be available by 15 July 1944.

For the Regional Commissioner:

758

W.H. SPANN.
Major AUS.
Regional Engineer Officer.

WHS/pd

Capt Langhorne

20/6.

42

HEADQUARTERS
ALLIED CONTROL COMMISSION FOR SARDINIA
TRADE & INDUSTRY DIVISION

16/6/44

Ref: IC/1833
Subject: Cold Storage Plant in Cagliari.
To: 'O' (MAINT).

1. Ref. this HQ. letter IC/1833 dated 13/6/44 on the subject of Cold Storage Plant in Market Place in Cagliari.

2. A further visit was made to this plant on 15/6/44. It was pointed out by the proprietors of the Ice Plant that the space which will be available for 40 tons of meat for the British S and T on July 15th can only be frozen to a temperature of Zero F. Can your frozen meat be stored in this temperature with satisfaction?

3. The additional room, which isbeing constructed where a temperature of 10° below zero is obtained, is unlikely to be ready by July 15.

For the Regional Commissioner:

J.R.B. TURNER.
Captain.
Trade and Industry Officer.

Ref: IC/1833
Subject: Cold Storage Plant in Cagliari.
To: 'C' (MAINT).

1. Ref. this HQ. letter IC/1833 dated 13/6/44 on the subject of Cold Storage Plant in Market Place in Cagliari.

2. A further visit was made to this plant on 15/6/44. It was pointed out by the proprietors of the Ice Plant that the space which will be available for 40 tons of meat for the British S and T on July 15th can only be frozen to a temperature of Zero F. Can your frozen meat be stored in this temperature with satisfaction?

3. The additional room, which isbeing constructed where a temperature of 10° below zero is obtained, is unlikely to be ready by July 15.

For the Regional Commissioner:

J.R.B. TURNER.
Captain.
Trade and Industry Officer.

757 -

91

HEADQUARTERS
ALLIED CONTROL COMMISSION FOR SARDINIA
TRADE & INDUSTRY DIVISION

Ref: IC/1633 13/6/1944

Subject: Cold Storage Plant in Cagliari.

To: Headquarters AAI - CMF.

1. Reference your letter AFHQ 2525 Q(MAINT) of 6/6/44 on the subject of Cold Storage Plant in Cagliari.

2. The Plant at the Market Place in Cagliari has been visited by Capt. J.R.B. Turner of A.C.C. on Friday June 9th. It was stated during the visit by the proprietors of this plant that it would be ready by July 15th.

3. The work on the building which is going to be used as a cover for transit stock for the British Army had been discontinued. Arrangements have now been made for this work to be resumed.

For the Regional Commissioner:

J.R.B. TURNER.
Captain.
Trade and Industry Officer.

COPY

90

SUBJECT: Frozen Meat Supplies SARDINIA and CORSICA

HEADQUARTERS,
ALLIED ARMIES IN
ITALY.

1075/1/Q1

8 June 44

Main HQ, ACC.

1. A report from AFHQ states that in early April the Cold Store at Cagliari after certain repairs would be in working order, within 4 or 5 weeks. The work is proceeding slowly but the plant is not yet available.

2. The Allied Forces Local Resources (SARDINIA) Board is pressing ACC Region VI to have work speeded up.

3. As the successful maintenance of frozen meat supplies to British personnel in Corsica and Sardinia is dependent on cold storage being available in Cagliari, it is requested that your urgent assistance be given in accelerating the progress of the repairs to the cold store.

4. It is added that a small plant whichwas in temporary occupation by the British Army to cover transit stocks, has now been given up in order to provide ice for the local garrison hospitals.

1075/1/Q1

Main HQ, ACC.

8 June 44

1. A report from AFHQ states that in early April the Cold Store at Cagliari after certain repairs would be in working order, within 4 or 5 weeks. The work is proceeding slowly but the plant is not yet available.

2. The Allied Forces Local Resources (SARDINIA) Board is pressing ACC Region VI to have work speeded up.

3. As the successful maintenance of frozen meat supplies to British personnel in Corsica and Sardinia is dependent on cold storage being available in Cagliari, it is requested that your urgent assistance be given in accelerating the progress of the repairs to the cold store.

4. It is added that a small plant whichwas in temporary occupation by the British Army to cover transit stocks, has now been given up in order to provide ice for the local garrison hospitals.

(signed) ???
Major General
Chief Administrative Officer

CONFIDENTIAL

ALLIED CONTROL COMMISSION

INCOMING MESSAGE

TO: CEB AND CAO AT AAI ACC MAIN FOR INFO

SIGNAL MESSAGE CENTER No: N 64/05

CLASSIFICATION: CONFIDENTIAL

FROM: FREEDOM SIGNED SECMED

PRECEDENCE: ROUTINE

REFERENCE No: F 55225

DATE AND TIME OF ORIGIN: JUNE 5/1606 OFFICE OF ORIGIN: CITE FHEN FHDS FHDG

ELECTRICAL STORES ORDERED BY ACC. FOLLOWING IS STATUS OFEACH REQUISITION ACCORDING TO RECORDS HERE: A. MGS 63.1/17 MISC MRSC ENGR IV OF 24 JANUARY. ALL ITEMS EXCEPT CONDENSER TUBES SCHEDULED TO BE SHIPPED PARCEL POST APPROXIMATELY SECOND WEEK IN MAY CONSIGNED TO RCAO, REGION ONE, ACC, ARMY POST OFFICE 550 AND MARKED ENG IV T/G49. D432. AVAILABILITY CONDENSER TUBES NOT KNOWN (AS OF 9 MAY) BUT HOPED TO PROCURE FROM STOCK. MANUFACTURING TIME APPROXIMATELY ONE MONTH. B. MGS 85.5 MISC REQUISITION III-44 OF 10 FEBRUARY. REQUISITION FORWARDED TO PENBARK 18 MARCH, REPORTED APPROVED AND SOURCE OF SUPPLY APPROVED BY CCS. SHIPPING STATUS NOT KNOWN. C. MGS 83 AND 88. 10 ENGRREQUISITION III-4 OF 29 FEBRUARY AND 13 ENGRIII-44 OF 1 MARCH. ELECTRIC BRUSHES ON BOTH REQUISITIONS APPROVED BY CCS ON 13 APRIL. SUPPLY FROM BRITISH SOURCES. DISCREPANCIES IN DIMENSIONS BEING CLARIFIED BY CABLES FROM 13 APRIL TO 2 MAY. THIS NOW CLARIFIED BUT NO INFORMATION AS TO WHEN SHIPMENTWILL BE MADE. D. MGS 104.2 ENG GEN 44 OF 12 MARCH. AGWAR INFORMED ON 25 MAY THAT MANUFACDUR OF BUSHINGS TENTATIVELY SCHEDULED FOR COMPLETION BY END OF AUGUST BUT AT THIS TIME UNABLE TO ADVISE DATE WHEN FIRST SHIPMENT WILL BE MADE. PARAGRAPH. AGWAR OR TROOPERS BEING ADVISED OF URGENT NEED OF ELECTRICAL SUPPLIES AND BEING REQUESTED TO FURNISH MOST RECENT SHIPPING STATUS. YOU WILL BE ADVISED WHEN LATEST INFORMATION RECEIVED HERE

DATE and Time of RECEIPT JUNE 5/2247

Distribution:

CONFIDENTIAL

807

Econsec 3

4 JUN Recd

MIDT V LEAS NR 213 QUR 3

N 87/03 052/Ra

FROM FILPOT

TO FREEDOM : CEB : ACC :

DW/1115

RESTRICTED . FOR CHIEF ENGINEER PERSONAL GEN CORMELL ROGERS TO GEN ELLIOT . ELECTRICAL STORES ORDERED BY ACC IS SUBJECT . REQUISITIONS MADE AFHQ N G S BEARING NUMBERS AND DATES AS FOLLOWS . 1 OBLIQUE 17 MISC ENGR - IV JANUARY 24TH . 5 MISC ENG 111-44 FEBRUARY 10TH . 10 ENGR WES 111-44 FEBRUARY 25TH . 13 ENGR 111-44 MARCH 1ST . . 2 ENGR GEN 44 MARCH 12 . POSITION WILL BECOME SERIOUS AND MILITARY WORKS WILL BE AFFECTED IF STORES NOT RECEIVED VERY EARLY . DEMANDS EXAMINED HERE AND CONSIDERED REASONABLE . CAN YOU EXPEDITE

BT1010

SENT NR 213 1200 GDP AR

REC NR 213 1200 AAA E1

PWO U.

Col Rhodes
Pls. note & file 4/6

ACC DIST

(INF) Econsec	3
- DCC	1
FILE	1
FLOAT	1

754

3 June 86

RESTRICTED

ALLIED CONTROL COMMISSION

INCOMING MESSAGE

807

TO: FREEDOM - CEB - ACC

SIGNAL MESSAGE CENTER No: N87/03

FROM: FILPOT

CLASSIFICATION: RESTRICTED

REFERENCE No: DW/1115

PRECEDENCE:

DATE AND TIME OF ORIGIN: JUNE 03

OFFICE OF ORIGIN:

FOR CHIEF ENGINEER PERSONAL GEN COXWELL ROGERS TO GEN ELLIOT. ELECTRICAL STORES ORDERED BY ACC IS THE SUBJECT. REQUISITIONS MADE AFHQ M G S BEARING NUMBERS AND DATES AS FOLLOWS. 1/17 MISC ENGR - IV JANUARY 24TH. 5 MISC REG 111-44 FEBRUARY 10TH. 10 ENGR REG 111-44 FEBRUARY 29TH. 13 ENGR 111-44 MARCH 1ST. 2 ENGR GEN 44 MARCH 12. POSITION WILL BECOME SERIOUS AND MILITARY WORKS WILL BE AFFECTED IF STORES NOT RECEIVED VERY EARLY. DEMANDS EXAMINED HERE AND CONSIDERED REASONABLE. CAN YOU EXPEDITE.

ACC DIST

(INF) ECON SECT 3)
DCC
FILE
FLOAT

DATE and Time of RECEIPT JUNE 03/1200

753

3 June 86 Distribution:

RESTRICTED

~~749~~ (

Econ Sec 3

PW+U

6 copies

3 JUN Head

052
RCW.

N52/03

HQPT V LEAR NR2524

QVRS

FROM A.A.I. : 021245B

TO FREEDOM

INFO C.E.B. - A.C.C.

QQY SR [illegible]

CA0199 RESTRICTED (.) FOR C.A.B. (.) [illegible] PERSONAL GENERAL ROBERTSON

TO GENERAL CLARK (.) CHIEF ENGINEER HAS CABLED UP FREEDOM

CONCERNING ELECTRICAL STORES ORDERED BY A.C.C. NOW URGENTLY REQUIRED (.)

ADVISED THATELECTRICAL BREAKDOWNS AFFECTINGMILITARY WORKSHOPS WILL

OCCUR IF SUPPLIES ARE NOT FORTHCOMING (.) GRATEFUL FOR YOURASSISTANCE

BT

SENT NR2524 021642B TOMI (A) (AR) (K)

RECD NR 2524 021642 B AAA A// 31

Lt Col Rhodes
~~Kayser~~ W.I.F.
Pls note & file – O.K.
[illegible]

ACC DIST
(INF) ECON SECT 3
" DCC 1
FILE 752 1
FLOAT 1

Col. Boardley ~~please see that Reg Div ACC~~ [illegible]

1st Copy handed to R–D.
on 3 June 1944.
[illegible]

3 June
1

80

RESTRICTED

ALLIED CONTROL COMMISSION

INCOMING MESSAGE 749

TO: FREEDOM INFO C.E.B. A.C.C.

FROM: AAI

REFERENCE No: CAO195

DATE AND TIME OF ORIGIN: JUN021245B

SIGNAL MESSAGE CENTER No: N52/03

CLASSIFICATION: RESTRICTED

PRECEDENCE: NONE

OFFICE OF ORIGIN: CITE/NONE

FOR CAO. PERSONAL ENERAL ROBERTSON TO GENERAL CLARK. CHIEF ENGINEER HAS CABLED CE FREEDOM CONCERNING ELECTRICAL STORES ORDERED BY A.C.C. NOW URGENTLY REQUIRED. ADVISED THAT ELECTRICAL BREAKDOWNS AFFECTING MILITARY WORKSHOPS WILL OCCUR IF SUPPLIES ARE NOT FORTHCOMING. GRATEFUL FOR YOUR ASSISTANCE

ACC DIST

INFO/ ECON SEC 3

DCC

FILE

FLOAT

751

DATE and Time of RECEIPT JUN021642B

Distribution:

39 ind 1

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

WML/lp

ACC/052/PWU. 27 May 1944

Subject: Requisitions for electrical equipment.

To : D.W., A.A.I.
Att.- E. & M. Officer.

A.C.C. Attached copy of Electrical Equipment ordered by A.C.C. A cable was sent on 25 May 1944 requesting delivery date and we will advise you of reply.

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

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

AEP/cgb

ACC/052/PWU

29 May 44.

Subject: Steam Plants data.

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

The enclosed is passed to you for information.

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

O Econ Sec (P.W. + U.)
U8995

HEADQUARTERS
ALLIED CONTROL COMMISSION
REGION VI

28 MAY Recd

26 May 1944 052 / Rcw.

TO : Public Works and Utilities Sub-Commission, H.Q., A.C.C.
SUBJECT : Weekly Report on Power Consumption, Region 6.
REFERENCE : TFTN/1616

1. Transmitted herewith is report by Elettrica Sarda for period 15 - 21 May.

For the Regional Commissioner,

Lt. Col. Loffson
mark.

GER
29/5

William M. Spann
W.M. SPANN.
Major AUS.
Regional Transportation Officer.

WMS/pd

748

HEADQUARTERS
27 MAG 1944
A. C. C.

28 May
10

SOCIETÀ ELETTRICA SARDA
SOCIETA' PER AZIONI - SEDE IN ROMA
Capitale L. 192 575.000
DIREZIONE

DA CITARE NELLA RISPOSTA
C - MR/ld/2/ 81

Telegrammi: ELETTROSARDA Cagliari - Corrispondenza: Casella Postale 132
Telefoni: Direzione 2424 - Uffici 3501 - 3502 - 3503

Cagliari, 25 Maggio 1944

AL SIG. MAGG. SPANN
Commissione Alleata
C A G L I A R I

Le accludo il 6° rapportino settimanale (dal 15 al 21 Maggio) richiesto dal Colonnello Lapper.

1 allegato

VISTI:

Mod. 241 d - 7/43 - 10.000

747

SOCIETA' ELETTRICA SARDA

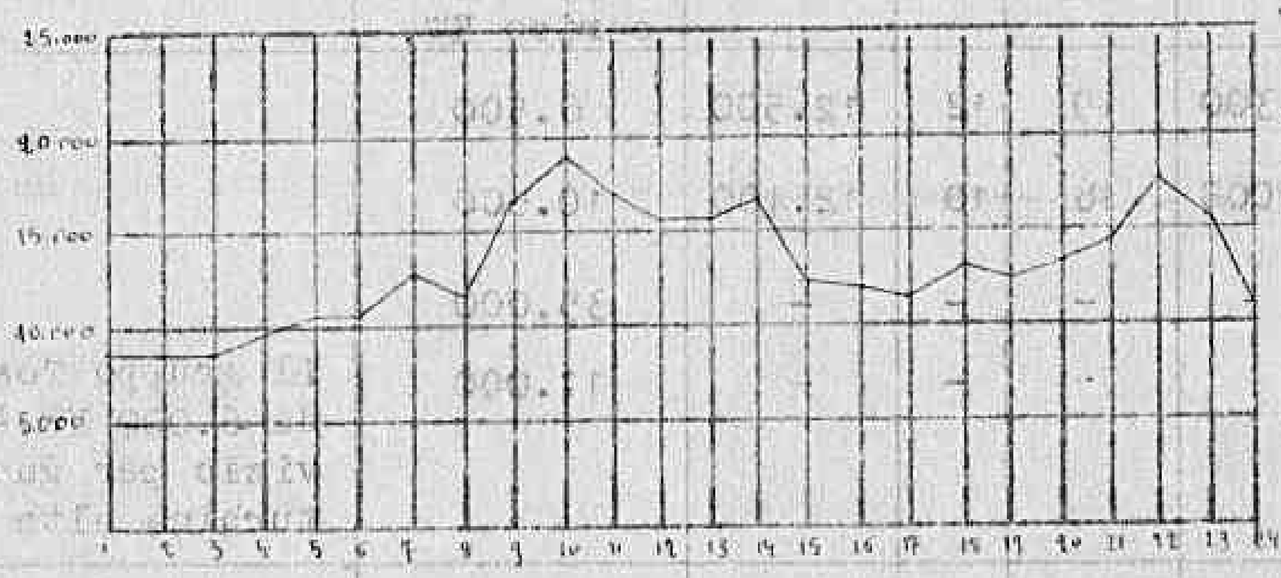
Data 23/5/1944

RAPPORTO SETTIMANALE DAL 15 AL 21 MAGGIO 1944

Centrale	Produzione Kwh.	Massimo carico giorno	ora	KW.	Potenza di spon.in corr risp.mass. carico KW.	Osservazioni
Coghinas	1.830.300	19	12	12.500	6.500	
Tirso I e II Salto	549.000	18	10	12.400	10.600	
S.Caterina	-	-	-	-	35.000	
S.Gilla	-	-	-	-	11.000	Il gruppo Tosi-Marelli da 6.000 Kw.è fuori servizio per guasto alla turbina alta pressione.
Totale	2.385.300					

SOCIETA' ELETTRICA SARDA

DIAGRAMMA DI CARICO DEL GIORNO *18 maggio 1944*



Station	Location	No of Boilers	Steam Pressure Atmospheres	Steam Temperature Degrees C	Each Boiler Surface Sq Metres	Turbine KWS	Generator KVAs	Volts	Phase	Frequency
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

Steam Pressure Atmospheres	Steam Temperature Degrees C	Each Boiler Surface Sq Metres	Turbine KWS	Generator KVAs	Volts	Phase	Frequency	Date in Operation	Reference
37	425	425	2 x 5,000	2 x 7,500	10,000	3	50	1931	CR 436
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	1925	CR 436
13	350	250	1 x 3,000	1 x 3,750	5,000	3	50	1916	CR 436
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	1939	"La Centrale Termica di S. Caterina". Publication by Societa Editrice Riviste Elettriche, 1939.

59

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

WML/mo

ACC/052/PWU

21 May 1944

Subject: Materials for Maintenance and repair.

To : Requisition Division.

1. Reference letters dated 16th May 1944 Ref.ACC/052/PWU dealing with material which is urgently required for Electrical Plants in the island of Sardinia.

2. The whole of this material is required by the Società Elettrica Sarda, to be used for maintenance for the Companys Power Station Plant and equipment.

3. In order that adequate Supplies of electricity may be maintained through out the island for supplying Power to dockyards mines and factories Engaged on work in connection with the war effort it is essential that proper maintenance of plant and machinary be carried out.

4. The request is for repair material now required to keep the plant in proper maintenance, and serious curtailment of electricity supplies may become necessary if the material is not made available. The Company's has no stocks of spare equipment on hand.

5. The quantities which are being asked for are the minimum requirements to meet present needs and to provide for maintenance and repairs. Further delay in replacing worn out parts on machinary invites the risk of serious damage to irreplaceble and indispensable plant machinary.

W.M. LAPPER,
Lt.-Colonel, 744
Chief El.& Adm. Div.

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

WL/1h

ACC/052/PWU

16 May 44

Subject : Electric Motor Brushes for maintenance and repair Sardinia Electric Power Plants.
MOTOR BRUSHES

To : Requisition Division.

1. The Electric Company of Sardinia, "Società Elettrica Sarda" are urgently in need of the following motor brushes.

2. (a) The attached drawing gives dimensions and shapes desired.
(b) Where the lengths of the connecting wire or wires are not shown on drawing, they must be at least 11 centimetres long.

3.

Quantity	Type and catalogue No.	
130	HM6	Morganite
250	EK3	Bellotti
100	3	Morganite
115	EG12	Morganite
24	CK6	Carbonio
24	CM	Morganite
24	CK6	Carbonio
100	HM6	Morganite
80	GK	Bellotti
170	4446	Bellotti
36	EK7	Bellotti
100	EK3	Bellotti
200	C4	Morganite
200	BB5	Carbonio
50	HM6	Morganite
24	CM5H	Morganite

M.M. LAPPER
Lt.Colonel
Chief El.& Admin.Div.

743

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

LWL/mc

ACC/052/PWU

16 May 1944

Subject: Maintenance and Repair material
for Sardinia Electric Power Plants.
PACKING MATERIAL.

To : Requisition Division.

1. The Electric Company " SOCIETA' ELETTRICA SARDA " are urgently in need of the following material.

2. Copper Nickel metal plastic gaskets.

Quantity	Dimensions in millimeters
6	66 by 37 by 2
8	55 " 25 " 2
8	51 " 20 " 2
6	56 " 30 " 3
6	80 " 48 " 2
8	120 " 90 " 2
8	130 " 113 " 2
6	134 " 95 " 2
8	154 " 90 " 2
6	195 " 135 " 2
12	230 " 200 " 4
3	480 " 450 " 3
15	71 " 60 " 2
4	750 " 720 " 2

3. Gaskets " Ondalio "

8	40 " 17
6	70 " 30
6	105 " 50
6	195 " 35
6	195 " 135
6	65 " 45

742

4. Manhole gaskets.

Quantity	Dimensions in millimeters
6	410 by 300 by 25 by 6

5. High pressure gaskets "Asfiet"

60 Kg	1	millimeter thick
40 Kg	2	" "
40 Kg	3	" "

6. Low Pressure gaskets " Anchor Admirality "

40 Kg	3	millimeter thick

7. Low Pressure rubberized gaskets.

40 Kg	2	millimeter thick

8. Cotton graphite gaskets.

15	Kg	8	by	8	millimeters
15	Kg	6	"	6	"
15	Kg	12	"	12	"
15	Kg	10	"	10	"
15	Kg	16	"	16	"

9. Asbestos cord gasket graphite self lubricating - for high pressure.

15	Kg	8	by	8	millimeters
15	Kg	6	"	6	"
15	Kg	10	"	10	"
15	Kg	12	"	12	"
15	Kg	14	"	14	"

10. Plain asbestos ganket cord gaskets.

25	Kg	5	by	5	millimeters
25	Kg	10	"	10	"
40	Kg	30	"	30	"

741

11. Fiber type hemp gasket-self lubricating.

Quantity

10 Kg

12. Cordboard gaskets.

25 Kg 2 millimeter thick
25 Kg 3 " "

W.M. LAPPER,
Lt.-Colonel,
Chief El.& Adm. Div.

740

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

LWL/mc

ACC/052/PWU

16 May 1944

Subject: Maintenance and Repair Material for Sardinia Electric Power Plants.
BALL BEARINGS

To : Requisition Division.

1. The Electric Company " SOCIETA' ELETTRICA SARDA" are urgently in need of the following material.

2. Attached are drawings giving details and dimensions of the items wanted. The SERIE (STYLE) numbers given below corresponds to the SERIE numbers on the attached drawings.

3. End thrust ball bearings with two crowns (sections) of balls.

Quantity Desired	Serie or Style number	Equipment on which bearings are used.
2	1200	Regulator machine
6	1209	" "
1	1305	Oil pump motor
2	1318	Forced draft fan
2	1410	Extraction pump
2	1509	Fan Motors
4	1511	Speed Reducers for feeding equipment
2	1613	Speed Reducers for feeding equipment
1	2202	Auxiliary oil pump for "V" machine
4	2205	Coal hoist motor
1	2206	Water recovery pump motor

739

Quantity Desired	Serie or Style number	Equipment on which bearings are used.
4	2211	Ash handling pump motor
2	2212	Air compressor motor
8	2304	Service water pump motor
1	2305	Forced draft fan motor
2	2508	Pumps Gabbionetta type

4. Rigid fixed ball bearings (with only one crown section).

6	6206	Scale motors
8	6207	Industrial water pump motor
2	6209	Ash pump motors
2	6212	Ash pump motors
2	6218	Railway car winch motors
2	6304	Auxiliary oil pump motors
18	6305	Sea water pump motors
4	6306	Pump extraction "V" machine
4	6313	Clinker pump motor
2	6315	Mill motors
4	6318	Speed reducers for mills
12	6405	Sea water pump motors

5. Roller bearings of two sections of spheric rolls.

2	21310	Speed reducers for preheaters
2	NM 95	Speed reducers for mills
4	NM 120	Pendulum mills
2	NFM 75	Reducers for mills
2	NFM 95	Reducers for mills
2	NUM 75	Mill motors
4	NUS 100	Pendulum mill motors

6. Ball thrust bearings with simple action.

4	2905	Oil Refrigerating pump
2	52220	Speed reducer for mills
2	54220	" " " "
2	54220 U	" " " "
2	DPLF	Pendulum Mills

W.M. LAPPER, 738
Lt.-Colonel,
Chief El.& Adm.Div.

PWOU

Econ Sec (for PWO) 1105

HEADQUARTERS
ALLIED CONTROL COMMISSION
REGION VI

11 MAY Recd

8 May 1944

052 / Rlw

11 MAY Recd

TO : Public Works Sub-Commission, HQ, A.C.C. (Attn. Col. Lapper)

SUBJECT : Electrical Report.

REFERENCE : TPTN/1610

File

1. Attached hereto is report from the Societta Ellettrica Sarda for the period 24 - 30 April 1944.

For the Regional Commissioner,

William M. Spann

W.M. SPANN.
Major AUS.
Regional Transportation Officer.

WMS/pd

Lt Col Lapper

12/5

737

11 May 925

SOCIETÀ ELETTRICA SARDA
SOCIETA' PER AZIONI - SEDE IN ROMA
Capitale L. 192.575.000
DIREZIONE

DA CITARE NELLA RISPOSTA
C - MR/lc/

Cagliari, 8 Maggio 1944

AL SIG.MAGG.SPANN
Commissione Alleata
C A G L I A R I

Le accludo il 3° rapportino settimanale (dal 24 al 30 Aprile) richiesto dal Colonnello Lapper.

SOCIETA' ELETTRICA SARDA
IL VICE DIRETTORE

1 allegato

Telegrammi: ELETTROSARDA Cagliari - Corrispondenza: Casella Postale 132
Telefoni: Direzione 2424 - Uffici 3591 - 3502 - 3503

VISTI:

Mod. 241 d - 7/43 - 10.000

735

SOCIETA' ELETTRICA SARDA

Data 2 Maggio 1944

RAPPORTO SETTIMANALE DAL 24 AL 30 Aprile 1944

Centrale	Produzione Kwh.	Massimo carico giorno	Massimo carico ora	Massimo carico Kw.	Potenza disponibile in corrispondenza massimo carico Kw.	Osservazioni
Coghinas	1.750.400	25	12	12.500	6.500	
Tirso I e II Salto	563.500	25	21	12.200	10.800	
S.Caterina	-	-	-	-	35.000	
S.Gilla	-	-	-	-	11.000	Il gruppo Tosi-Marelli da 6.000 Kw. è fuori servizio per guasto alla turbina alta pressione.
Totale	2.314.100					

736

PWD Com Sec (PW & U)

12 MAY Recd

J 7231

062

HEADQUARTERS
ALLIED CONTROL COMMISSION
REGION VI

10 May 1944

TO : Public Works and Utilities Sub-Commission, H.Q., A.C.C.
SUBJECT : Weekly Report, Electric Power.
REFERENCE : TPTN/1610

1. Submitted herewith is report by Soc. Elettrica Sarda for period 1 - 7 May.

For the Regional Commissioner,

William M. Spann

W.M. SPANN.
Major AUS.
Regional Transportation Officer.

WMS/pd

Lt Col Cooper
Ltr. 12/5

12 May
87

734

SOCIETÀ ELETTRICA SARDA

SOCIETA' PER AZIONI - SEDE IN ROMA

Capitale L. 192 575.000

DIREZIONE

DA CITARE NELLA RISPOSTA

C - MR/lc/2/

Cagliari, 9 Maggio 1944

AL SIG.MAGG.SPANN
Commissione Alleata
C A G L I A R I

Le accludo il 4° rapportino settimanale (dal 1° al 7 Maggio) richiesto dal Colonnello Lapper.

1 allegato

VISTI:

Telegrammi: ELETTROSARDA Cagliari - Corrispondenza: Casella Postale 132
Telefoni: Direzione 2124 - Uffici 3501 - 3502 - 3503

Mod. 244 d - 7/43 - 10.000

SOCIETA' ELETTRICA SARDA

Data 9 Maggio 1944

RAPPORTO SETTIMANALE DEL GIORNO 7 Maggio 1944

Centrale	Produzione Kwh.	Massimo carico			Potenza disponibile corrisp. mass. carico Kw.	Osservazioni
		giorno	ora	Kw.		
Coghinas	1.787.000	6	15	12.500	6.500	
Tirso I e II Salto	406.900	4	10	10.500	12.500	
S.Caterina	-	-	-	-	35.000	
S.Gilla	-	-	-	-	11.000	Il gruppo Tosi-Marelli da 6.000 Kw. è fuori servizio per guasto alla turbina alta pressione.
Totale	2.193.900					

732

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

LWI/ac

12 May 1944.

ACC/052/PWU

Subject : Maintenance and Repair Material for Sardinia Electric Power Plants.

To : Requisition Division.

1.. The Electric Company at Sardinia "SOCIETA ELETTRICA SARDA" are urgently in need of the following material.

2. The need for this material is very urgent.

3. Black iron pipe or tubing 2" inside diameter in 20' lengths, pressure 12 kg per sq. cm. threaded both ends.
Quantity desired 1200 kg. (length and size not critical)

4. Black iron flanges for above 2" pipe. Flanges do not have to be drilled for coupling bolts. Can be blanks.
Quantity desired to be sufficient for above pipe lengths.

5. Black iron pipe or tubing 3/4" size inside diameter in 20' lengths, pressure 6 kg. perasq. cm. threaded both ends.
Quantity desired 500 kg. (length and size not critical).

6. Black iron flanges for above 3/4" pipe. Flanges do not have to be drilled for coupling bolts. Can be blanks.
Quantity desired to be sufficient for above pipe lengths.

7. Black iron steel plates. Size desired 2 meters by 1 meter.
(size not critical).

Thickness	3/4"		Quantity desired	300 kg.
"	1/2"		" "	100 kg.
"	3/8"		" "	50 kg.
"	1/4"		" "	50 kg.
"	2	Millimeters	" "	300 kg.
"	3	"	" "	450 kg.
"	5	"	" "	900 kg.
"	10	"	" "	200 kg.
"	1	"	" "	250 kg.
"	7	"	" "	300 kg.
"	20	"	" "	400 kg.

in need of the following material.

2. The need for this material is very urgent.

3. Black iron pipe or tubing 2" inside diameter in 20' lengths, pressure 12 kg per sq. cm. threaded both ends.
Quantity desired 1200 kg. (length and size not critical)

4. Black iron flanges for above 2" pipe. Flanges do not have to be drilled for coupling bolts. Can be blanks.
Quantity desired to be sufficient for above pipe lengths.

5. Black iron pipe or tubing 3/4" size inside diameter in 20' lengths, pressure 6 kg. per sq. cm. threaded both ends.
Quantity desired 500 kg. (length and size not critical).

6. Black iron flanges for above 3/4" pipe. Flanges do not have to be drilled for coupling bolts. Can be blanks.
Quantity desired to be sufficient for above pipe lengths.

7. Black iron steel plates. Size desired 2 meters by 1 meter.
(size not critical).

Thickness	3/4"		Quantity desired		300 kg.
"	1/2"		"	"	100 kg.
"	3/8"		"	"	50 kg.
"	1/4"		"	"	50 kg.
"	2	Millimeters	"	"	900 kg.
"	3	"	"	"	450 kg.
"	5	"	"	"	900 kg.
"	10	"	"	"	200 kg.
"	1	"	"	"	250 kg.
"	7	"	"	"	300 kg.
"	20	"	"	"	400 kg.

8. Antifriction babbit metal for bearings. Quantity desired 250 kg.

BF 205

731

W.M. LAPPEN,
Lieut.-Colonel.,
Chief El. & Admin. Div.

Lt. Col Lappen.
original given to Capt. Woodhall
that he could begin checking to see
how much of this he could locate.
Ltr 12 May 44

HEADQUARTERS
ALLIED CONTROL COMMISSION REGION 6.

22nd April 1944. 093 Rec

To : Public Works and Utilities
Sub-Commission, H.Q. A.C.C., APO 394.

From : Regional Commissioner.

Subject : Materials for Operating Thermal Plants.
(Region 6)

Reference : TPTN/1610

1. Reference letter 13 April 1944 from Col Lapper and inspection of electric power facilities in Region 6.

2. We are transmitting the data requested, as submitted by Ing. Ruggiu. Answers to questions raised by Col Lapper are answered by the attached notes, pinned to the original pencil notes made while here. This method seems best for clarification.

3. Weekly reports will be sent in by Ing. Ruggiu, copy of first one is enclosed.

For Regional Commissioner.

Lt Col Lapper
24/4/44

William M Spann

WMS/ajs.

W.M. SPANN.
Major AUS.
Regional Transportation Officer.

739

NOTES (from Ruggere)

1. Tubes for Fans:

Used to clean boilers - from blowers.
Size 2" internal diameter. x 6 meters normal length. Flange couplings standard for 2" pipe - flange has 4 holes usually 1/4" diameter, but size doesn't matter as he can adjust. Has gaskets on hand.

(a) Pressure = 12 Kg. per Sq. cm.
(b) " = 6 Kg " " "

2. Plates are black iron - 2 cm thick - normally 2 meters x 1 meter in size.

3. Antifriction metal - to be used for pouring bearings - can use ordinary babbit metal - needs 250 Kg as he has none on hand. Usually comes in blocks of 10 Kilos.

729

Notes re Sir Ruggeri Report re Materials

Notes ATTACHED

(1) Tubes for Fans.
What are Thicknesses for; are they Tubes for the Air Heaters. Full details of Size and Length and Type of Couplings required.
or is it general Tubing required for the manufacture of the Stators. If this is the case is it Condenser, Low pressure Tube Tube or High pressure Tube

(2) Plates for Chimneys.
Case Size of plates Required.

(3) White metal
what quantity is reasonably required over the maintenance requirements.

(4) Detail Stocks Ferrous with full dimensions of Steel Bearing and Carbon or Manganese Bronze required.

FONOGRAMMA

Cagliari 8 Aprile 1944

[redacted]
Commissione Alleata

C A G L I A R I

I am sending the list of materials which, together with trisodic phosphate soda, rubber ribbon already requested in our letter to Allied Forces, are necessary for our Plants

Le comunico la distinta dei materiali che, oltre al fosfato tri-sodico, alla soda, al nastro di gomma, già specificatamente richiesti nella lettera in Sue mani, sono necessari per le ns/ Centrali:

(1) Tubi neri: Black tubes (

Per soffiatori S.Caterina
for fans at S Caterina

(a)	Kg.	1.200	da 2" inches with couplings
	"	500	" 1"

Per Centrali Tirso-Coghinas e S.Gilla
For plants at Tirso " "

(b)	Kg.	300	da 3/4"
	"	100	" 1/4"
	"	50	" 3/8"
	"	50	" 1/4"

(2) Lamiere di ferro nero: Black iron plates

Per riparazione camino IV^ caldaia S.Caterina
For repairing chimney of a boiler at S. Caterina

Kg.	300	da 2	mm.
"	450	" 3	"
"	900	" 5	"
"	200	" 10	"

Per Centrali Tirso-Coghinas e S.Gilla
For Plants at " "

Kg.	250	da 1	mm.
"	300	" 7	"
"	400	" 20	"

(3) Metallo antifrizione: antifriction metal

Per tutte le Centrali
for all Plants

Kg. 250

Per i cuscinetti a sfere e per le spazzole per i motori elettrici la cui distinta, per poter domandare soltanto il minimo indispensabile, non ho potuto ancora approntare, presenterò al mio ritorno nota dettagliata

./.

7217

2)

al Maggiore Spann.

Cordiali saluti ed auguri.

Ruggeri

As soon as I come back I'll give Major Spann a detailed list of the ball bearings and of the brushes for the electric motors.

(attached)

pag / 3

Note — Sizes of each ball bearing are shown in attached drawings.

I200	Regulator V Machine
I305 3	Turbo oil pump # Stal type
~~I3D8~~	~~Ventilators (fan) burning air~~ Forced draft fan. 46
~~I4I8~~	Extraction Pumps
I509	~~Motors for fans~~ Fan motors.
II	Reducers for feeding equipment
I3	Current reducers for lifting coal equipment
2202	Auxiliary Oil Pump for V Machine
05	~~Motor for coal lifting installation~~ Coal hoist motor
06	Pump for recovered water
II	~~Pump for circulation of ashes~~ Ash handling pump
I2	Air Compressor
2504	~~Pump for water for industrial uses~~ Service water pump
5	~~Motor~~ for fan for burning air Forced draft fan motor
2508	Pumps, Gabbionetta type

B- Rigid fixed ball bearing (with only one crown- section)

6206	~~Motors for scales~~ Scale motors
7	~~Motors for industrial water pumps~~ 5
9	Pumps for ashes'
I2	Pump ashes
I8	Winches to move railway cars
04	Auxiliary oil pump
05	Pump for sea water
06	Pump extraction V Machine
I3	Pump for ashes (clinker)
I6	Motors mills
I8	Current reducers for mills
6405	Mototors for sea water pumps

C) Roll bearings of two sections of spheric rolls

3I0	Reducers for preheaters
NM 95	" " mills
I20	Mills pendulum
75	Reducers for mills
95	" "
75	Motors for mills
I00	Mills pendolum

E) Ball bearings supporting push, ~~EE~~ with a simple action

2905	Oil Refrigerating pump
20	Mills current reducers
	" "
	" 2
DPLF F	Mills pendolum

5

2506 Pumps, Gabbionetta type

B- Rigid fixed ball bearing (with only one crown- section)

6206 ~~Motors for scales~~ Scale motors
7 ~~Motors for industrial water pumps~~ 5
9 Pumps for ashes'
12 Pump ashes
18 Winches to move railway cars
04 Auxiliary oil pump
05 Pump for sea water
06 Pump extraction V Machine
13 Pump for ashes (clinker)
16 Motors mills
18 Current reducers for mills
6405 Mototors for sea water pumps

C) Roll bearings of two sections of spheric rolls

210 Reducers for preheaters
NM 95 " " mills
120 Mills pendulum
75 Reducers for mills
90 " "
75 Motors for mills
100 Mills pendolum

E) Ball bearings supporting push, ~~xx~~ with a simple action

2906 Oil Refrigerating pump
20 Mills current reducers
" "
" 2
DPLF F Mills pendolum

5
PAG 11 - Brushes for electric machines

Remarks : Their positions is known in the attached drawings; when the length of the "brush-holders " is not mentioned, in drawings, they must be or are intended to be II centimeters long

III - GASKET (Cupro nickel metal plastic gaskets) 725
a)
b) Ondalium (Ondalio) gaskets x
PAG 6
c) Gaskets for "passo d'uomo - men step x
d) Asrist high pressure gaskets
e) Anchor Admirality low pressure gaskets
r) Low pressure rubberized gaskets
g) Cotton graphite gaskets
i) High pressure gaskets in asbestos graphite tress self lubricatin
l) plain asbestos tress gaskets
m) ~~self xxxxxxxxxxxxxxx~~xx Fiber type gaskets for self lubricating hemp gasking holders
n) cardboard gaskets

VG/ld. Arborea 18 Aprile 1944

45

I°) - CUSCINETTI A SFERE BALL BEARINGS

A) Cuscinetti oscillanti a due corone di sfere 3
Hand Trust ball bearings with two crowns (sections) of balls

Ref. No. N° riferimento	QUANTITY Quantità	Destinazione to be used for	Osservazioni REMARKS
1200	2	Regolatore V^ Macchina (Regulator V Machine)	Le dimensioni di ciascun cuscinetto sono riportate nei disegni allegati.
1209	6		
1305	1	Turbopompe olio Stal	
1318	2	Ventilatori aria comburente	
1410	2	Pompe estrazione Extraction Pump	
1509	2	Motori ventilatori Fans Motors	
1511	4	Riduttori organi alimento	
1613	2	Riduttori monta carbone	
2202	1	Pompa olio ausiliaria V^ macch.	Oil Pump V. Machin
2205	4	Motori montacarbone	
2206	1	Pompa acqua ricupero	
2211	4	Pompe evacuazione scorie	
2212	2	Compressore aria	
2304	8	Pompe acqua industriale	
2305	1	Motore ventilat.aria comburente	
2508	2	Pompe Gabbioneta	

B) Cuscinetti rigidi a una corona di sfere

6206	6	Motori bilance
6207	8	Motori pompe acqua industriale
6209	2	Pompe scorie
6212	2	Pompa scorie
6218	2	Argani movimento carri ferrov.
6304	2	Pompa ausiliaria olio
6305	18	Pompe acqua salata
6306	4	Pompa estrazione V^ macchina
6313	4	Pompa scorie
6315	2	Motori mulini
6318	4	Riduttori mulini
6405	12	Motori pompe acqua salata

This came with letter of transmittal giving Sardo & typical local Gone [illegible]. that letter to Ed Rigfusi to photostat. VSK.

C) Cuscinetti oscillanti a due corone di rulli sferici

21310	2	Riduttori preriscaldatori

724

D) Cuscinetti a rulli cilindrici

N° riferimento	Quantità	Destinazione	Osservazioni
NM 95	2	Riduttori mulini	
NM 120	4	Pendoli mulini	
NFM 75	2	Riduttori mulini	
NFM 95	2	" "	
NUM 75	2	Motori mulini	
NUS 100	4	Pendoli mulini	

E) Cuscinetti reggispinta a semplice effetto

2905	4	Pompa refrigerante olio	
52220	2	Riduttori mulini	
54220	2	" "	
54220 U	2	" "	
DFLF F	2	Pendoli mulini	

II°) - SPAZZOLE PER MACCHINE ELETTRICHE

Larghezza	Spessore	Altezza	N° attacchi	Tipo	Qualità	Osservazioni
20	7	25	1 -	EK3 Belotti	250	La destinazione e il tipo degli attacchi, è riportata nei disegni allegati.
30	25	31	2 -	EG12 Morganite	115	
30	20	31	2 -	HM6 Morganite	130	
18	15	55	1 -	EK3 Belotti	100	
37	25	57	2 -	GK Belotti	80	
25	10	40	2 -	4446 Belotti	140	
1"1/4	1"	1"1/2	2 -	HM6 Morganite	100	
25	25	40	1 -	CK6 Carbonio	24	Gli attacchi ove non è segnata la lunghezza sui disegni s'intendono lunghi 11 cm.
24	24	40	1 -	CK6 Carbonio	24	
35	18	50	1 -	CM Morganite	24	
38	22	30	2 -	CM5H "	24	
34	16	40	2 -	EK7 Belotti	36	
44	31	50	4 -	HM6 Morganite	50	
32	16	60	2 -	C4 "	200	
40	32	50	2 -	Z "	100	
30	30	31	2 -	BH5	200	

III°) - GUARNIZIONI

a) Guarnizioni Cupro nichel metallo plastiche

n° 6 da mm. 66 x 37 x 2
" 8 " " 55 x 25 x 2
" 8 " " 51 x 20 x 2
" 6 " " 56 x 30 x 3
" 6 " " 80 x 48 x 2
" 8 " " 120 x 90 x 2
" 8 " " 130 x 113 x 2
" 6 " " 134 x 95 x 2
" 8 " " 154 x 90 x 2
" 5 " " 195 x 135 x 2
" 12 " " 230 x 200 x 4
" 3 " " 480 x 450 x 3
" 16 " " 71 x 60 x 2
" 4 x" " 750 x 720 x 2

b) Guarnizioni ondalio

n° 8 da mm. 40 x 17
" 6 " " 70 x 30
" 6 " " 105 x 50
" 6 " " 195 x 35
" 6 " " 195 x 135
" 6 " " 65 x 45

c) Guarnizioni per passo d'uomo

n° 6 da mm. 410 x 300 x 25 x 6

d) Guarnizioni Asfist per alta pressione

Kg. 20 da 1 mm.
" 40 " 2 "
" 40 " 3 "

e) Guarnizioni Ancora Ammiragliato per bassa pressione

Kg. 40 da 3 mm.

f) Guarnizioni gommantite per bassa pressione

Kg. 40 da 2 mm.

g) Guarnizione cotone grafitato

Kg. 15 da 8 x 8 mm.
" 15 " 6 x 6 "
" 15 "12 x12 "
" 15 "10 x10 "
" 15 "16 x16 "

i) Guarnizione in corda amianto grafitato autolubrificante per alta pressione

Kg. 15 da 8 x 8 mm.
" 15 " 6 x 6 "
" 15 " 10 x 10 "
" 15 " 12 x 12 "
" 15 " 14 x 14 "

l) Guarnizione corda amianto comune

Kg. 25 da 5 x 5 mm.
" 25 " 10 x 10 "
" 40 " 30 x 30 "

m) Guarnizioni fibrose per premistoppa autolubrificante

Kg. 10

n) Guarnizione in cartone comune

Kg. 25 da mm. 2
" 25 " " 3

(translation)

SAN CATERINA POWER STATION SARDINIA

The new production and distribution (transportation) installations of Società Elettrica Sarda (Sardinia Electric Company)

The Thermo-electric power station of Santa Caterina

The new installations of Società Sarda have been studied and planned to provide electric power in order to carry out in Sardinia the first part of the self-sufficiency programme.

For the production of energy there has been planned a thermo power station with an installed capacity of 50,000 KVA, utilizing only Sardinian coal and capable to add to the electric output of Sardinia about additional 250 million of KWH per year.

To carry the power there has been planned a 70KV electric line, about 60 kilometers long, with 2-70 KV each substations, one at Carbonia to supply the coal mines zone, the other at Villasor connecting this new line with those coming from the hydroelectric power plants of the Tirso and Coghinas rivers and with the existing thermo plant of San Gilla, at Cagliari.

The power station of Santa Caterina began in the summer of year 1937, will be ready shortly; the two substations and the line were already in operation at the end of 1938.

The power station of Santa Caterina is the first to have been built in Italy to use nationally mined coal, pulverized by means of machinery and equipment, almost entirely supplied by the Italian industry.

Società Sarda has already acquired a special experience in this matter. This Company for the first in Italy had started using about 20 years ago, Sardinian coal for its thermo electric power stations, continuing to use them even when owing to the cheap price of imported coal same was more convenient to employ. On account of this policy the coal mine of Bacu Abis, of which Società Sarda was the most important, if not the sole client, was able to maintain its production and survive the seriouness of the economic crises.

Last December in the occasion of his visit to the city of Carbonia, the Duce (Mussolini) visited the works being done at the power station of Santa Caterina.

The Thermo Electric Station of S.Caterina - Location

Its location had to comply with the following requirements:

a) To be close to the sea in order to get and return easily the water required to cool the condensors.

b) To be in the area in which the highest demand of power was expected .

c) To be located near the mines so to reduce to a minimum transportation.

d) To utilize the new means of transportation of coal from the mines to the new coal harbor of S.Antioco.

The locality of Santa Caterina, where the power station has been built, meets the above requirements.

FOUNDATIONS : A series of accurate piling operations, down to a depth of 15 meters, showed that the ground in the zone was made of sand and clay, not strong enough to support a building containing heavy machinery in operation. Therefore it was necessary to pile concrete piles and the Double and Triple types were chosen for the foundation, being considered best adapted to terrain of variable consistency and resistence. Single piles of 40 centimeters diameter were chosen; as a consequence those Double were a little larger (cm.55 diameter) and those of the Triple type had a diameter of about 70 cm. The safe load of the concrete foundation was fixed at about 30 kilos per square centimeter and therefore the maximum load of each pile was for the Single ones 30 tons, 55 tons for the Double and 70 tons for the Triple.

Having so established the safe load of each pile concrete the steel rod was piled down by means of pile drivers, so to have for it a safe load, calculated on the basis of the Brix formula, a safety coefficient equal to about 2.5 or about 15% higher to that of each concrete pile as above mentioned.

The number of piles, their disposition and types (see Drawing N.1) was fixed in relation to the weight to be supported, as found out in the pertinent calculation.

The caps (head) of the foundation piles of each column of the power station building were connected together by a band, on top of which a surface in concrete high enough to be used also as a foundation for the building walls, was built. Also the caps of the piles supporting the foundation basements of the boilers, turbine-alternators and of other heavy machinery, were connected among themselves by a band, leaving however each of these bands by itself and not connected with that supporting

the foundation of the building in order to follow the right technical procedure to keep the foundations of the building separate and independent from those of the machinery.

Altogether a total of 61 Single, 559 Double and 40 Triple piles were driven in, so that considering each Double as equivalent to 2 piles a Triple corresponding to 3 piles, a total of 1299 piles, with an aggregate length of meters 8,287 were driven in.

BUILDING OF THE POWER STATION : The building of the power station may be considered formed with 4 sections housing respectively : the steam generators, water stills and pumps, the turbines-alternators, the 5 KV instruments panel. The sizes and locations of the various blocks (sections) of the building are shown in Drawings 2 and 3.

The building consists of a concrete structure with masonry walls, with a covered surface of about 3,000 square meters, (70,000 cubic meters).

The block (section) of the building (the wing of the building) in which are housed the steam generators has nine separate ceilings in addition to the top ceiling, so as to allow easy approach for their maintenance the various parts of the generators. In this wing of the building special attention has been given to the construction of : the ceiling supporting the chimneys (at elevation meters 27.10) as the load of each one of them exceeds 18 tons and for the 4 silos, each of which has 250 cubic meters capacity. In their upper part the silos (containers of coal power) have a constant rectangular section, while their lower part is shaped like a piramid. In view of the large dimensions of the horizontal section of the building, in order to balance the strong pressure exercised by the moving machinery against the walls of the building, such walls have been reinforced with structural steel connections and rods.

The wings housing the water stills and the turbine-alternators have no separate ceilings (roofs) but only a system of suspended bridges (scaffolds) 6.95 high, to inspect the various machinery. To be noted in these wings the ceiling of the Stills Room supporting the water reservoirs (4 of which having 250 cubic meters and 2,-100 cubic meters capacity with an aggregate weight of about 1,500 tons). The structure in concrete for the support of the turbines, 5.40 meters heigh, designe for a dynamic load so that the frequency of their own vibrations differs of about the 30% from the turbines vibrations; the roof of the engines room made by concrete rafters of meters 20 x 6.15.

The instruments panel room has at the ground floor all the instruments for 5 KV equipment and at the first floor for the control and operating instruments and the recording offices. Between these two floors there is a space of about 2 meters high housing all the connecting wires.

In view of the notable length of the building it has been thought advisable the build between the wing housing the water stills and that of the turbines-alternators an expansion joint, obtained by dividing in two parts the two external columns shared in common by these two wings of the building. Drawing No.4 show the steel structure of this joint and the connection of the top of the divided column. Drawings 5,6,7,8,9, 10 and 11 show a series of pictures showing the progress of the construction work between Nov 37 and the end of Feb 1939.

PRODUCTION OF STEAM AND ELECTRIC ENERGY.- In the power station four principal generating units are going to be installed. Each unit has been considered as a completely autonomous generating unit, supplied therefore with all its own service, except those for the supply of coal. Even this service in common leaves to each generating unit a notable autonomy ; as a matter of fact each boiler is served by its own silos (funnel or tank) for the coal (with a capacity of about 250 tons) sufficient to assure the operation in full for more than a working day. Each generating unit consists of:

a plant for crushing coal composed of two mills each producing about 6 tons of coal powder;

a steam generator for the production of 50 tons/hours of super heated steam at the actual pressure of 40 atmospheres (pound per sq. inches) and at the temperature of 420°;

a still for 5,500 kilos of water and the de-mineralization of 55,000 kilos/hour of distilled water ;

a turbines-alternators group of the capacity of 12,500 KVA at the tension of 5 KV-50 cycles frequency-3000 revolutions;

a 5/70 KV transformer with an installed capacity of 12,000 KVA.

The idea of keeping autonomous the various generating units has been extended to the connection between generator and the turbine-alternator and between these two and the transformer, running each unit in parallel on the side at 70 KV; in this way it has been obtained a minimum length of the sections of said connections. However this idea has not been pushed to the limit of admitting, in case of breaking down of two different parts of two different units, that both units must remain idle until both repaired. Therefore there has been provided:
a branch pipe connected with the main steam pipe, a branch on the

main water pipe going to the boilers and a connecting 5 KV bar permitting the reconstruction of each unit by means of operation Z shaped.

The power station is going to be fed with powdered coal (from the Sulcis mine; the boilers and the pertinent equipment have dimensions such that will permit the use even of coal of poor quality (with less than 4 calories and a maximum humidity of 10% and with small modifications could also use as a fuel semi-coke and other coal by-products. Such operating conditions explain why boilers using powder coal and not lump coal have been chosen.

INSTALLATION FOR THE TRANSPORTATION OF COAL - The possibility of obtaining daily deliveries of coal by means of railway cars has been unnecessary to build a large coal dump, as it has been considered enough to store the coal storable in the silos (bunkers) belonging to each generating unit. It was necessary however to build a railway yard with tracks well placed to speed up the movement unloading of coal cars.

The avrege per hour consumption of coal when the four units are operated in full is about 50 tons. To carry the coal from the car to the bunkers, instead of building two separate moving installations of 50 tons each, there is just one installation that can move 100 tons of coal per hour.

Good care has been taken to assure the filling of the b bunkers, doubling all parts and equipment in operation, need a careful maintenance so to avoid breakdown and failure to have the bunkers filled with coal.

The cars unload the coal in two small dumps (see Drawing 12) from which by means or an up grade mechanical feeder, the coal is transported inside two crushing machines, that reduce the sizes of its lumps to 2 - 30 mm., discharging it at the feet of the two cup elevators. Special direction devices make possible to send coal to one or to another of the crushing machines, or to avoid same altogether should the coal be supplied in very small lumps or in power.

By means of the two elevators the coal is lifted to the bunkers, and placed inside any of the 4 bunkers by a rubber belt feeder. The electric motors operating this coal supply installation are operated(by only a panel located in the boiler room regulated by a system or relays, remote control) providing that the installation starts working from the bottom to the top (fromm valley to the mountain) and viceversa when it is halted. Controlling relay stop the installation at the point wanted, in case of stoppage of any of the four motors. In this manner it is avoided the possibility of too much accumulation of coal when

the installation starts, or it is halted or in case of accidents during its operation.

DE-HYDRATING AND PULVERISING INSTALLATIONS - At the exit of each silo the coal is weighted by an automatic scale that drops the coal in two smaller bunkers. These two bunkers have the dual purpose to avoid any stoppage in the supply of coal by the eventual non operation of the automatic scale and to mantain a certain column of coal execising pressure on the equipment dosing the coal, operating under gravity as any other installation of the pulverizing installation. The dosing equipment, of the plate type, regulates the immesion of coal in the mills. The pulverizing and drying of coal is effected at the same time inside the mills, by n mixture of water and gas heated at a convenient temperature.

The mills are of the Loesche type, medium speed, with cylinders the pressure of which can be regulated by means of levers; the pulverization rings in tables are flat, while the rollers are conic shaped having therefore in various points different speeds insuring so a better pilverization and less wear of them; the rollers and the tables of pulverization are separated to avoid the contact of metallic parts and the possibility of sparks and explosions in view of the high percentage of gas contained in the pulverized coal. The separation and classification of the coal dust is made by the hot air current, that goes across two screens, one fixed and the other movable, of speed of which can be regulated varying the grade of the coal dust.

Attached to the same axle of the electric motor operating the mill, there is a two phase ventilator one of which is used to stock the mixture of air and heated gas necessary to the drying operations, and the other to bring the coal dust to the boilers.

For the drying of the coal can be used: heated gas exempt from any burning part, heated to about 450° calories, air heated to about 200° calories or air of the installation, or a mixture of the three. It is therefore possible to obtain the temperature necessary and sufficient to drying operation and at the same time to reduce the amount of oxygen in the installation, during the conveying of the coal dust(to dimish the danger of explosions.)

The boilers, four, placed incouple one on top of the other in two floors, are of the Gako type, with double operation regulated by means of a controlling device. At the moment of burning on the two lower boilers are installed, during the initial burning operation, two small oil burners.

715

For the operation of each drying and pulverizing installation there are elortic motors of an aggregate capacity of 150 KW. As, already mentioned, each installation has an output of 12 Tons/hour (6 Tons each mill for each ton of coal pulverized and dried) therefore there is only an installed capacity of only 12,5 KW; this has been one of the considerations which has decided to install this types of installation.

GENERATOORS OF STEAM - The generators,(see Drawings 13 and 14) are of the total irradation type with only one opening, on the top, for letting the gas out. The combustion shamber is limited: laterally by four walls formed by water pipes, covered by an armour of cast iron forming a continuous flat surface; at the bottom by a fire bar (screen) made by iron bars, of iron rod (grills) spared apart one from the other. On top of the combustion chamber there is a series of small pipes also well apart to screen the ashes carried by the gas and to start cooling down the gasses before they reach the superheater. This superheater is formed by two series of serpentines inseries, one series connected to four collectors; the superheater is followed a steel preheater(economiser)for the water of the semi steaming type that warm the water till boiling point and also there is an air preheater of the Ljungstroem type. The exchange surfaces are the following ones:

Vaporizator (steam generator)	422 meters
Superheater	400 "
Water pre-heater (economiser)	460 "
Air pre-heater	2,100 "

The burned gasses are stocked by a mechanic chimney (Prat type) operated by a motor with changeable speed. The air needed for the combustion is blown by a ventilator (fan) located on the top of the combustion chamber so to utilize the heated air and obtain an efficient ventilation of the chamber itself. What remain after the combustion is discharged directly from the combustion chamber in a canal where flow the water discharged from the condensators, reaching to tanks on the outside of the building. From this tank the clinkers, either hydraulically or mechanically according to its size and quantity is sent to the clinker dump along the sea shore.

In order to maintain even the temperature of the superheated steam, between 50% and 100% of the charge, there is a desuperheater of the type shown in Drawing 15. The level of the water in such desuperheater is automatically controlled by a special valve, placed in the pipe by which the steam is returned to the higher cylinder of the generator; this valve is controlled by a special thermostatic very accurate device of the Askania type.

By a sole panel, on the side of each generator, are operated and controlled, by means of relays, all the electric motors (of the mills coal pulverizers, of the chimney fan, of the preheater) so that the controlling personnel may according to the indications of the instruments panel, also appearing in a nearby panel, intervene immediately and regulate the combustion. In addition to hand levers control each generator is equipped with an automatic control device, of the Askania type, that according to the steam pressure in the intake pipe regulate the speed of the device dosing the amount of coal. According to this speed is regulated also the chimney forced draft.

INSTALLATION OF STILLS AND FOR THE EXTRACTION OF GASSES (deaerating) Drawing 15 shows the scheme of operation of this installation based on the "Prache Bouillon" patent.

The sea water, first treated with Carbonate of Sodium and purified, is introduced into the evaporator machine; this water together with that used in the condensators, enter the deaerated machine and after having been preheated, is sent to the boiler. The installation is designed to recover any amount of heat and for its operation are necessary 5,500 kilos of dry well saturated steam, at the pressure of kilos 1.5 and kilos 3,3000 of dry well saturated steam at the pressure of kilos 4.5.

PUMPS AND CONTROL OF THE WATER FOR THE BOILERS - For the feeding of water to the boilers for each unit there are two electric pumps, with an output per hour of 55 tons/hour of water at the temperature of 120 and a turbine-pump with an output of 100 tons/ hour operated by the superheated steam. The control of the water feeding to each boiler is made by a double controlled Copes device, thermostatically operating that, acting on an opening valve on the water intake pipe, regulate and maintain constant the level of the water inside the boiler, according to the speed of the steam in the steam exhaust pipe. To improve its regularity to the pump there has been added the automatic regulating device of the Askania type that maintains for whatever quantity of water, perfectly constant the pressure difference between the pumps and the boiler. In the Askaniw regulating device a also takes care of controlling of the turbine-pump and automatically starts it if and when, for any special reaspn or incident, the pumps pressure should fall below the fixed load.

TURBO-ALTERNATORS - For the time being have been installed in the Power station only two, 12,500 KVA, of condensation type turbo-alternators and one 1,500 recovering type alternator used for auxiliary services. The two main turbines are of the two cylinders type, see Drawing 17, with each cylinder divided in

two equal parts, operating with superheated steam at actual 37 atm (pressure) and at the temperature of 400 Centigrade. From these turbines are taken out at the respective pressure of 4.5 and 1.5 atm. steam used for the stills, and the deaerating and preheating installations, so to have the best utilization within the thermic cycle. The surface type condensator for the salt water is equipped with two pumps circulating the cooling water, with the pipes divided in two series, so to make possible, while the turbine is operating to clean half of the pipes.

The alternator is of the normal capacity in contiluous service of 12,500 KVA, at the tension of 5/5.5 KV - frequence 50 cycles - 3,000 revolutionsper minute, cooling system closed cycle. It id equipped with thermometers to show on the panels in the Control Room the temperature of the air and of the cooling water. The 1,500 KW alternator of the double revolution type, is operated by steam at 37 actual atm and at 400 Centigrade temperature. It is for the continuous installed capacity of 1,500 KW maximum 2,000 KW at the tension of 5/5.5 KV frequency 50 periods, 3,000 revolutions per minute.

5 AND 70 KV ELECTRIC EQUIPMENT - TRANSFORMERS - The 5 KV equipment is located in the Instrument Panel Room (wing), while the 70 KV installation is on the outside, supported by a structure in concrete.

The current breakers are of the compressed air type, producers by two compressors with two cylinders producing a maximum pressure of 20 atm., while the current breakers operate with a press pressure of 12 + 14 atm. The same pipe, ring life, connect the principal air storage tank (cylinder) with the tank attached to each breaker and with the auxiliary breakers, a number of which can be found along the pipe. The operation of these compressors is automatically controlled to assure that in the tanks and the pipes exist always the necessary pressure required for the operation of the breakers. Each tank attached to each breaker contains a quantity of compressed air enough to assure in case of lack of fresh supply due to leaks in the pipes, three complete operations of opening and closing.

The elctric scheme 5 KV is of the single bar system; instead a double bar system is used for the 70 KV installation.

The 12,000 KVA transformers are designed for open air installation natural cooling with relation to full load = 0,75, of 5/69, 5/72, 7/75, 8 KV and are equipped with devices to change the ratio of transformation.

Each alternator has a differential protection and is supplied with a device controlling and regulating the tension and limiting the amount of current; the transformers instead are protected by "Bucholz" type relays.

712

For all auxiliary services there are 4 750 KVA transformers relation ratio 5000/260 KV, and each transformer is connected to a separate panel from which start all 260 volts cables to feed the auxiliary services of each production unit.

In the Instrument Room there are operating and controlling panels of all the electric equipment and also those controlling the combustion.

To send instructions to working personnel instead of the usual system of "fixed orders", a telephone system with loud speakers, has been installed. There are 16 of these loud speaking telephone stations for the inetrbal services of the power plant, 4 for each unit, in parallel among themselves. In this manner each instructions given is heard by all the men working at the same unit; from the Instrument Room is also possible by moving some switches, to give the same instruction at the same time, to various units.

Near each loud speakers there are two push buttons which two bulbs of different color, light on the instrument panels showing to the people in control that their instructions have been received, at the unit, and executed. In addition there are ordinary telephones so that the personnel may carry on conversations and discuss operations between the various services and the Control Room.

WORKS FOR THE INTAKE AND THE EXHAUST OF WATER FOR COOLING THE CONDENSORS - At about 3/4 of a mile from the shore the sea is only about 2 meters deep. To get water of a lower temperature than that of the water of such shallow depth, it was necessary to dig a channel with an average depth of about meter 1.50, 28 meters wide near the intake installations and 80 meters wident the opposite side. This channel for its first 600 meters is protected by stone banks reinforced with the clay extructed from the bottom of the sea, so to make impossible to the warmer water, outside the channel (canal) to mix with the water inside the canal.

Near the intake installation there are two grills, rotating, to screen and free water from sea weeds and damaging materials. From this intake point runs a covered canal of the capacity of 4 cubic meter per second bringing the water inside the plant in to special tanks where the condensers pumps are installed. The water discharged from the condensers is partially used to carry to combustion waste, the remaining by means of trench canal is discharged near the Santa Caterina marsh, thus assuring without the necessity of building any special work that the exhaust water does not mix with the intake water.

HOUSING FOR PERSONNEL - As the nearest inhabited center is about 6 kilom. from the power station, nearby it three building have been built for the Management, for the Chief of the power station and the personnel necessary to the operation of the installation; all the remaining personnel will be housed at S.Antioco in houses especially built by the Institutte for Economical Houses.

THE TRANSPORTATION SYSTEM AND THE KV SUBSTATIONS - The new elentric line,(see Drawing 18) is about 60 kilometers long. Each pole of the Mannesmann type supports two groups of three conductors each on a steel-aluminum arm tress each of which formed with 26 aluminum wires (diameter mm.2.80) and 7 steel wires (diameter 2.18) (the corresponding copper station of each conductor (insulator) is of 100 mmq.) this stress has a breaking load of 5,480 kilos.

The normal pole weighing about 1,700 kilos) at an average distance from other poles of 220 meters, see Drawing No.19, is about 17.80 meters high from ground level, the lower arm being at about 14.30 meters high from the ground. The insulation is obtained with chains, of suspended insualtors of 4 elements for the normal suspension and of 5 elements in special cases.

At Kilometer 10 there is the Carbonia Substation, open air type supported by a concrete structure, to obtainna double feeding of power for the transforming substation of the Carbonifera Sarda(coal mines), substation serving the new coal mining center of Carbonia.

At Km 60 the the line ends in the Villasoe substation, also of the open air type, with a concrbe structure deuigned to receive receive of 8 groups of three lineseach, 70 KV of which 6 in operation and 3 to be in operation in the hear future for the connection with the projected hydroelectric production plant on the High Flumendosa river.

This substation is equipped with a double bar system with 70 KV oil current breakers.

I.M.R.

710

ALLIED MILITARY GOVERNMENT
INTER OFFICE MEMO

From: .....

SUBJECT: Public Works & Utilities in Sardinia

TO: Lt Col Rhodes
Foggia

FILE No. .....

1/4 1944

So far we have not had the time to make any survey of conditions or requirements in Sardinia. However, that fact does not relieve me of the overall responsibility To inquire into the situation there and to see if there are any pressing problems on which we should take action. Therefore, will you two please arrange to go there at an early date for the purpose of making a general survey and of preparing a report for our record.

Thx.

709

(1)

31 March.

Colonel Lapper:

1. The following has been noted from studying available data on the Sardinian electric power situation:

a. Very little data is on hand.

b. In Sardinia, there are two steam stations having a total capacity of 55,400 kva and three hydro stations having a total capacity of 51,000 KVA and 12,000 kw (D.C.).

c. One steam turbine generator, believed to be 7500 kva capacity is out of service due to a bent shaft. There is no other equipment laid up due to bad condition, so far as is known.

d. A recent report indicated that lack of stored water for hydro generation of electric energy was retarding fertilizer production at Coghinas. If this report is true, the power shortage may be due to one or more of the following factors:

(2)

1. Possible past or future damage to the hydroelectric installations by enemy bombing. An early report stated that some damage from bombing had occurred. Also, there is some indication that the water is being held to a low level in the reservoirs, possibly because of the fear that damage to the dams would release a large quantity of water over the countryside.

2. Lack of essential supplies to run the generating stations. The company has indicated its need for such supplies; Industry and Commerce Subsection has already ordered some of them.

3. Damage to the transmission system, preventing a flow of power to the fertilizer plant.

4. Damage to the d-c generating equipment in the Coghinos hydrostation, near the fertilizer.

707

(3).

4

2. In the absence of information concerning the Sardinian power situation, it is suggested that a representative of this Subcommission go to Sardinia to determine.

(1) The extent of power and energy requirements of essential users.

(2) The ability of the electric system to meet these requirements.

(3) The action to be taken if the requirements can not be met under present conditions.

JBL.

- SARDINIA -

Generating Capacity

Steam

Cagliari

7500.	1 Unit @	7500 KVA
	1 Unit @	11000 KVA (HP Rotor Required)
	TOTAL	18500 KVA.

S. Caterina

25,000	2 Units @ 12500 KVA:	25000 KVA } 2 x 12500 KVA Transformers
	1 Unit @ 11000 KVA:	11000
	1 Unit @ 1900 KVA:	1900
		37900 KVA.

32.500	TOTAL STEAM CAPACITY	55,400 KVA.

Hydro

Tirso - 1st Fall

2 Units @ 9000 KVA:	18000 KVA.
2 Units @ 5000 KVA:	10000
	28000 KVA.

Tirso - 2nd Fall

1 Unit @ 4500 KVA:	4500 KVA.

Cagliari

2 Units @ 7500 KVA:	15000 KVA.
2 Units @ 2000 KVA:	4000 KVA
2 Units @ 6000 KW (d.c.):	12,000 KW.

(2)

19

Coghinas - Total. 19000 KVA.
12 mo KW dc.

28
25
1
5P
1

TOTAL. Hydro Capacity 51,500 KVA.
12,000 KW (dc).

TOTAL GENERATING CAPACITY { 106,700 KVA.
12,000 KW dc.

Cagliari Generating Station.

1 - Turbine Generator Unit, 6,000 KW - 7,500 KVA.
1 - Turbine Generator Unit, 8,000 KW - 11,000 KVA.
Generated voltage - 5 KV.
Steam Pressure 27 Kg/cmq (385 lb/in²).
" Temperature 375°C (707° F).
2 - Boilers 17 tons/hour (37500 #/hr)
2 - Boilers 30 tons/hour (66,100 #/hr).

Appearently the 6000 KW unit is not operating due to ~~dama~~ a bent shaft and rubbing -

S. Caterina - Palmas Sierqia.

2 - Turbine Generator Units - 12,500 KW - 12,500 KVA.
1 - Turbine Generator Unit - 8,800 KW - 11,000 KVA.
1 - Turbine Generator Unit - 1500 KW - 1900 KVA.
Generated voltage - 5 KV.
Steam Pressures - { 27 Kg/cmq (385 lb/in²). - One boiler.
{ 37 Kg/cmq (526 lb/in²). - Three boilers.
Steam Temperatures - 375°C (707°F) - One boiler.
- 400°C (752°F) - Three boilers

4 Boilers - 50 tons/hour (110,000 #/hr).

Società Elettrica Sarda

Arborea, 21 gennaio 1944

RISPOSTA AL QUESTIONARIO 3 GENNAIO 1944
DELLA MISSIONE ALLEATA

Iº) Le informazioni sono fornite dall'Ing.Direttore della Società

2º) Si é preso nota e ci si atterrà a quanto richiesto.

3º) Si unisce la:mappa richiesta: Nella leggenda sono indicate le precisazioni richieste.

4º) La mappa di cui al punto 3º) contiene anche le indicazioni richieste al punto 4º)

5º) Impianti termici:
1º)Centrale termoelettrica di S.Gilla - Cagliari

a)nº2 due turboalternatori

b)potenza apparente di ogni unità: nº1 turboalternatore da 7500 KVA.
nº1 turboalternatore da 11.000 KVA.

c)fattore di potenza cosØ = 0,8

d)potenza dei motori primi;
nº1 turbo-alternatore Tosi-Marelli Kw.6.000
nº1 " " Stal Kw.8.000

e)pressione 27 Kg/cmq. - temperatura vapore 375ºC.

f)voltaggio: 5 KV.

g)giri al minuto: 3.000

h)ditta costruttrice:
gruppo da 7.500 KVA - Tosi Marelli
" da 11.000 " - Stal

i)caldaie: nº4 - due da 17 tonn/ora di vapore;due da 30 tonn/h. di vapore

l)tipo di combustibile;carbone minuto bruciato su griglia tipo Riley

m)il;turbo-alternatore da 5.500 KVA Tosi-Marelli é attualmente fuori servizio per guasto alla turbina a alta pressione (spalettatura del rotore e statore;deformazione dell'asse).

16

2° Centrale termoelettrica di S.Caterina-Palmas Siergiu

a) n°4 alternatori

b) potenza apparente di ogni unità:

n°2 turboalternatori da 12.500 KVA
n°1 " " da 11.000 KVA
n°1 " " da 1.900 KVA

c) fattore di potenza cosØ = 0,8

d) potenza dei motori primi: n°2 unità da 12.500 Kw.
n°1 unità da 8.800 Kw.
n°1 unità da 1.500 Kw.

e) Pressione e temperatura:

n°3 unità - 37 Kg/cmq. - 400° C.
n°1 unità - 27 Kg/cmq. - 375° C.

f) Voltaggio: 5 KV.

g) ;Giri al minuto: 3.000

h) Ditta costruttrice:
- gruppi da 12.500 KVA: Tosi&Brown Boveri
- gruppo da 11.000 KVA: Stal
- gruppo da 1.900 KVA: Stal.

i) Caldaie: n°4 da 50 tonn/h.di vapore

l) Tipo di combustibile: carbone polverizzato

m) La IV^ caldaia ad il 3° trasformatore sono attualmente fuori servizio in seguito a danneggiamento della centrale per offesa aerea.

Note:

a) Esiste a Sassari una piccola vecchia centralina termica con motori a gas,ma data la nessuna importanza della centrale ed il suo stato di conservazione non si é ritenuto di doverla segnalare nei suoi dettagli.

b) Per assicurare il funzionamento delle centrali termiche occorre facilitare l'approvvigionamento di materiale di consumo, e pezzi di ricambio. Si segnalano come particolarmente urgenti:
Fosfato trisodico ed acido solforico per accumulatori 701
Occorre provvedere inoltre con sollecitudine agli olii lubrificanti,ed isolanti nonché i pezzi di ricambio ed i vari materiali segnalati sia al Comando Militare - Ufficio Affari Civili - che alla Unione degli Industriali.-

6°) Impianti Idraulici

I° - Centrale del Tirso - I° salto

a) Numero 4 gruppi turbina-alternatore

b) Potenza apparente di ogni unità:
-n°2 unità da 9.000KVA.
-n°2 unità da 5.000 KVA.

c) Fattore di potenza: casϕ = 0,7 per tutte le unità

d) Potenza dei motori primi:
-n°2 unità da 4.400 Kw.
-n°1 unità da 5.300 K_w.
-n°1 unità da 6.600 Kw.

e) Tutti i motori primi sono turbine a reazione tipo Francis

f) Altezza di caduta sotto la quale funziona l'impianto: variabile da m.27 a m.54.

g) Voltaggio di ogni unità: 5 KV.

h) Giri al minute: 427

i) Fabbrica costruttrice delle turbine: Ditta S.Giorgio
Fabbrica dei due alternatori:
-da 5.500 KVA: Metropolitan Vickers -
-da 9.000 KVA: Compagnia Generale di Elettricità

l) Altezza massima della diga: m.70 (dalle fondazioni)

m) Capacità complessiva del serbatoio: 400.000.000 mc.

n) Capacità complessiva in Kwh.del serbatoio:circa 30 milioni di Kwh.

o) Riserve nel serbatoio al 19/1/44:

quota m.90,62 sul mare(metri d'altezza di acqua utili per produzione energia: 10,62)
metri cubi di acqua; circa 130 milioni
Kwh. circa 9,4 milioni?

Dati presumibili delle condizioni sulle quali si troverà il serbatoio alla fine della stagione delle pioggie (aprile 1944):

4°)

E' in funzione all'andamento della stagione delle pioggie ad al consumo dell'enrgia elettrica.
Ammesso un afflusso al serbatoio pari alla media dei vari anni si può ritenere,in via di orientamento,che alla fine della stagione delle pioggie il livello del lago sarà verso le maggiori quote se da parte delle Autorità Militari sarà consentito raggiungere con l'invaso tali quote.

p) Tutte le unità sono in efficienza.

q) L'invaso del Tirso era stato limitato all'inizio delle guerra; era poi stata tolta ogni limotazione nell'aprile 1942;é stato limitato a quota 90 nel maggio 1943;attualmente si sta esaminando il problema con le Autorità Militari per stabilire a quale quota dovrà essere limitato l'invaso di tale lago.

II° - Centrale del Tirso - 2° Salto

a) N)1 gruppo turbina laternatore

b) Potenza apparente: 4.500 KVA.

c) Fattore di potenza: cosø = 0,7

d) Potenza motore primo: 4.000 Kw.

e) Il motore primo é una turbina ad elica.

f) Altezza media di caduta sotto la quale funziona l'impianto: m.16

g) Voltaggio: 5 KV.

h) Giri al minuto: 214.

i) Fabbrica costruttrice:
-della turbina:Ditta San Giorgio
-dell'alternatore: Brown Boveri

l) Altezza massima della diga: m.26

m) Capacità utile del serbatoio per la regolazione giornaliera: mc.1.100;000.
L'impianto però utilizza l'invaso del 1° salto che,come é stato detto,é di circa 400 milioni di mc.e quindi la riserva in Kwh. dell'impianto é di circa 11 milioni di Kwh.

n) Il gruppo é in efficienza.

Società Elettrica Sarda

III° - Centrale del Coghinas

a) Numero due gruppi turbina-alternatore-numero due gruppi trubine-dinamo.

b) Potenza apparente di ogni unità:
- n°2 gruppi turbina-alternatore da KVA.7.500
- n°2 gruppi turbina-dinamo da 6.000 Kw.

Ad ogni gruppo turbina dinamo é anche collegato un alternatore volano da 2.000 KVA.

c) Fattore di potenza per tutti gli alternatori: cosØ = 0,8

d) Potenza dei motori primi:
- n°4 unità da 8.100 Kw.

e) Altezza media di caduta sotto la quale funziona l'impianto: m.90

f) Voltaggio:
- degli alternatori: 5 KV.
- delle dinamo: 0,3 KV.

g) Giri al minuto: 500

h) Fabbrica costruttrice:
delle turbine: S.Giorgio
degli alternatori da 7.500 KVA: Compagnia Generale di Elettricità
degli alternatori da 2.000 KVA: San Giorgio
delle dinamo: Brown Boveri.

i) Altezza massima della diga: m.58

l) Capacità complessiva del serbatoio; 250.000.000 mc.

m) Capacità complessiva in Kwh. del serbatoio: 40.000.000 Kwh.

n) Riserve nel serbatoio al 19/1/44:
quota m.155,11 sul mare (m.d'altezza d'acqua utile per la produzione di enrgia: 15,11)
metri cubi di acqua; 124.000?000
Kwh. circa 17 milioni.

Dati presumibili delle condizioni nelle quali si troverà il serbatoio alla fine della stagione delle pioggie (aprile 1944):

Societa'Elettrica Sarda

E'in funzione all'andamento della stagione e al consumo di energia elettrica. Ammesso un afflusso al serbatoio pari alla media dei vari anni, si puo'ritenere in via di orientamento che alla fine della stagine delle piogge il livello del lago sara'verso le quote massime.

c) Tutte le unita' sono in efficienza

7) Sottostazione di trasformazione

Nominativo	Trasiormatori	Rapp.di trasior.	Potenza unitaria KVA	Potenza totale KVA	Cosø di targa
CAGLIARI	3	7000/5000	7.500	22.500	0,8
GUSPINI	3	70000/15000	4.000	12.000	0,75
MONTEPONI	2	70000/15000	5.000	10.000	0,8
MARRUBIU	2	70000/15000	3.000	6.000	0,8
CHILIVANI	1	70000/15000	1.350	1.350	0,8
SASSARI	2	70000/15000	2.750	5.500	0,8
F.RAMINOSA	2	70000/15000	4.000	8.000	0,8

Note:

a) Benchè si richiedano i dati delle sottostazioni della potenza di almeno 2.000 KVA si e'ritenuto d'indicare anche la sottostazione di Chivilani di KVA 1.350 data la sua importanza.

b) Fra le sottostazioni e'stata enumerata quella della centrale termica di Cagliari perche'quando la centrale e'ferma, come attualmente, essa funziona da sottostazione, per l'alimentazione di Cagliari di alcune linee a 15 KV.-

SOCIETA'ELETTRICA SARDA
Il Direttore
F.to Ing. Fiorelli.

I. Information have been given by the Engineer, Director (Manager) of the Company

2. We have taken good note and we will comply with what requested,

3. We attach the requested map; in the legend there are indicated the points requested

4. Map mentioned in par. 3 contains also the information requested in par. 4

Note (pag. 2)
a)
There is at Sassari an old small thermo electric power station with gas engines, but in view of its little importance and poor condition of maintenance, we thought useless to give details about it.

b) To assure the operation of the ther;o electric power stations it will be necessary to insure the materials used and spare parts; we particularly needed are :

Triacetin

Threecsodic Phosphate and sulphuric acid needed for the storage batteries

It will also be neccessary supply urgently lubricating oils, insulating matreials together with various spare parts and materials indicated both to the Military Command, Civil Affairs Offuce and the Industrialists Union.

c) pag. 3 - 4 Reserves in reservoir at Jan 19.44 :
altitude meters 90.62 on sea level(of which meters 1).62 of water useful for the production of power)
about 13) million cubic meters of water ;
Kwh about 9.4 million

Estimated conditions of the reservoir at the end of the rainy season (april 44) : It will depend from the amount of rain fall and of power used. Considring a storage of water equal to the average of past years it may be estimated, for general information that at the end of the rainy saison the level of the lake will reach the higher level provided the military Authorities will consent that enough water may flow into the lake so that it may reach such higher level.

p) All the units are in good conditions

q) The amount of water flowing into the Tirso lake had been limited at the beginning of the war; in April 1(42 any such limitation had been withdrawn ; in May 1943 its level had again been limited at 90 meters; actually this problem is being examined together with the Military Authorities to fix to what level must be limited the flow of water into the lake.

m) pag 4 useful capacity of reservoir for daily regulation : 1,100.000 cubic meters.
The plant however use the flow of water of the 1st Head, amounting as mentioned, to about 400 million cubic meters, therefore the reserve of the plant is of about 11 million Kwh.

bottom of page 5 - Estimated data about the position of the reservoir at the 696 end of the rainy season (April 44) : It will depend from the rainfall of the season and the amount of power consumed. Assuming a flow of water into the reservoir equal to the average flow of the past years, we may state, in a general way, that at the end of the rainy season the level of the lake will reach its higher levels.

Notes (bottom page 6)
Notwithstanding only data concerning Substations of at least 2,000 KVA were requested, we thought advisable to include also information concerning the Chivelani Sub station (KVA 1,350) in view of its importanc

b) Among the Substations we mentioned that of the Cagliari Thermo Power Station as, when the power plant does not operate, as at the present time, the Substation is used for the feeding of the city of Cagliari, connected with some of the 15 KV lines

1 ch March 1944.

10

Thermal
Electric Power Plant Equipment
in Sardinia.

1. General.

Investigation has been made to cover all thermal power plants in Sardinia to include units of power and necessity for local use.

The plants investigated are located at :-

X Cagliari.

Porto Vesme.

X San Caterina.

Sassari.

Two small generating sets are located at Cagliari and are included in the report. General descriptive data follows in the above order.

2. Cagliari Power Station (S.Gilla)

(a) 2 Turbo Generators

1 - 1 at 7500 KVA

2 1 at 11000 KVA x 07

(b) Power factor 0.6

(c) Primary motors

1 Turbo generator, Tosi-Marelli KW6000
2 " " Stal- KW8800

(d) Pressure 27 kq/cmq

(e) Temperature 375° C

(f) Voltage 5 KV

(g) Rotation per minute : 3000

(h) Boilers -

1. 2 at 17 tons/steam load

2. 2 at 30 tons/steam load

x Cagliari.

Porto Vesme.

x San Caterina.

Sassari.

Two small generating sets are located at Cagliari and are included in the report. General descriptive data follows in the above order.

2. Cagliari Power Station (S.Gilla)

(a) 2 Turbo Generators

1 - 1 at 7500 KVA

2 1 at 11000 KVA x o/c

(b) Power factor 0.8

(c) Primary motors

1 Turbo generator, Tosi-Marelli Kw6000
2 " " Stal- Kw8800

(d) Pressure 27 kg/cmq

(e) Temperature 375° C

(f) Voltage 5 KV

(g) Rotation per minute : 3000

(h) Boilers -

1. 2 at 17 tons/steam load

2. 2 at 30 tons/steam load

(i) Fuel -

Small size coal (Sulcis) on Riley type grate.

(j) The plant was built about 1928 and produces about 35,000,000 KWK per year. It is used as suplemental supply to the grid system for the entire Island to take care of the load when the hydro - plants are unable to operate at full capacityon account of water shortage or in dry seasons.

(k) The plant is complete and ready to operate and is essential and necessary unit and cannot be removed without serious loss to sustained output.

(l) No damage was done during bombing raids in 1943. 69

3. San Caterina Plant (Palmas Suergiu)

(a) 4 turbo generators

1. 2 at 12500 KVA (Tosi)
2. 1 at 11000 KVA (Stal)
3. 1 at 1900 KVA (Stal)

/Contd.

9

3. Continued.

(b) Power factor 0.8

(c) Primary motors.

1. 2 units at 12500 KW
2. 1 unit at 8800 KW
3. 1 unit at 1500 KW

output
2 × 12500
= 25000 KW Gen

(d) Boilers -

1. 4 from 50 tons/steam hour
2. Pressure and Temperature -
   (a) 3 units - 37 KG/CMG - 400° C
   (b) 1 unit - 27 KG/CMG - 375° C

(e) Voltage - 5 KV

(f) Rotation per minute - 3000

(g) Fuel - pulverised local coal.

(h) The plant was built in 1938 - 39 and is in first class condition except that the No. 4 boiler and one transformer are not working due to damage by air raids in 1943. It is used on an average of 6 months per year, with an output of 70,000,000 KWH per year, to supplement the hydro electric plants at Tirso and Coghinas when dry seasons occur making a shortage of stored water.

(i) The plants forms an integral part of the grid supply system and is a necessity for use in operation in Carbonia Mining district.

(j) Air raids caused damage to one corner of the boiler house, one transformer and a residence, but the damage is minor and operations will not be handicapped.

4. Porto Vesme Plant of the Monteponi Co.

(a) 2 turbo generators

1. One 4500 KWH (Stal 1937 5200 H P)
2. One 4000 KWH (Tosi 5440 H P)
3. 3000 R P M
4. Output 2,500,000 KWH per month with maximum of 35,000,000

(a) 3 units - 37 KG/CMG - 400° C

(b) 1 unit - 27 KG/CMG - 375° C

(e) Voltage - 5 KV

(f) Rotation per minute - 3000

(g) Fuel - pulverised local coal.

(h) The plant was built in 1936 - 39 and is in first class condition except that the No. 4 boiler and one transformer are not working due to damage by air raids in 1943. It is used on an average of 6 months per year, with an output of 70,000,000 KWH per year, to supplement the hydro electric plants at Tirso and Coghinas when dry seasons occur making a shortage of stored water.

(i) The plants forms an integral part of the grid supply system and is a necessity for use in operation in Carbonia Mining district.

(j) Air raids caused damage to one corner of the boiler house, one transformer and a residence, but the damage is minor and operations will not be handicapped.

4. Porto Vesme Plant of the Monteponi Co.

(a) 2 turbo generators

1. One 4500 KWH (Stal 1937 5200 H P)

2. One 4000 KWH (Tosi 5440 H P)

3. 3000 R P M

4. Output 2,500,000 KWH per month with maximum of 35,000,000 KWH per year.

(b) Boilers

1. Two at 17 tons/steam hour

2. 35.42 Kg/sq cm pressure - 400° C temperature.

(c) Fuel

One boiler uses powdered coal, the other small local lump - automatic feed.

(d) The plant is an old one, but was remodelled in 1937 using new boilers and machinery. One corner of the building was blown off in an air raid in 1943 but the plant is complete and ready to operate. It normally runs the year round, furnishing 20,000,000 KWH of the required 50,000,000 KWH annual requirement of the Monteponi Co in its mining operations.

/Contd.

4. Continued.

(d) Normal purchases from the Soc. Elettrica Sarde amount tp 30,000,000 KWH but at this time operations are greatly reduced.

(e) Theplant isowned and operated by the Monteponi Company, a private mining organization. An engineer of the Soc. Elettrica Sarde is of the opinion that under normal conditions his corporation can furnish the power for all the mining operations needed, but if the season was a dry one and mining operetions are in full operations a shortage ofpower would result. The need for this equipment would therefore need to be an emergency to warrant the removal of this plant. Since it is a private firm, a purchase price would need to be arranged.

5. Sassari Producer - Gas Plant.

(a) 4 Gas producer sets - furnace and retorts:
(bought 16 years ago and were old then)

(b) 4 engines - 2 cylinders (Societa Italiana Lerger - Wolf) 250 H.P. each (Nos. 6743, 6441, 6443 & 7479)

(c) Generators.

1. Three 3000 volts - 98 Amps - 50 cycle A.C. 300 KW
2. One 3150 Volts - 42 amps - 50 cycle A.C. 230 K W
3. 1 Alternetor - 175 H P - 16 Amps - 600 R P M 1200 volts
4. 1 electric welding outfit.

(d) Transformers.

1. 3 - 70,000 volt - 15000 volts
2. 8 - 15000 volt - 260/150 volts.

(e) Sassari has population of 55,000 and uses average 20,000 KWH daily - Plant has daily capacity of 24,000 KWH.

(f) Plant has not been operated in about 6 years, but is in good condition and can be used if and when needed. All power in this area now comes from the hydro electric net.

(g) Fuel needed is imported Anthracite. Local semi-

shortage of power would result. The need for this equipment would therefore need to be an emergency to warrant the removal of this plant. Since it is a private firm, a purchase price would need to be arranged.

5. Sassari Producer - Gas Plant.

(a) 4 Gas producer sets - furnace and retorts: (bought 16 years ago and were old then)

(b) 4 engines - 2 cylinders (Societa Italiana Larger - Wolf) 250 H.P. each (Nos. 6743, 6441, 6443 & 7479)

(c) Generators.

1. Three 3000 volts - 98 Amps - 50 cycle A.C. 300 KW
2. One 3150 Volts - 42 amps - 50 cycle A.C. 230 K W
3. 1 Alternetor - 175 H P - 16 Amps - 600 R P M 1200 volts
4. 1 electric welding outfit.

(d) Transformers.

1. 3 - 70,000 volt - 15000 volts
2. 8 - 15000 volt - 260/150 volts.

(e) Sassari has population of 55,000 and uses average 20,000 KWH daily - Plant has daily capacity of 24,000 KWH.

(f) Plant has not been operated in about 6 years, but is in good condition and can be used if and when needed. All power in this area now comes from the hydro electric net.

(g) Fuel needed is imported Anthracite. Local semi-anthracite coal from Siemi has not been tried but the plant Superintendent at Sassari for the Soc. Elettrica Sarde thinks that the sulfur content is too high for use.

(h) This plant is definitely surplus and could be used where needed, if fuel is supplied.

6. Producer Gas Plant at Cagliari Salt Works.

(a) 2 Generators, engines and producers for 550 Volt - 3 x 147 amps - 290 KW

693

(b) Fuel is Anthracite Coal.

(c) Condition is good and owner says he can operate

/Contd.

6. Continued.

without the plants.

(d) Transformers 5000 volts to 500 volts and 500 volts to 160 volts.

(e) Owned by a private firm which will negotiate a sale if needed.

7. Diesel Plant.

There is a complete Diesel engine - generator set 3 KW - 110 volt (DC) with switchboard at the headquarters shop of the 13th Regiment Italian Army at Cagliari. It is not in use.

8. Summary.

From the data listed above, it would seem that the only Plants that can be definitely moved from the area would be the Producer Gas Plants at Sassari (paragraph 5) and Cagliari (paragraph 6) plus the small Diesel plant at Cagliari (paragraph 7). The thermal plants at Cagliari(2) and San Caterina (3) are necessary for power production for the Island. The Plant at Porto Vesme (4) has possibilities if the need justifies the removal which may or may not interfere with mining operations by the Monteponi Company.

b

SOCIETA' ELETTRICA SARDA

Arborea, 21 gennaio 1944

RISPOSTA AL QUESTIONARIO 2 GENNAIO 1944

DELLA MISSIONE ALLEATA

****

1°) Le informazioni sono fornite dall'Ing. Direttore della Società/

2°) Si è preso nota e ci si atterrà a quanto richiesto:

3°) Si unisce la mappa richiesta: Nella leggenda sono indicate le precisazioni richieste:

4°) La mappa di cui al punto 3°) contiene anche le indicazioni richieste al punto 4°):

5°) Impianti termici:

1°) <u>Centrale termoelettrica di S. Gilla - Cagliari</u>

a) n.2 turboalternatori

b). potenza apparente di ogni unità: n.1 turboalternatore da

7500 KVA.
n.1 turboalternatore da

11.000 KVA.

c) fattore di potenza cos = 0,8

d) potenza dei motori primi;

n.1 turboalternatore Tosi-Marelli kw 6.000

n.1 " " Stal kw 8.000

1°) Le informazioni sono fornite dall'Ing. Direttore della Società/

2°) Si è preso nota e ci si atterrà a quanto richiesto:

3°) Si unisce la mappa richiesta: Nella leggenda sono indicate le precisazioni richieste:

4°) La mappa di cui al punto 3°) contiene anche le indicazioni richieste al punto 4°):

5°) Impianti termici:

1°) <u>Centrale termoelettrica di S. Gilla - Cagliari</u>

a) n.2 turboalternatori

b). potenza apparente di ogni unità: n.1 turboalternatore da 7500 KVA.
n.1 turboalternatore da 11.000 KVA.

c) fattore di potenza cos = 0,8

d) potenza dei motori primi;

n.1 turboalternatore Tosi-Marelli kw 6.000

n.1 " " Stal kw 8.800

e) pressione 27 kg/cmq.- temperatura vapore 375° C.

f) voltaggio: 5 KV.

g) giri al minuto: 3.000

h) ditta costruttrice:
gruppo da 7.500 KVA - Tosi Marelli
" da 11.000 " - Stal

i) caldaie: n.4 - due da 17 tonn/ora di vapore; due da 30 tonn/h. di vapore.

l) tipo di combustibile; carbone minuto bruciato su griglia tipo Riley

m) il turbo-alternatore da 5.500 KVA Tosi-Marelli è attualmente fuori servizio per guasto alla turbina alta pressione

691

./. ./.

(spalettatura del rotore e statore; deformazione dell'asse).

2°) Centrale termoelettrica di S.Caterina - Palma Sucreti

a) n.4 alternatori

b) potenza apparente di ogni unità:

n° 2 turboalternatori da 12.500 KVA
n° 1 " " da 11.000 KVA
n° 1 " " da 1.900 KVA

c) fattore di potenza cos/ = 0,8

d) potenza dei motori primi: n.2 unità da 12.500 Kw.
n.1 unità da 8.800 Kw.
n.1 unità da 1.500 Kw.

e) pressione e temperature:
n° 3 unità - 37 Kg/cmq. - 400° C.
n° 1 unità - 27 Kg/cmq. - 375° C.

f) voltaggio: 3 KV.

g) Giri al minuto: 3.000

h) Ditta costruttrice:
gruppi da 12.500 KVA: Tosi-Brown Boveri
gruppo da 11.000 KVA: Stal
gruppo da 1.000 KVA: Stal

i) Caldaie: n° 4 da 30 tonn/h. di vapore

l) Tipo, di combustibile: carbone polverizzato

m) La IV^ caldaia ed il 3° trasformatore sono attualmente fuori servizio in seguito a danneggiamento della centrale per offesa aerea.-

Note:

n) Esiste a Bacoari una piccola vecchia centralina termica con

n° 1 " " da 1.500 KVA

c) fattore di potenza cosφ = 0,8

d) potenza dei motori primi: n.2 unità da 12.500 Kw.
n.1 unità da 2.000 Kw.
n.1 unità da 1.500 Kw.

e) pressione e temperatura:
n° 2 unità - 37 Kg/cmq. - 400° C.
n° 1 unità - 27 Kg/cmq. - 375° C.

f) voltaggio: 5 KV.

g) Giri al minuto: 3.000

h) Ditta costruttrice:
gruppi da 12.500 KVA: Tosi-Brown Boveri
gruppo da 11.000 KVA: Stal
gruppo da 1.800 KVA: Stal

i) Caldaie: n° 4 da 50 tonn/h. di vapore

l) Tipo di combustibile: carbone polverizzato

m) La IV^ caldaia ed il 3° trasformatore sono attualmente fuori servizio in seguito a danneggiamento della centrale per offesa aerea.-

Note:

a) Esiste a Sassari una piccola vecchia centrale termica con motori a gas, ma data la nessuna importanza della centrale ed il suo stato di conservazione non si è ritenuto di doverla segnalare nei suoi dettagli.

b) Per assicurare il funzionamento delle centrali termiche occorre facilitare l'approvvigionamento di materiale di consumo, e pezzi di ricambio.- Si segnalano come particolarmente urgenti: fosfato trisodico ed acido solforico per accumulatori
Occorre provvedere inoltre con sollecitudine agli olii lubrificanti, ed isolanti nonchè i pezzi di ricambio ed i vari materiali segnalati sia al Comando Militare - Ufficio Affari Civili che alla Unione degli Industriali.-

8°) Impianti idraulici

1°) Centrale del Tirso - I° salto

./. ./. ./.

4

a) Numero 4 gruppi turbina-alternatore

b) potenza apparente di ogni unità
n° 2 unità da 9.000 KVA.
n° 2 unità da 5.500 KVA.

c) Fattore di potenza: cosφ = 0,7 per tutte le unità

d) Potenza dei motori primi:
n° 2 unità da 4.400 kw.
n° 1 unità da 5.500 Kw.
n° 1 unità da 6.600 Kw.

e) Tutti i motori primi sono turbine a reazione tipo Francis

f) Altezza di caduta sotto la quale funziona l'impianto:
variabile da m.27 a m.54.

g) Voltaggio di ogni unità: 5 KV.

h) Giri al minuto 427

i) Fabbrica costruttrice delle turbine: Ditta S. Giorgio
Fabbrica dei due alternatori
da 5.500 KVA. Metropolitan Vickers -
da 9.000 KVA. Compagnia Generale di Elettricità

l) Altezza massima della diga: m.70 (dalle fondazioni)

m) Capacità complessiva del serbatoio: 400.000.000 mc.

n) Capacità complessiva in Kwh. del serbatoio: circa 30 milioni di Kwh.

o) Riserve nel serbatoio al 19/1/944:
quota m.90,62 sul mare (metri d'altezza di acqua utili per produzione energia: 10,62)
metri cubi di acqua; circa 130 milioni
Kwh. circa 9,4 milioni

Dati presumibili delle condizioni sulle quali si troverà il serbatoio alla fine della stagione delle pioggie (aprile 1944):

n° 1 unità da 5.300 Kw.
n° 1 unità da 6.600 Kw.

e) Tutti i motori primi sono turbine a reazione tipo Francis

f) Altezza di caduta sotto la quale funziona l'impianto:
variabile da m.27 a m.54.

g) Voltaggio di ogni unità: 5 KV.

h) Giri al minuto 427

i) Fabbrica costruttrice delle turbine: Ditta S. Giorgio
Fabbrica dei due alternatori
da 5.500 KVA. Metropolitan Vickers -
da 9.000 KVA. Compagnia Generale di Elettricità

l) Altezza massima della diga: m.70 (dalle fondazioni)

m) Capacità complessiva del serbatoio: 400.000.000 mc.

n) Capacità complessiva in Kwh. del serbatoio: circa 30 milioni di Kwh.

o) Riserve nel serbatoio al 19/1/944:
quota m.90,62 sul mare (metri d'altezza di acqua utili per produzione energia: 10,62)
metri cubi di acqua; circa 130 milioni
Kwh. circa 9,4 milioni

Dati presumibili delle condizioni sulle quali si troverà il serbatoio alla fine della stagione delle pioggie (aprile 1944):

E' in funzione all'andamentodella stagione delle pioggie ed al consumo dell'energia elettrica.-

Ammesso un afflusso al serbatoio pari alla media dei vari anni si può ritenere, in via di orientamento, che alla fine della stagione delle pioggie il livello del lago sarà verso le maggiori quote se da parte delle Autorità Militari sarà consentito raggiungere con l'invaso tali quote.-

p) Tutte le unità sono in efficienza.

q) L'invaso del Tirso era stato limitato all'inizio della guerra; era poi stata tolta ogni limitazione nell'aprile 1942; è stato limitato a quota 90 nel maggio 1943; attualmente si sta esaminando il problema con le Autorità Militari per stabilire a quale quota

689

./. ./. ./.

3.

dovrà essere limitato l'invaso di tale lago.-

2°) Centrale del Tirso - 2° Salto

a) n° 1 gruppo turbina alternatore

b) Potenza apparente: 4.500 KVA.

c) Fattore di potenza: cosØ = 0,7

d) Potenza motore primo: 4.500 Kw.

e) Il motore prima è una turbina ad elica

f) Altezza media di caduta sotto la quale funziona l'impianto: m.16

g) Voltaggio: 5 KV.

h) Giri al minuto: 214

i) Fabbrica costruttrice:
della turbina: Ditta San Giorgio
dell'alternatore: Brown Boveri

l) Altezza massima della diga: m.26

m) Capacità utile del serbatoio per la regolazione giornaliera:
mc. 1.100.000.
L'impianto però utilizza l'invaso del 1° salto che, come è stato detto, è di circa 400 milioni di mc. e quindi la riserva in Kwh. dell'impianto è di circa 11 milioni di Kwh.

n) Il gruppo è in efficienza.

3°) Centrale del Coghinas

a) Numero due gruppi turbina alternatore - numero due gruppi turbina-dinamo.-

b) Potenza apparente di ogni unità:
n° 2 gruppi turbina alternatore da KVA. 7.500
n° 2 gruppi turbina-dinamo da 6.000 KVA.

A ogni gruppo turbina dinamo è anche collegato un alternatore volano da 2.000 KVA.

d) Potenza motore primo: 4.800 Kw.

e) Il motore prima è una turbina ad elica

f) Altezza media di caduta sotto la quale funziona l'impianto: m.16

g) Voltaggio; 5 KV.

h) Giri al minuto: 214

i) Fabbrica costruttrice:
della turbina: Ditta San Giorgio
dell'alternatore: Brown Boveri

l) Altezza massima della diga: m.26

m) Capacità utile del serbatoio per la regolazione giornaliera:
mc. 1.100.000.
L'impianto però utilizza l'invaso del 1° salto che, come è stato detto, è di circa 400 milioni di mc. e quindi la riserva in Kwh. dell'impianto è di circa 11 milioni di Kwh.

n) Il gruppo è in efficienza.

3°) Centrale del Coghinas

a) Numero due gruppi turbina alternatore - numero due gruppi turbina-dinamo.-

b) Potenza apparente di ogni unità:
n° 2 gruppi turbina alternatore da KVA. 7.500
n° 2 gruppi turbina-dinamo da 6.000 KVA.

A ogni gruppo turbina dinamo è anche collegato un alternatore volano da 2.000 KVA.

c) Fattore di potenza per tutti gli alternatori: cosφ = 0,8

d) Potenza dei motori primi:
n° 4 unità da 8.100 Kw.

e) Altezza media di caduta sotto la quale funziona l'impianto: m.90

f) Voltaggio:
degli alternatori: 5 KV.
delle dinamo: 0,3 KV.

g) Giri al minuto: 500

h) Fabbrica costruttrice:

./. ./. ./.

delle turbine: S.Giorgio
degli alternatori da 7.500 KVA.: Compagnia Generale di Elettricità.
degli alternatori da 2.000 KVA. S. Giorgio
delle dinamo: Brown Boveri.

i) Altezza massima della diga: m.58

l) Capacità complessiva del serbatoio; 250.000.000 mc.

m) Capacità complessiva in Kwh. del serbatoio: 40.000.000 Kwh.

n) Riserve nel serbatoio al 19/1/1944:
quota m.155,11 sul mare (m.d'altezza d'acqua utile per la produzione di energia: 15,11)
metri cubi di acqua: 124.000.000
kwh. circa 17 milioni.
dati presumibili delle condizioni nelle quali si troverà il serbatoio alla fine della stagione delle pioggie (aprile1944):

E' in funzione all'andamento della stagione e al consumo di energia elettrica. Ammesso un afflusso al serbatoio pari alla media dei vari anni, si può ritenere in via di orientamento che alla fine della stagione delle pioggie il livello del lago sarà verso le quote massime.

o) Tutte le unità sono in efficienza.

7) Sottostazioni di trasformazione

Nominativo	Trasformatori	Rapp. di Trasformazione	Potenza unitar. KVA.	Potenza totale KVA.	Cosø di targa
CAGLIARI	3	70000/5000	7.500	22.500	0,8
GUSPINI	3	70000/15000	4.000	12.000	0,75
MONTEPONI	2	70000/15000	5.000	10.000	0,8
MARRUBIU	2	70000/15000	3.000	6.000	0,8

n) Riserve nel serbatoio al 19/1/1944:
quota m.155,11 sul mare (m.d'altezza d"acqua utile per la produzione di energia: 15,11)
metri cubi di acqua: 124.000.000
kwh. circa 17 milioni.
dati presumibili delle condizioni nelle quali si troverà il serbatoio alla fine della stagione delle pioggie (aprile1944):

E' in funzione all'andamento della stagione e al consumo di energia elettrica. Ammesso un afflusso al serbatoio pari alla media dei vari anni, si può ritenere in via di orientamento che alla fine della stagione delle pioggie il livello del lago sarà verso le quote massime.

o) Tutte le unità sono in efficienza.

7) Sottostazioni di trasformazione

Nominativo	Trasformatori	Rapp. di Trasformazione	Potenza unitar. KVA.	Potenza totale KVA.	Cosø di targa
CAGLIARI	3	70000/5000	7.500	22.500	0,8
GUSPINI	3	70000/15000	4.000	12.000	0,75
MONTEPONI	2	70000/15000	5.000	10.000	0,8
MARGUBIU	2	70000/15000	3.000	6.000	0,8
CHILIVANIA	1	70000/15000	1.350	1.350	0,8
SASSARI	2	70000/15000	2.750	5.500	0,8
F. RAMINOSA	2	70000/15000	4.000	8.000	0,8

./. ./. .

Note:

Benchè si richiedono i dati delle sottostazioni della potenza almeno 2.000 KVA. si è ritenuto d'indicare anche la sottostazione di Chilivani di KVA. 1.350 data la sua importanza.

b) Fra le sottostazioni è stata enumerata quella della centrale termica di Cagliari perchè quando la centrale è ferma, come attualmente, essa funziona da sottostazione, per l'alimentazione di Cagliari di alcune linee a 15 KV.-


1078