



TELEGRAM

6/3 49

gms 008 karlsruhe/cco 514 48 6 2030 usa -

Mrs. Östman's teleexp.

chief engineer thelander electrical department
state railways stockholm -

Telef. No. _____
Th. Sign.



reichsbahn revising its power plant program believe we
should act at once on parjos generator as discussed
with your office 15 february please advise if i should
act exact lprice not necessary but should follow as
soon as possible -

gilles +



gms

Exp. av _____

B. 300 (1940)



TELEGRAFVERKET

TELEGRAM

De med grova linjer inramade delarna ifyllas av telegrafen. Anvisningar, se baksidan

11/11/49

Klass	Nr	Ord	Datum 7/3 49	Kl.	Avsant sign. kl.
Tj-anm. och via					

Adress

Robert C Gilles

Weberstrasse 10

Karlsruhe Tyskland

Text

Are willing to sell Porjus generator and transformers if satisfactory agreement can be made stop Asea will probably not be able to rewind transformers stop Further reports will follow as soon as possible

State Railways

Avsändarens namn, adress och telefannummer (avtelegraferas icke)

Avgift	sign.
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Gd

Ö18 Ebr

Frd

Fsbr

Mr. Robert C. Gilles,

Weberstrasse 10,

Karlsruhe.

Germany.

Dear Sir,

On account of your inquiry concerning the sale to Germany of the available Porjus generator, we herewith confirm that we are willing to transfer the generator with transformers and other equipment to a total price of 85 000 U.S. dollars. To this sum charges for dismantling, packing and freight will be added. Delivery can take place after July 1st this year, provided that you will give us satisfactory guarantee for the payment, and that the Swedish Government will consent to the sale in question. As soon as we have come to a preliminary agreement with you in this matter, we will make arrangements for obtaining such a permission.

The two single-phase transformers are manufactured by Siemens and rated: type WW 1350-80/15, volts 4000/43000, cycles 15. They are connected in parallel on the low voltage side and in series on the high voltage side, and the transformation ratio is thus 4000/2 x 43000 volts. As you desire higher step up voltage, the transformer must be rewinded, but, being overwhelmed with orders, the Asea Company, Västerås, cannot

undertake this work.

The generator is manufactured by ASEA, and was rewinded in 1931-1932. Then it obtained a new stator disc-core and a new stator winding, and the rotor was repaired, among other things, as to the amortisseur winding. The ASEA Company at Västerås gives the following overload values for the generator:

Nominal output	10 000 kVA
Overload	15 % during 45 minutes
"	40 % " 3 "
"	100 % " 15 seconds.

However, the officers of the water power plant at Porjus mean that these figures ought to be put lower. We cannot give any guarantees in this respect.

The feeder can deliver 310 A, 370 V at 250 r/m. At present it is working with 180 V at nominal load, whereas its thermal load capacity is completely utilized at the nominal output of the generator. With regard to its heating, the feeder will therefore not be sufficient for a lengthy overload of the generator.

The following equipment is included in the price mentioned above:

Zero resistance, manufactured by ASEA, 40 kV
Circuit breaker " " Siemens, 80 kV
type CR 6365 N^o
873544
Demagnetizing device, " " Siemens, the
"Schwingung" system,
Magnetizing resistance, manufactured by ASEA,
400 ohm, 6,2 A.
Voltage regulator, manufactured by Brown Boveri
Excess current regulator " " " "
Normal current transformers, potential transformers,
measuring instruments and relays.

The generator being sold, this equipment is of little value to us, and it has therefore been calculated to a low amount which is included in the selling price.

Yours truly,

Skriv tydligt!

Med förändringar eller förändringar av ord äro icke tillåtna.

Varje ändring i telegramoriginalen skall vara bestyrkt av avsändaren eller hans ombud.

Fullständigt adress är av största vikt för telegrammens säkra och snabba befordring.

Beteckningen Rt (med eller utan telefonnummer) anbringad i adressen till rikstelefonabonnent efter dennes namn är avgiftsfri.

Skiljetecken av telegraferas endast på uttrycklig begäran och ingå då i det taxerade ordantalet.

Särskilda föreskrifter angående telegrammet o. dess befordran äger avsändaren lämna genom s. k. taxerade tjänsteanmärkingar placerade före adressen, såsom:

svar betalt=Rpx=
(x betecknar avgiftsbeloppet i kronor vid inländsk och i franes vid utländsk korrespondens)

extrabud=Xp=
vidaresändes=Fs=
kollationeras=Tc=
mottagningsbevis =Pc=
egenhändigt=Mp=

Börjande telegram, som äro försedda med den taxerade tjänsteanmärkingen *extrabud*, gäller, att dylika telegram, därest bud för utbärningen ej kan anskaffas, vidarebefordras till adressaten med telefon eller post. Vid sådant förhållande återbetalas extrabudsavgiften med avdrag av event. telefon- eller postporto.



TELEGRAM

från

till

(Adress- eller förmedlingsstation vid S. J.)

Klass	Nr	Ordantal	Inlämnat den	19	Tjänsteanmärkingar
			kl.	21	449

Robert C Gilles

Weberstrasse 10

Karlsruhe

Letter giving all information about the generator and transformers was sent to you on April 9

State Railways

Skriv tyd

Stats- och pri gram befordras telegraf i den u ning, som teleg gen i S. J. egna i det medgiver.

I och för medd därest telegram le bliva obestå återbetalning av skulle ifrågakom torde här nedan : avsändarens nu. adress.

Avgifter

Porto

Svar betalt

Extrabud

Post m. m.

Lyxblankett

Summa Kr.

För taxeringen an

signatur:

Ann. vid befordr

Avsänt den / 19 kl. å apparat nr av Mottaget i av

Frd

Ü18 Ebr

Mr. Robert C. Gilles,
Weberstrasse 10,
Karlsruhe.
Germany.

Dear Sir,

In reply to your letter of April 30th, 1949 concerning the sale of a generator with equipment from the power plant at Porjus, we beg to inform you as follows.

The enclosed drawing Ebr N° 30678 is a wiring diagram for the 15 cycles system of the Porjus power plant. The generator now intended for sale, is indicated by "Aggr. III". This generator is connected in the same way as Aggr. II (G 215), with the exception that, on the former, 50 cycles is ~~xxx~~ mounted on the same shaft.

We have no test certificate for the transformers, but a controlling of the transformer losses at different voltages was previously made. The results are given below.

kVA	750	1500	2250	3000	3750	4500	5500
Iron losses kW	21,5	21,5	21,5	21,5	21,5	21,5	21,5
Copper losses kW	3,8	15,1	33,9	60,3	94,3	136,0	203,0
Total kW	25,3	36,6	55,4	81,8	115,8	157,5	224,5

The transformers have the manufacturing

numbers 129836T and 129840T and are rated W 135080/15, 3000 kVA, 4000/43000 volts, 15 cycles. They are not equipped with regulation taps neither on the primary side, nor on the secondary side. The transformers are made for water cooling. About 75 liters of water a minute are consumed.

According to observations made at Porjus, the transformers can ~~be loaded by~~ ^{carry} 10000 kVA for about 45 minutes, without the oil temperature exceeding 70°C at a temperature of the cooling water of 25°C. The load capacity during 3 minutes or during a shorter time, may be estimated to 11000 or 12000 kVA.

The generator has an open cooling system.

The voltage regulator for the generator is manufactured by Brown Boveri, type A 2/1, N° A 20279. Furthermore, there is an ~~excess~~ — current regulator type A 2/1a N° 20274.

Only one generator with equipment is now available at Porjus. The other generators will still be utilized for some 10 years.

The price mentioned in our letter of April 9th, 1949, US \$ 85000, is net to you.

Very truly yours,

Telegram den 2 juni 1949.

Mr. Robert Gilles

Hotel Goldener Hirsch
Salzburg

Total weight of generator 240 metric tons

Dimensions in meters Total length 7,62 Stator diameter 6,3

Height above floor of centre 1,0 total 4,15

Breadth over the stator feet 7,8

State Railways

Very truly yours
Mr. Robert C. Gilles,
3 Eichpointweg,
Salzburg,
Austria.

Dear Mr. Gilles,

Referring to your letters of June 21st and 28th, 1949, we beg to inform you as follows.

The dimensions of the generator are shown by the photo enclosed in duplicate, and by the drawings Asea N^o 44536 and 63068.

According to information received from Asea, the weight of the stator of the generator is 85 metric tons. The stator can be ~~horizontally~~ divided into two halves. The upper half has a weight of 40 tons, and the lower half has a weight of 45 tons.

The rotor has a total weight of 74 tons, but, if the axle is taken away, the weight will be reduced to 65 tons. However, the pole plates and the windings can also be taken away, and the rotor can further be divided into 6 parts. The weight of each part will then be 7 tons.

As we have informed you in our letter of May 19th, 1949, the two transformers can carry a total load av 10000 kVA for about 45 minutes, and a higher load during a shorter time.

It may therefore be called in question, whether the transformers must be rewound with regard to the load capacity. Dimensions for the windings of the

transformers are not available, but such dimensions can be obtained at Porjus, if required, by measuring after a transformer being lifted. As this work is relatively hard, we are looking forward to your information, if a lifting of the transformer is required, now that the statement of the transformer output has been corrected.

The weight of a transformer is about 40 tons, 8 tons of which are oil.

The external dimensions are about 4,0 m x 2,7 m x 2,2 m.

Very truly yours,

Mr. Robert G. Gillies

J. E. Johnson

Stockholm, 6th July, 1949.

9/HH/BE

Mr Robert Willes
Hotel Goldener Hirsch,
Salzburg.
Österrrike.

In reply to your letter of May 25th 1949 please be informed, that tests will be made of oil from the transformer as well as from the switch 80 kv. The result of these tests will then be forwarded to you.

The switch 80 kv cannot be tested at Forjus with higher voltages than 80 kv. It will therefore be necessary to send the switch to Allmänna Svenska Elektriska AB:s laboratory at Ludvika, if completet tests are to be made. If tests are to be made with the switch att voltages above 80 kv, there will always be a risk that the switch will be seriously damaged. It therefore seems most suitable that the switch is sold separately, as suggested by you, and that it is used for a maximum of 80 kv.

At a possible sale all items No. 1-35 between A and B skenors will be included in accordance with the diagram previously handed over to you.

Yours truly
KUNGL. JÄRNVÄGSBSTYRELSEN

B. Holme

Specification of

the dimensions of the single-phase transformer T 315.

Rated data

Single-phase transformer	T315A	T315B
Manufacturer:	Siemens	Schuckert
Type:	WW 1350	⁸⁰ / ₁₅
Manufacturer's number:	129836T	129840T
Output:	3000 kVA	
Frequency:	15 c/s	
Primary voltage:	4000 V	770 A
Secondary voltage:	43000 V	71,2 A

Oil insulated and internal cooling.
Iron core of shell type.

Winding data

Primary winding

Number of turns: 108
Dimensions of copper: 4 parallel parts 4,0 x 17,0 mm each included a conductor having the exterior dimensions of about 18,5 x 18,5 mm.
Number of coils: 6 x 18 turns

Secondary winding

Number of turns: 1162
Copper dimensions: 1 conductor about 5,0 x 5,0 mm
Number of coils: 2 having 53 turns each
16 " 66 " "

The 53 turn coils placed adjacent to the tapping points have 18 turns normally insulated and 35 turns with strengthened insulation by which means the exterior dimensions have increased from about 5,1 x 5,1 to about 7,0 x 7,0 mm.

Number of turns: None.

Coil dimensions:

See the drawing.

Iron core:

See the drawings.

Transformer case:

See the drawing.

Porjus, September 27th, 1949.

Name

Stockholm, October 10th, 1949.

Ebr 2331

Mr. Robert C. Gilles,
3 Eichpointweg,
Salzburg.

Austria.

Ref. Generator at Porjus.

Dear Mr. Gilles,

Referring to your letters of August 6th and 17th and October 1st, 1949, we are sending you an additional copy of the photograph as well as the drawings Asea n^o 44536 and 63068, which were not sent to you on July 26th on account of a mistake.

A transformer has now been raised at Porjus, so that the information desired can be obtained. The statements are given in the questionnaire as well as on the enclosed drawings which show the dimensions of the iron core.

Furthermore, we have succeeded in getting some copies of the drawings showing the construction of the transformer. Two copies of these drawings are enclosed. We hope that the questionnaire and the drawings will give you all necessary information.

As previously has been mentioned, only one generator can now be sold.

The figures of the stator weight which were given in our letter of July 26th, 1949, have been obtained from Asea, Västerås, which has manufactured the generator. The figures of weight are taken from the statements obtained in conjunction with the weighing of the stator before the transport from the factory. The figures for the upper part and the underpart, 40 and 45 tons respectively, ought therefore to be reliable.

Very truly yours,

Th. Tholander

Enclosure: Fragebogen,

Photo,
Specification with
3 drawings (in duplicate)
Draw. n^o Asea 44536, 63068,
Draw. n^o SSW 9TC 10600, 7CT 593,
5CT 598, 7CT 596 and 9TC 10463
(in duplicate)

Stockholm, July 13th, 1950.

Kop Fbr
RL

(219)

Ebr 2331

Mr. Robert C. Gilles,
3, Eichpointweg,
Salsburg.

Austria

Ref. Generator at Porjus.

Dear Mr. Gilles,

We are in receipt of your letter of March 21st and June 22nd, 1950, and have examined the want of cars etc. for a planned transport of the generator and equipment from Porjus to Austria.

1. The charges for dismantling, packing and loading of the generator and equipment have been estimated to about 1000 US dollars. This amount is however very questionable, because it is difficult to foresee the extent of the necessary packing etc.
2. The State Railways will pay the freight from Porjus to Sassnitz Hafen, if the transport passes Trelleborg, or to Helsingborg border, if the transport passes Denmark.
3. The following number of cars is calculated to be necessary for the transport:
 - a) The rotors of the generators:
5 two-axle cars, carrying a load of 15 tons each,
 - b) The stator halves:
Two special cars type Sb (four axles) carrying a load of 40 or 45 tons each.
 - c) Endshields, bearing brackets, feeder etc:
6 two-axle cars carrying a load of 15 tons each.
 - d) Transformers:
2 special cars type Q 1 (four axles) carrying a load of 40 tons each.
 - e) Oil circuit breaker etc:
1 two-axle car carrying a load of 5 tons.

Before a transport as the above mentioned takes place, the forwarding possibilities must be carefully examined allowance to be made for the size and the weight of the loads. Special cars are at present very occupied in internal traffic, and, for this

reason, the transport may be delayed. The whole forwarding time from Porjus to Austria is supposed to be about 14 days.

4. We have approximately calculated the transport charges as follows:

- a) Sassnitz-Salzburg 5,400 US dollars
- b) Hülisingborg gränsen (border)-
Padborg-Salzburg 7 000 US dollars

Car rent according to agreement to be made later on will be added, and there will also be additions, if special train is needed or if the loading gauge is exceeded.

5. We are sending you enclosed another set of the following drawings, which we sent you on October 10th, 1949:

Specification and three drawings

Asea N° 44536, 63068

SSW " 9TC 10600, 7CT 593, 5CT 598, 7CT 596 and

9TC 10463.

Very truly yours,

KUNGL. JÄRNVÄGSSTYRELSEN

Ake Karsberg
tjf.