

228/ATV.2 - Rail 6 Months Program 1000

Months Program 10000/140/804

From: Feb 45

To: July '45

Ext: 513

HEADQUARTERS ALLIED COMMISSION
APO 394
TRANSPORTATION SUB COMMISSION

FPR/ld

Ref: 228~~M~~/5/Tn.2

13 July 1945

Subject : I.S.R. Six Months Requirements.

To : Rail Division TN 4
(attn. Maj. G. M. Long)

735

(1) Confirming conversation Major Long - Major Richardson of even date that materials ordered on Reqn. No ENG-IV-O 498 were a military commitment of the D.M.R.S. It has been decided that materials on arrival in Italy would be handed over to the American M.R.S. for accounting and disposal to the Italian State Railways. (Para 3 of D.M.R.S. letter Tn.A2/75/12 of 8 July '45 and para 3 of AG/Mat/14/8/Tn.4 of 6 July '45 reference).

(2) Will you kindly maintain a close contact with M.R.S. American so that as and when this material arrives this office may be advised

- (a) Port and date of arrival in Italy
- (b) Type and tonnage of material
- (c) date of acceptance by M.R.S. American
- (d) date, tonnage and description of material when handed over to I.S.R.
- (e) any other data relative to transfer of material

(3) This information is required for recording purposes against requisitions.



F. P. RICHARDSON, Major,
Planning Staff.

File

14

CMB/ev

LOWER-OFFICE MEMO

File H. AC/Mat/14/10/Tn 4

SUBJECT : I.S.R. Six Month Requirements.

734

TO : Planning Staff In 2
Attn: Mr. Chas Ryan

1. With further reference to our AC/Mat/14/8/Tn 4 of 6 July 1945 above subject, attached is copy of letter from I.S.R. to G-4 tracing on the status of the balance of the items requisitioned on ENG-IV-U.498.

2. This for your information.

C. C. C. C.
for Chief
Rail Division

Incl. Letter referred to in para 1.

Transp. Sub-Commission (Rail Div.)
11 July 1945
Tel: 843191-11

*Major long phone 0930
12 July 45
Military Committee of
DMRS - to American MRS.
to a/c for to I.S.R.*

*Para 3 of DMRS Letter TN.A. 2/76/12 of 8 July 45
Para 3 and AC/RIAT/14/8/TN 4. 6 of July 45.*

14

*Brought
by hand of
Major B. B. B.
Planning Staff*

Subject: Railroad Maintenance Equipmt.

To : G-4 (O) (through G-4 Mov & Tn).

Copy to: Tn (Br) A.F.H.Q.
Lt.Col.E.F.de Lisle
Tn (Finance)
Tn Sub-Commission A.C.

Military Railway Service,
C.M.F.
Tel. Firebox 9389.
Tn.A.2/76/12
8 July 45.

1. G-5 Section A.F.H.Q. requisition AC-ENG-87-45, Feb.45 was returned to you under cover of our Tn.A.2/76/12, 20 Apr.45, duly broken down as between (a) essential requirements for military traffic and to prevent disease and unrest and (b) balance of original quantities specified by A.C.
2. We have received copy of U.S. military requisition ENG-IV-U 498, 16 May 45 which covers, in part, the items listed under caption 'A', but are without information on any further action taken in respect of the balance of the items under this heading. It is noted that a number of the critical materials recommended by us for provision under caption 'A' have yet to be ordered, e.g. Boiler Tubes, Leather Belting etc. May we be informed please whether or not such action to arrange supply is in hand; these items will be urgently needed for maintenance of locomotives and railway workshops. Alternatively, please say if further action is in suspense pending I.S.R. review of availabilities in Northern Italy.
3. In our Tn.A.2/76/12, 31 May 45 to D.D.Tn., Tn.(Br), A.F.H.Q., we enquired whether the materials ordered on Reqn.ENG-IV-U-498 could be consigned direct to A.C. depots or to the Italian State Railways. As a result of conversation Col.Simons - Maj.Reynolds it is understood that M.R.S. will be responsible for handling and accounting for any supplies received against these military requisitions. Arrangements have therefore been made accordingly.

D.R.H.CHAPLIN, Lt.Col.
for Brigadier
Director Military Railway Service.

SUPPLY POSITION SHEET
 Requisition: AC-ENG-87-45 - Dated: February 1945 -

Item	Amount	Advice of Shipment	Arrival	Balance Due
1	4			
a	25			
b	3			
c	6			
d	11			
e	245			
f	340			
g	306			
h	135			
i	3			
j	3			
k	3			
l	117			
m	5			
n	8			
o	10			
p	5			
q	6			
r	6			
s	8			
t	10			
u	100			
v	100			
w	100			
z	4			
a	3			
b	8			
c	5			
d	105			
e	6			
f	3			
g	4			
h	3			
i	5			
3	10			
a	20			
b	25			
c	40			
d	80			
e	100			
4				
a				
b				

732

732

135	3	3	3	117	5	8	10	5	6	6	8	10	100	100	4	3	8	5	105	6	3	4	3	5	10	20	25	40	80	100	20	20	20	100	60	50	50	50	20
-----	---	---	---	-----	---	---	----	---	---	---	---	----	-----	-----	---	---	---	---	-----	---	---	---	---	---	----	----	----	----	----	-----	----	----	----	-----	----	----	----	----	----

I J K L M N O P Q R S T U V W X Y Z a b c d e f g h i j k l m n o p q r s t u v w x y z

SUPPLY POSITION SHEET

Item	Amount	Advice of Shipment	Arrival	Balance Due
a	10			
f	22			
g	50			
h	32			
i	12			
j	15			
k	6			
l	6			
m	6			
n	6			
o	6			
p	6			
q	6			
r	6			
s	17			
t	40			
u	40			
v	900			
w	900			
x	900			
y	900			
z	900			
aa	900			
ab	900			
ac	220			
ad	440			
ae	440			
af	660			
ag	660			
ah	660			
ai	440			
aj	440			
ak	440			
al	440			
am	660			
an	440			
ao	440			
ap	1,100			
aq	1,100			
ar	1,100			
as	1,100			
at	1,100			
au	731			

SUPPLY POSITION SHEET

Item	Amount	Advice of Shipment	Arrival	Balance Due
e	500			
f	15			
g	400			
h	40			
i	100			
11 a	100			
11 b	1,200			
11 c	300			
11 d	100			
12 a	75,000			
12 b	150,000			
12 c	250,000			
12 d	75,000			
12 e	25,000			
12 f	25,000			
13 a	100,000			
13 b	100,000			
13 c	100,000			
14 a	50,000			
14 b	50,000			
15 a	1			
15 b	3			
15 c	4			
15 d	10			
15 e	12			
15 f	10			
15 g	10			
16 a	80,000			
16 b	80,000			
16 c	20,000			
16 d	40,000			
16 e	40,000			
16 f	40,000			
16 g	7,000			
16 h	20,000			
16 i	10,000			

731

731

75,000
150,000
250,000
75,000
25,000
25,000

100,000
100,000
100,000

50,000
50,000

1 3 4
10 12 10 10

80,000
80,000
20,000
40,000
40,000
40,000
7,000
20,000
10,000

4,000
4,000
4,000

3,000
3,000
30,000
30,000
60,000
60,000

12 a b c d e f

13 a b c

14 a b

15 a b c d e f g

16 a b c d e f g h i

17 a b c

18 a b c d e f

SUPPLY POSITION SHEET

Item	Amount	Advice of Shipment	Arrival	Balance Due
5 g h i	40,000 40,000 40,000			
19 a b c d e f g h i j k	20,000 20,000 30,000 30,000 30,000 30,000 30,000 30,000 30,000 30,000 30,000 30,000			729
20 a b c d e f g h i j k l	1,000 1,000 7,000 2,000 2,000 2,000 3,000 3,000 8,000 12,000 5,000 5,000			
21 a b c d e f g h i j k l m n	1,000 1,000 2,000 5,000 5,000 4,000 4,000 2,000 5,000 10,000 10,000 1,000 1,000 1,000			

729

30,000
30,000
30,000
30,000
30,000
30,000

1,000
1,000
7,000
2,000
2,000
2,000
3,000
3,000
8,000
12,000
5,000
5,000

1,000
1,000
2,000
5,000
5,000
4,000
4,000
2,000
5,000
10,000
10,000
1,000
1,000
1,000
1,000

500
500
800
500
500
1,000
500
500
500
1,000

I S H I J K

20 a b c d e f g h i j k l

21 a b c d e f g h i j k l m n o

22 a b c d e f g h i j

SUPPLY POSITION SHEET

Item	Amount	Advice of Shipment	Arrival	Balance Due
K	1,000			
L	1,000			
M	1,000			
N	1,000			
O	2,000			
P	1,000			
Q	1,000			
R	1,000			
S	1,800			
T	500			
U	500			
V	500			
W	500			
X	800			
Y	500			
Z	800			
a.1	500			
a.2	500			
a.3	500			
a.4	500			
a.5	500			
a.6	500			
a.7	500			
a.8	500			
a.9	500			
a.10	500			
a.11	500			
a.12	500			
a.13	500			
a.14	500			
a.15	500			
a.16	500			
a.17	500			
a.18	500			
a.19	500			
a.20	300			
a.21	300			
a.22	300			
a.23	300			
23	700			
a	500			
b	500			
				728

SUPPLY POSITION SHEET

Item	Amount	Advice of Shipment	Amount	Balance Due
q	200			
r	200			
s	200			
t	300			
u	300			
v	200			
24				
a	1,000		250	750
b	1,000		250	750
25				
a	1,000			
b	1,000			
26				
a	2,000		4,800	1,200
b	2,000			727
c	2,000			
27				
a	250			
28				
a	3,280			
b	16,400			
c	9,850			
d	3,280			
29				
a	40,000			
b	90,000			
c	40,000			
30				
a	15,000			
b	7,500			
c	7,500			
31				
a	2,000		500	2,500
b	3,000		500	2,500
c	3,000			
d	2,000			
e	3,000			
f	5,000			
g	8,000			
h	4,000			
i	3,000			
j	5,000			
k	7,000			
			1,000	4,000
			1,000	6,000

b	26	a	b	c	27	28	a	b	c	d	29	a	b	c	30	a	b	c	31	a	b	c	d	e	f	g	h	i	j	k	l	32	a	b	c	d	e	f	g	h	i	j
---	----	---	---	---	----	----	---	---	---	---	----	---	---	---	----	---	---	---	----	---	---	---	---	---	---	---	---	---	---	---	---	----	---	---	---	---	---	---	---	---	---	---

1,000
1,000

2,000
2,000
2,000
250

3,280
16,400
9,850
3,280

40,000
90,000
40,000

15,000
7,500
7,500

2,000
3,000
3,000
2,000
3,000
5,000
8,000
4,000
3,000
5,000
7,000
5,000

2,000
4,000
4,000
4,000
8,000
8,000
4,000
8,000
8,000

4,800

500
500

1,000
1,000

800

800
1,000

1,200
1,200

2,500
2,500

4,000
6,000

3,200

3,200
7,000

SUPPLY POSITION SHEET

Item	Amount	Advice of Shipment	g Arrival	Balance Due
33				
a	1,000		500	2,500
b	3,000			
c	2,000			
d	4,000			
e	8,000			
f	4,000		750	3,250
g	8,000			
34				726
a	3,000			
b	4,000			
c	7,000			
d	6,000			
e	2,000			
f	2,000			
g	3,000			
h	5,000			
i	6,000			
j	7,000			
k	7,000			
l	8,000			
m	10,000			
34 A	10			
34 B	15			
35				
a	2			
b	5			
c	5			
d	1			
e	1			
f	2			
g	2			
h	10			
i	28			
j	30			
k	2			
l	2			
m	2			
n	8			
36				
a	0.5			
b	1.5			

226

4,000	10	2	5	5	1	1	2	2	19	28	30	2	2	2	8	0.5	1.5	2	3	3	5	5	5	2	2	2	2	3	3	2
7,000	15																													
6,000																														
2,000																														
3,000																														
5,000																														
6,000																														
7,000																														
7,000																														
8,000																														
10,000																														

34 A
 34 B
 35 a b c d e f g h i j k l m n
 36 a b c d e
 37 a b c d e f g h i j

SUPPLY POSITION STATEMENT

Declassified E.O. 12356 Section 3.3/NND No. 785021

Item	Amount	Advice of Shipment	Arrival	Balance Due
38				
a	1			
b	0.5			
c	1			
d	1			
e	1.5			
39	30			
40	100			
41	50			
42	5			
43				
a	5,000			
b	4,000			
c	3,500			
d	2,500			
e	4,500			
f	7,000			
g	3,000			
44				
a	5,000		5,000	None
b	4,000		4,000	"
c	3,500		3,500	"
d	2,500		2,500	"
e	4,500		4,500	"
f	7,000		7,000	"
g	3,500			
45	25			
46				
a	100			
b	100			
c	100			
d	250			
e	250			
f	250			
g	250			
h	100			
i	100			
j	100			
47	200			

725

2274

725

None
" " " " "

5,000
4,000
3,500
2,500
4,500
7,000

5,000
4,000
3,500
2,500
4,500
7,000
3,000

5,000
4,000
3,500
2,500
4,500
7,000
3,500

25

100
100
100
250
250
250
250
100
100
100

200
200
200
100
100
100
100

50
40
20
20
20
30

a b c d e f g

44

a b c d e f g

45

a b c d e f g h i j

46

a b c d e f g

47

a b c d e f g

48

SUPPLY POSITION SHIP FT

Item	Amount	Advice of Shipment	Arrival	Balance Due
49				
50	50			
a	50			
b	50			
c	50			
d	50			
e	50			
f	50			
50	10,350			
52	500			
53	500			
54	700			
a	600			
b				
55	120			
a	20			
b				
56	50			
a	800			
b				
c	6			
57	80			
a	4			
b	5			
c	15			
d	14			
e	11			
f	7			
58	19			
a	22			
b	77			
c	60			
d	34			
e	26			
f				
59	3			
a	4			
b	.24			
c	18			

724

t

721

ct

700	55	56	57	58	59	60
600	a b	a b c	a b c d e f	a b c d e f	a b c d e f g h i j k l m n o	100,000
120						
20						
50						
800						
6						
80						
4						
5						
15						
14						
11						
7						
19						
22						
77						
60						
34						
26						
3						
4						
24						
18						
7						
16						
2						
94						
750						
31						
8						
19						
38						
19						
13						

SUPPLY POSITION SHEET

Item	Amount	Advice of Shipment	Arrival	Balance Due
61	500			
a	500			
b	500			
c	1,000			
d	1,000			
e	1,500			
f	1,250			
g	15,000	2,000	13,000	
62	5,000		500	4,500
63	1,300			
64	10,000			
65	3,000			
a	2,000			
b	10,000			
c	60,000			
66				
67	2,500			
a	2,500			
b	3,350			
68	6,700			
69	4,500			
70	55,000			
71	6,700			
72	2,250			
73	4,500			
74	1,150			
75	1,150			
a	800			
b	1,800			
c	5,000			
76				
a				
b				

4,500
7,500

500

63	5,000
64	1,300
65	10,000
a	3,000
b	2,000
c	10,000
66	60,000
67	2,500
a	2,500
b	3,350
68	6,700
69	4,500
70	55,000
71	6,700
72	2,250
73	4,500
74	1,150
75	1,150
a	800
b	1,800
c	5,000
76	3,500
a	3,350
b	1,800
c	900
77	250
a	1,150
b	3,800
c	5,500
d	8,000
e	2,100
f	
78	

SUPPLY POSITION SHEET

Item	Amount	Advice of Shipment	Arrival	Balance Due
6	1,150			
7	900			
8	29,000			
9	85,000			
10	75,000			
11	200			
12	200			
13	100			722
14	500			
15	100			
16	250			
17	50			
18	25			
19	5			
20	15			
21	40			
22	5			
23	15			
24	2			
25	600			
26	600			
27	600			
28	500			
29	500			
30	500			
31	1,000			
32	1,700			
33	200			
34	300			
35	300			
36	500			

0290

84	500
85	100
86	250
87	50
88	25
89	5
90	15
91	40
92	5
93	15
94	2
95	600
a	600
b	600
c	500
d	500
e	500
96	1,000
a	700
b	
97	200
a	300
b	300
c	500
d	600
e	600
f	700
g	200
h	600
i	200
j	500
k	600
l	500
m	200
98	100
a	

SUPPLY POSITION STATEMENT

Item	Amount	Advice of Shipment	Arrival	Balance Due
b	200			
c	200			
d	300			
e	400			
f	300			
99				
a	3			
b	2			
c	2			
d	3			
100	2.5			721
101	25			
102	2.5			
103	60			
104	5			
105	65			
106	500,000			
107	5			
108	2.5			
109	1			
110	5			
111	10			
112				
a	4,000			
b	5,000			
c	10,000			
d	30,000			
e	20,000			
f	2,000			
g	1,000			
h	15,000			
i	7,500			
j	1,000			
k	55			
l	300			
m	5			
n	500			
65			65	
235				235

101	25
102	2.5
103	60
104	5
105	65
106	500,000
107	5
108	2.5
109	1
110	5
111	10
112	
a	4,000
b	5,000
c	10,000
d	30,000
e	20,000
f	2,000
g	1,000
h	15,000
i	7,500
j	1,000
k	55
l	300
m	5
n	2,500
o	2,500
p	8,000
q	7,500
r	5,000
s	4,000
113	
a	50
b	50
c	10,000
d	30,000
e	20,000
114	750

65

235

SUPPLY POSITION SHEET

Item	Amount	Advice of Shipment	Arrival	Balance Due
115	1,250			
116	60			
117	210			
118	275			
119	135			
120	75			
121	6			
122	6			
123	70			
124	30			
125	1			
126	1			
127	2,200			
128	1,100			
129				
a	30			
b	150			
130				
a	60			
b	60			
c	40			
d	40			
e	200			
f	200			
g	40			
h	40			
i	40			
j	40			
k	40			
l	40			
m	40			
n	40			
131				

720

720

123	70
124	30
125	1
126	1
127	2,200
128	1,100
129	
a	30
b	150
130	
a	60
b	60
c	40
d	40
e	200
f	200
g	40
h	40
i	40
j	40
k	40
l	40
m	40
n	40
131	
a	70
b	70
c	150
d	150
e	150
f	150
g	70
h	70
i	70
j	70
k	70
l	70
m	150
n	150

SUPPLY POSITION SHEET

Declassified E.O. 12356 Section 3.3/NND No. 785021

Item	Amount	Advice of Shipment	Arrival	Balance Due
132				
a	350			
b	600			
c	1,000			
d	1,150			
e	1,700			
f	200			
g	350			
h	150			
i	450			
j	1,000			
k	450			
l	1,700			
133	5,000			711
134	4,500			
135	2,000		300	1,700
136	3,500			
137	2,500			
138	350		350	None
139	1,600		500	1,100
140	100			
141	250			
142	100,000			
143	90,000			
144				
a	1,500		500	1,000
b	4,550		1,500	3,000
145				
a	400			
b	3,000			
c	2,300			
d	2,300			
e	3,500			
f	2,550			
g	2,550			

I	450
J	1,000
K	450
L	1,700
133	5,000
134	4,500
135	2,000
136	3,500
137	2,500
138	350
139	1,600
140	100
141	250
142	100,000
143	90,000
144	
a	1,500
b	4,550
145	
a	400
b	3,000
c	2,300
d	2,300
e	3,500
f	2,550
g	2,550
146	150,000
147	900
148	5,400
149	600
150	360
151	600
152	840

300
1,700
None
1,100
500
1,500

714

1,000
3,000

SUPPLY POSITION SHEET

Item	Amount	Advice of Shipment	Arrival	Balance Due
153	240			
154	360			
155	480			
156	1 1/2			
a	3 1/2			
b	5			
c	1 1/2			
157	25			
158	50			
159	19			
160	3			
161				
162				
a	3,000			
b	12,000		3,750	8,250
163	18,000			
164	1,200			
165	160			
166	4,800			
167	400			
168	300			
169	20			
170	1,000			
171				
a	100			
b	100			
172	200			
173	6			
174	1			
175	20			

158	25
159	50
160	19
161	3
162	
a	3,000
b	12,000
163	18,000
164	1,200
165	160
166	4,800
167	400
168	300
169	20
170	1,000
171	
a	100
b	100
172	200
173	6
174	1
175	20
176	12
177	
a	2
b	2
c	2
d	2
e	2
f	2
g	5
h	10
i	15
j	10
k	10

3,750

8,250

SUPPLY POSITION STATEMENT

Item	Amount	Advice of Shipment	Arrival	Balance Due
180				
a	20			
b	20			
181				
a	16			
b	20			
c	24			
d	40			
182	30			
183	8			
184	7,000			
185	4,000			718
186	2,000			
187	1,000			
188				
a	250			
b	1,000			
c	1,000			
d	1,000			
e	1,000			
f	1,000			
g	500			
h	400			
i	300			
j	250			
k	200			
l	200			
189				
a	100			
b	250			
c	300			
d	300			
e	300			
f	250			
g	250			
h	150			
i	150			
j	100			
k	100			

718

7,000

4,000

2,000

1,000

250

1,000

1,000

1,000

1,000

500

400

300

250

200

200

100

250

300

300

300

250

250

150

150

100

100

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100

200

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250

300

300

250

200

150

150

184

185

186

187

188

a

b

c

d

e

f

g

h

i

j

k

l

189

a

b

c

d

e

f

g

h

i

j

k

l

191

a

b

c

d

e

f

g

h

i

j

SUPPLY POSITION SHEET

Declassified E.O. 12356 Section 3.3/NND No. 785021

Item	Amount	Advice of Shipment	Arrival	Balance Due
K	100			
L	100			
192				None
a	200		200	"
b	300		300	"
c	500		500	"
d	750		750	"
e	1,000		1,000	"
f	750		750	"
g	500		500	"
h	300		300	"
i	200		200	"
j	100		100	"
k	100		100	"
l	100		100	"
193				"
a	100		100	"
b	100		100	"
c	200		200	"
d	300		300	"
e	300		300	"
f	200		200	"
g	100		100	"
h	100		100	"
i	100		100	"
j	100		100	"
k	50		50	"
194				"
a	200		200	"
b	200		200	"
c	300		300	"
d	300		300	"
e	500		500	"
f	500		500	"
g	300		300	"
h	200		200	"
i	100		100	"
j	50		50	"
k	50		50	"
l	50		50	"
195				None
a	200		200	"
b	300		300	"

" " " " " " " " " " " "

Note " " " " " " " " " "

300 200 100 100 100 100 100 100 200 300 300 200 100 100 100

200 300 300 500 500 200 200 150 150 100 100

300 200 100 100 100 100 100 100 100 50

200 200 300 300 500 500 300 200 100 50 50 50

200 300 300 500 500 200 200 150 150 100 100 200

H I J K L

193 a b c d e f g h i j k

194 a b c d e f g h i j k l

195 a b c d e f g h i j k

196 a

SUPPLY POSITION SHEET

Declassified E.O. 12356 Section 3.3/NND No. 785021

Item	Amount	Advice of Shipment	Arrival	Balance Due
b	250			
c	300		300	None
d	350		350	"
e	300			
f	250			
g	200			
h	150			
i	100			
j	100			
k	50			
197				718
a	100			
b	100			
c	150			
d	200			
e	250			
f	200			
g	100			
h	100			
i	50			
j	50			
k	50			
l	50			
198				
a	100			
b	150			
c	200			
d	250			
e	300			
f	250			
g	200			
h	100			
i	100			
199				
a	50			
b	50			
c	50			
d	100			
e	150			
f	200			
g	250			

100
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150
200
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300
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200
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50
50
50

150
200
200
300

197 a b c d e f g h i j k l

198 a b c d e f g h i

199 a b c d e f g h i j k l m n o

200 a b c d

200
300

None
"

SUPPLY POSITION SHEET

Declassified E.O. 12356 Section 3.3/NND No. 785021

Item	Amount	Advice of Shipment	Arrival	Balance Due
e	350		300	None
f	300		200	"
g	200		150	" 715
h	150		100	"
i	100		100	"
j	50			
k	50			
l				
201 a	100			
b	150			
c	200			
d	250			
e	250			
f	150			
g	100			
h	50			
i	50			
j	50			
k	50			
202 a	500		500	None
b	750		750	"
c	1,000		1,000	"
d	1,250		1,250	"
e	1,500		1,500	"
f	1,500		1,500	"
g	1,000		1,000	"
h	750		750	"
i	500		500	"
j	400		400	"
k	300			
l	200		200	None
203 a	500			
b	750			
c	1,000			
d	500			
e	1,000			
f	500			
g	500			
h	1,000			
i	500			

150
200
250
250
150
100
50
50
50
50

202

a b c d e f g h i j k l
500
750
1,000
1,250
1,500
1,500
1,500
1,000
750
500
400
300
200

203

a b c d e f g h i j k l m n o p q r s t u v
500
750
1,000
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350
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500
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500
750
1,000
1,250
1,500
1,500
1,000
750
500
400
200

None
"
"
"
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"
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"
"
"
None

SUPPLY POSITION SHEET

Item	Amount	Advice of Shipment	Arrival	Balance Due
W	200			
X	50			
Y	50			
Z	100			
204				711
a	250		250	None
b	300		300	"
c	500		500	"
d	1,000		1,000	"
e	1,500		1,500	"
f	1,000		1,000	"
g	500		500	"
h	300		300	"
i	250		250	"
j	200		200	"
k	100			
l	50		50	None
205				
a	1,000			
b	1,500			
c	2,000			
d	2,500			
e	2,500			
f	2,000			
g	1,000			
h	1,000			
i	500			
j	500			
k	250			
l	250			
206				
a	1,000			
b	1,000			
c	1,000			
d	1,000			
e	1,000			
f	500			
g	500			
h	500			
i	500			
j	400			
k	400			

1,000	"
500	"
300	"
250	"
200	"
100	"
50	None

1,000
500
300
250
200
100
50

1,000
1,500
2,000
2,500
2,500
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I S H I J K I

205 a b c d e f g h i j k l

206 a b c d e f g h i j k l m n o p q r s t u v w x y z

SUPPLY POSITION SHEET

Item	Amount	Advice of Shipment	Arrival	Balance Due
206				
a.1	50			
a.2	50			
a.3	50			
a.4	50			
207				713
a	1,000			
b	1,000			
c	1,000			
d	1,000			
e	1,000			
f	500			
g	500			
h	500			
i	500			
j	400			
k	400			
l	400			
m	300			
n	300			
o	300			
p	250			
q	250			
r	200			
s	200			
t	200			
u	150			
v	150			
w	150			
x	100			
y	100			
z	100			
a.1	50			
a.2	50			
a.3	50			
a.4	50			
208				
a	1,000			
b	1,000			
c	1,500			
d	2,000			
e	2,000			
f	2,000			

500	500	500	500	400	400	400	300	300	300	250	250	200	200	200	150	150	150	100	100	100	50	50	50	50	1,000	1,000	1,500	2,000	2,000	2,000	1,000	1,000	500	500	250	250	100	100	100	150	150	150	100		
I	B	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	a.1	a.2	a.3	a.4	208	a	b	c	d	e	f	g	h	i	j	k	l	209	a	b	c	d	e	f	g

SUPPLY POSITION SHEET

Item	Amount	Advice of Shipment	Arrival	Balance Due
D I J K I	100 50 50 50 50			712
210 a b c d e r e h i j k l	100 100 100 150 150 150 100 100 50 50 50 50		100 100 100 150 150 150 100 100 50 50 50 50	NONE " " " " " " " " " " None
211 a b c d e r e h i j k l	50 50 50 50 500 500 500 750 750 500 500 500		50 50 500 500 750 750 500	NONE " " None " " "

Ext:513

HEADQUARTERS ALLIED COMMISSION
APO 394
TRANSPORTATION SUB COMMISSION

FPR/1a

Ref:228/4/Tn.2

27 June 1945 ⁷¹¹

Subject : Surplus Materials ex Theatre.
To : Economic Section, Requisition Branch.

(1) Reference your memorandum RB-400.4 of 14th and 24th June 1945.

(2) These items have been checked against those on requisitions by the Divisions of this Sub Commission. Nothing is required.

F.P.R.
F. P. RICHARDSON, Major,
Planning Staff,
Transportation Sub Commission.

File

11

Ext:513

HEADQUARTERS ALLIED COMMISSION
APO 394
TRANSPORTATION SUB COMMISSION

FPR/1a

Ref: 228/3/Tn.2

23 June 1945

Subject : Release of Materials to I.S.R.

120

To : Rail Division (Tn.4)
(attn. Major G.W. Long)

- (1) Your N. AC/MAT/35/5/TN 4 of 21 May '45.
- (2) The question of release has been taken up with the P.B.S. Naples.
- (3) In order that the I.S.R., Naples, may take delivery of the 621,500 feet of wire for telephone and telegraph purposes against release order N° S-1633 dated 10 May '45, signed Chief, Signal Officer MTOUSA, it is necessary that you issue shipping tickets (signal Corps U.S.Army Form N° 28a). Block attached.
- (4) While P.B.S. are still in charge of stores, it is essential that these shipping tickets are signed by an Allied Officer. An Allied Officer does not have to be present on delivery of the Stores as heretofore providing the Civilian responsible for the collection, in this case a representative of the I.S.R. has a letter of authority from the issuing Allied Officer and a copy of the Original Shipping Ticket in his possession to authenticate his identity.
- (5) The following shipping tickets are necessary for each release and should be prepared by your office:-

P.B.S.	original and 3 copies
I.S.R. Representative	" 1 "
Planning Staff Tn.2	" 1 "
Rail Division Tn 4	" 1 (or 2?) "
- (6) The I.S.R. should be given full instructions as above and requested to advise you when complete delivery has been taken. At the same time it might be well to tell them that when delivery procedure is changed this office will

10

attempt to establish, within the new transfer policy, a method of delivery direct to I.S.R.

JPR

F. P. RICHARDSON, Major,
Planning Staff,
Transportation Sub Commission.

709

10

WARX 12693
JUNE 062108Z

9/3947
JUNE 071005
ROUTINE

7-25
225/TH 9

COPY

WAR
ALCOM

708

RESTRICTED.

This is COM 106. Refer CLAC I-239, program 2 D.

Carbon brushes.

1. Is north ITALY able to furnish carbon brushes? If unavailable there information requested:

A. Voltage and amperage of machines requiring graphite brushes for rings, steel, and commutators.

B. Amperage per brush of the metal graphites minus attachments, and whether slip rings are made of bronze or steel.

C. Give voltage and amperage of machines requiring electro-graphite brushes for use on copper segment commutators. Give number of brushes for each machine.

2. New Subject: For SEVLOE from CLEVELAND-report required on status of AC-ENG-87-45.

3. New subject: Should ALCOM 8593 be in COM-MOC series. If so, give correct MOC number.

Regr Br Dist:

Action: PW + V S/C (2)

Transportation (2)

File Regn 13r

DIST

~~ACTION - REQUISITION BR-5~~
INFO - CHIEF COMMISSIONER
ECON SEC
FILE 2
FLOAT

COPY

7
 5,100 PIECES OF ROLLING STOCK SOUGHT IN MRS THEATER PROJECT.

A theater project (No U-52-45) covering additional standard gauge railroad rolling stock requirements of 5,100 pieces for the joint U.S.-British operation of railroads in Italy has been submitted to the War Department for approval. If approved, requisitions will be submitted for the equipment for delivery between June and November, 1945.

Requested, in addition to rolling stock now on requisition, are:

707

100	2-8-0 oil burning steam locomotives.
2500	20-ton box cars.
1850	20-ton high side gondolas.
150	50-ton flat cars.
350	20-ton low side gondolas.
150	rail tank cars, 10,000 gallon capacity each.
<u>5100</u>	

Above requirements are based on estimates that Military Railway Service will have to move from 10,000 to 15,000 tons of freight each day in Northern Italy in addition to present commitments. Eighty percent of this is military operational freight and 20% is essential civilian freight.

Based on present turnaround of cars of 10 days and average tons of freight per car of 12 tons, this will require a minimum of 10,000 cars and 350 locomotives over present holdings.

Recent intelligence reports that the Germans have evacuated 1,000 of the best steam locomotives and thousands of rail cars from Northern Italy. This, in addition to destruction of rolling stock by Allied Air Forces, makes it unlikely that more than 100 locomotives and 5,000 cars in running condition will be recovered.

One hundred thirty locomotives now on requisition plus 100 to be requisitioned and 100 which would be recovered from Northern Italy railroads would provide the required minimum of 330 locomotives.

Above needs do not include requirements for Greece and Yugoslavia which are not yet firm, and will be met partially from expected transfers from Mideast.

Heavy movement of freight will be necessary for both military and essential civilian requirements for some time after the termination of hostilities.

WRECKING CRANES ON WAY TO ITALY.

Two of four 75-ton railroad wrecking cranes, requisitioned from the United States for Military Railway Service, have been lifted and are en route to this theater, the New York POE announced. The remaining two will be shipped as soon as suitable deck space is available.

TEST TRAINS OPERATED OVER TWO NEW TRACKS.

Test trains were operated successfully over two new stretches of track during the past week.

The Pisa-Florence-Prato-Pistoia rail line was declared in operation at 0300 hours 2 April after the completion of a test run over the stretch of line 219, operating between Pisa and Florence, gave Florence its

day in Northern Italy in addition to present commitments. Eighty percent of this is military operational freight and 20% is essential civilian freight.

Based on present turnaround of cars of 10 days and average tons of freight per car of 12 tons, this will require a minimum of 10,000 cars and 350 locomotives over present holdings.

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TEST TRAINS OPERATED OVER TWO NEW TRACKS.

Test trains were operated successfully over two new stretches of track during the past week.

The Pisa-Florence-Prato-Pistoia rail line was declared in operation at 0500 hours 2 April after the completion of a test run over the route. Line 219, operating between Pisa and Florence, gave Florence its first rail connection since its occupation by the Allies.

The stretch of railroad between Florence and Prato is a part of Line 55. The line is being extended from Prato northward to Bologna. Many tunnels, including the Great Apennines Tunnel which is more than 11 miles long, are making reconstruction difficult.

The Prato-Pistoia stretch is part of Line 217. Pistoia is on the principal highway to Bologna.

A test train was operated successfully on the short Vada-Roignano rail spur on Line 50. The spur will service a limestone products plant and some Allied Commission depots.

0308

HEADQUARTERS ALLIED COMMISSION
APO 394
TRANSPORTATION SUB-COMMISSION

6
CRR/SM

3 APRIL 1945

MEMORANDUM

Ref. 228/2/Tn.2

SUBJECT: Status of Six Months Railway Maintenance Requisition. 706

TO : Col. W. B. Thomas, Deputy Director.

Pursuant to your advice to me on 30 March 1945 that the 6 months program requisition for Railway maintenance materials had been returned from A.V.H.Q. and was in the hands of the B.D.S.A.S. this office took the following steps:

1. Coordinated your statement by Maj. Long who stated that six copies were being made for distribution and screening by B.D.S.A.S. staff technicians.
2. Called Col. Sutterworth, G-5 (A) A.V.H.Q. who stated (as I had been advised in Caserta) that program had been approved and LAC Airman was in process of preparation when General McFurd decided that program was not a G-5 function but G-4 since traffic was preponderantly military.
3. Called Col. Wilson (Brigadier Waghorn's assistant) who confirmed Maj. Long's statement and advised that by Monday 2 April 1945 he should know when his technicians would be prepared to consult with ours on any controversial or informational questions.
4. Called Col. Wilson Monday 2 April 1945 and he advised that conference tentatively set for Thursday afternoon 5 April 1945 subject to confirmation to me on Wednesday 4 April.
5. This office has advised Majors Long and Street of probable conference time and they express themselves in readiness. Maj. Baister will unfortunately be in Calabria and unable to attend. However with representation from this office I believe we will be able to answer any question which would ordinarily fall in Maj. Baister's province.

1. Corroborated your statement by Maj. Long who stated that six copies were being made for distribution and screening by D.S.M.S. staff technicians.
2. Called Col. Butterworth, G-5 (A) A.S.H.Q. who stated (as I had been advised in Caserta) that program had been approved and LAC Airgram was in process of preparation when General McInnes decided that program was not a G-5 function but G-4 since traffic was preponderantly military.
3. Called Col. Wilson (Brigadier Rogers's assistant) who confirmed Maj. Long's statement and advised that by Monday 2 April 1945 he should know when his technicians would be prepared to consult with ours on any controversial or informational questions.
4. Called Col. Wilson Monday 2 April 1945 and he advises that conference tentatively set for Thursday afternoon 5 April 1945 subject to confirmation to me on Wednesday 4 April.
5. This office has advised Majors Long and Street of probable conference time and they express themselves in readiness. Maj. Baister will unfortunately be in Calabria and unable to attend. However with representation from this office I believe we will be able to answer any question which would ordinarily fall in Maj. Baister's province.
6. We shall advise you of developments.

CHARLIE RYAN
 Planning Staff
 Transportation Sub-Commission

the 6 month program requisition for Railway maintenance materials had been returned from A.F.F.4. and was in the hands of the D.D.M.S. this office took the following steps:

Subject : Railroad Maintenance Equipment.

Military Railway Service,
Italy.
Tel : Firebox - 49
Outside line 843332.
Ref : TR.A.2/76/12.
5 March 1947.

To : Director,
Transportation Sub Commission,
Allied Commission.

1. Reference meeting today.
2. Herewith copy of minute sheet in connection with your requisition for Railroad Maintenance Equipment for Italy.

R.D. Washort

(R.D. WASHORT).
Brigadier.
Director, Military Railway Service.
Italy.

707

5

5

COORDINATING ROUTE SLIP

Log :

CONFIDENTIAL.

(STAFF MINUTE SHEET)

Classification

ALLIED FORCE HEADQUARTERS

Suspense :

File No.....

Date
Originated :

Subject : RAILROAD MAINTENANCE EQUIPMENT FOR ITALY.

Number each memo or minute consecutively. Fill in each column, initial action, draw 1 line across the sheet. Use entire width of sheet for long memoranda.

No.	Section of Origin	Pass To	Date
-----	-------------------	---------	------

2	ASST DDRSI AFHQ	DRSI	1 May 45
---	-----------------------	------	-------------

1. Referred for comment as per paragraph two, minute #1.

2. This subject discussed with G-4 Operations who request review of requisition by Military Railway Service to insure there is no duplication therein of supplies requisitioned by MRS and that items are only for essential military and civilian requirements.

3. It was suggested that separate requisitions should be prepared distinguishing between (a) essential military requirements (b) essential civilian requirements (c) rehabilitation requirements.

For the Deputy Director:

(Signed) E. F. BARNES
Lt. Col., TC
Ass't. Deputy Director

3	DRSI	ASST DDRSI AFHQ	4 May 45
---	------	-----------------------	-------------

1. There is no question of duplication of supplies. Requisitions submitted by MRS Stores Section are to cover immediate requirements in newly occupied territory and based on operational and minimum civilian needs.

2. As operations have moved northward sections of the railway have been handed back to ISR. The traffic on these sections is still mainly operational, the balance being minimum civilian traffic required to prevent disease and unrest.

P.T.O.

704 6

It is to cover the maintenance requirements of the ISR on these sections that the attached requisitions are being submitted by A.C., and for which no provision is being made by MRS.

3. Owing to the delay in submission of these requisitions the MRS are in fact supplying to a great extent the needs of the ISR but this has only been possible owing to the static nature of operations during the last few months.

4. In view of the very large commitments which the MRS will have to cover initially when N.W. Italy is liberated it will be necessary to hand over further sections of the railway to ISR and the need of A.C. provision of materials to cover their maintenance requirements is most urgent.

5. The sections in rear under ISR will until hostilities cease continue to carry a preponderately military traffic and these requisitions therefore cover not only minimum civilian but also essential military needs.

6. The above has been agreed with Director, Transportation Sub Commission, A.C.

R.D. Washburn
(R.D. WASHBURN).
Brigadier.
Director, Military Railway Service.
Italy.

TO : [illegible]
FROM : [illegible]
SUBJECT : [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

INFORMAL ROUTING SLIP

Log : 580.

CONFIDENTIAL
ALLIED FORCE HEADQUARTERS
APO 512

Suspense : _____

Date : _____

File : _____

Subject : Railroad Maintenance Equipment for Italy

No. From To Date

1 G-5 Liaison 28 Feb
Officer, 1945.
AFHQ
Military
Railroad
Service.

1. Attached is A.C. requisition
AC-ENG-87-45.

2. The subject requisition has been received by this headquarters without any previous discussion with the A.C. about the provision of military railroad equipment. It will be noted that the requisition is for very large quantities of material.

3. It is requested that the enclosed copy of the requisition be forwarded to the Director, Military Railway Service, Rome, for his comment. This section is not in a position to screen the technical requirements or judge the minimum equipment necessary to transport essential civil supplies.

4. It is further desired to point out that this headquarters is responsible for the provision of essential civil supplies during the period of military responsibility necessary to prevent disease and unrest, and is not prepared to sponsor as a matter of military responsibility equipment for the rehabilitation of Italian railroads.

For the Assistant Chief of Staff, G-5:

(Signed)

R. V. GRADY.
Major, T.C.
Economics & Supply Division.

Incl: as per para 1.

703

031A

S E C R E T 4

Subject: Future Requirements
Locomotives & Rolling
Stock.

Military Railway Service
Italy.
Tel: Fivebox - 42
Outside line 049932.
MS.1/38.

4 March 1945.

To: O.I.O.
A.E.H.Q. - through 3-4 (Mov & Tr), A.P.H.Q.

Copy to: Director, Transportation Sub-Commission
Allied Commission.

D.D.Tr., A.P.H.Q.
Asst. D.D.Tr., A.P.H.Q.

1. I have come to the conclusion, after careful consideration, that the quantity of locomotives and rolling stock likely to be available in Italy when Northern Italy comes into our hands will fall considerably short of our estimated minimum requirements necessary to meet military operational and essential civil needs.
2. I consider that some 200 main line locomotives and some 5000 cars will be required to be imported into Italy during the period July-December 1945.
3. The present volume of traffic being loaded daily on rail in Italy averages 30,000 tons. The present availability of approx 1000 locomotives and 30,000 cars is adequate to handle this volume but does not fully cover even essential civil requirements.
4. Warc. Northern Italy is occupied it is estimated that at least 10,000 to 15,000 tons per day will have to be handled additionally, and this will require an additional 300 locomotives and a minimum of 10,000 cars.
5. Recent OK intelligence reports indicate that the enemy has already moved from N. Italy 1000 locomotives and some thousands of cars and I consider it would be unwise to assume that more than 100 locomotives and 5000 cars will be recovered from N. Italy or from present occupied Italy. Work of recovery in present occupied Italy is being pressed to the limit of available resources.

702

D.J.M.; A.P.H.4.

Subj. D.D.M.H.S.; A.P.H.4.

1. I have come to the conclusion, after careful consideration, that the quantity of locomotives and rolling stock likely to be available in Italy when Northern Italy comes into our hands will fall considerably short of our estimated minimum requirements necessary to meet military operational and essential civil needs.

2. I consider that some 100 main line locomotives and some 5000 cars will be required to be imported into Italy during the period July-December 1945.

3. The present volume of traffic being loaded early on rail in Italy averages 20,000 tons. The present availability of approx 1000 locomotives and 10,000 cars is adequate to handle this tonnage but does not fully cover even essential civil requirements.

4. Since Northern Italy is occupied it is estimated that at least 10,000 to 15,000 tons per day will have to be handled additionally, and this will require an additional 300 locomotives and a minimum of 10,000 cars.

5. Recent CX intelligence reports indicate that the heavy use already made from N. Italy 1000 locomotives and some thousands of cars and I consider it would be unwise to assume that more than 100 locomotives and 5000 cars will be recovered from N. Italy or from present occupied Italy. Work of recovery in present occupied Italy is being pressed to the limit of available resources **702**

6. There remains therefore a deficit of some 250 locomotives and 5000 cars on minimum estimated requirements.

Of these, 150 locomotives are being forwarded from U.S. as a previous requisition and delivery should be completed by about the end of June.

7. In the above I have not taken into consideration requirements for Greece and Yugoslavia necessary to meet essential civil needs. These requirements are not yet firm, though a preliminary estimate has already been received from Greece amounting to some 60 locomotives and 500 cars.

.1.1.1.

4

It is anticipated that these can be partially met from locomotives and cars now coming available for transfer from Wisnet.

3. It is recommended therefore that a requisition should be placed forthwith on United States and a suggested draft signal for dispatch to AFSA is attached.

signed: R.D. HACHORN
Bri. Chief
Director of Transportation

701

SIGNED: R.D. WASHORN
BY: [Signature]
Director of Transportation

701

4

D R A F T

From: Friedman

To : ALPHA

Repts : WAS Washington
Tx IAC

Subject is locomotives and railroad cars required this theatre for period July - December 1945.

Estimate require following

- 100 locomotives 2-8-0
- 2500 Box Cars - 20 tons
- 1050 Gondolas High Side 20 ton
- 150 Flat Cars - 50 ton
- 350 Gondolas Low Side 20 ton
- 150 Rail Tank Cars 10,000 gallon

Justification for above requirements is based on following

- (1) Estimate that will require to move in Northern Italy 10,000 - 15,000 tons of freight per day in addition present commitments of which 30% estimated military operational and 20% essential civil.
- (2) Based on present turnaround of cars of 10 days and average tons of freight per car of 12 tons this requires minimum of 10,000 cars and 330 locomotives over present total holdings.
- (3) In view indication from recent CX reports that Germans have evacuated 1000 of best steam locos and thousands of wagons from N. Italy do not anticipate recovering more than 100 locos and 5000 wagons in running condition including results of work on recovery still in hand in occupied Italy.
- (4) Of balance of 230 locos 130 already covered by lines coming in on previous requisition.
- (5) Above excludes requirements for Greece and Yugoslavia which not yet firm and will partially met from expected transfers from Marseas theatre.

700

Estimate requires following

- 100 locomotives 2-8-0
- 2500 Box Cars - 20 tons
- 1650 Gondolas High Sided 20 ton
- 150 Flat Cars - 50 ton
- 250 Gondolas Low Side 20 ton
- 150 Rail Tank Cars 10,000 gallon

Justification for above requirements is based on following

- (1) Estimate that will require to move in Northern Italy 10,000 - 15,000 tons of freight per day is addition present commitments of which 30% estimated military operational and 20% essential civil.
- (2) Based on present throughput of cars of 10 days and average tons of freight per car of 12 tons this requires minimum of 10,000 cars and 250 locomotives over present total holdings.
- (3) In view indication from recent OI reports that Germans have evacuated 1000 of best steam locos and thousands of wagons from N. Italy do not anticipate recovering more than 100 locos and 5000 wagons in running condition including results of work on recovery still in hand in occupied Italy.
- (4) OI balance of 230 locos 130 already covered by lines coming in on previous requisition.
- (5) Above excludes requirements for Greece and Yugoslavia which not yet firm and will partially met from expected transfers from atleast theatre.

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0320

INTER OFFICE MEMORANDUM

3
FPE/ld

27 February 1945

Ref: 240/AG/Tn.2

SUBJECT: Transport Problem - Italy.

TO : Merritt H. Taylor,
Director, Transportation Sub Commission.

1. The purpose of this report is to indicate the difference between pre-war available transport and existing transport in Liberated Italy to facilitate the rehabilitation of the Rail, Road and Sea transport to prevent disease and unrest, south of the Pisa-Rimini Line.

2. Attached are lists of information available and of requirements submitted by the Italian Government, lack of documents within the Ministries prevents the completed report anticipated.

3. It has not been possible to ascertain from military sources ton miles of freight carried by rail or road, or civic freight by road.

4. Commodity figures covering the six months' of a war period were received too late to break down; no departure or destination were given.

F. P. RICHARDSON,
Major, R.E.,
Planning Staff,
Transportation Sub Commission.

Enclosures:

- 1. I.S.R. Materials required for six months operation Appendix A
- 2. Ready-reckoner in miles between the ports of Italy and Sardinia Appendix B
- 3. Tariff for freight of goods Appendix C

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REHABILITATION OF RAILROADS.

The rebuilding of the following Rail Sections of the Italian State Railways has been authorized and work is in progress under A.C. supervision.

<u>Line</u>	<u>Section</u>	<u>Date reconstruction will be completed.</u>
(a) 86 Ancona-Ortona	Ortona-Pescara	31 March 1945
	Pescara-Giulianova	14 April 1945
	Giulianova-Civitanova	30 April 1945
	Civitanova-Ancona	30 April 1945
	Pescara River Bridge	30 April 1945
(b) 213 Pisa-Pistoia-Prato (D.M.R.S.)		20 April 1945
(c) 219 Pisa-Sapoli-Florence		15 April 1945
(d) 65 Rome-Orte	Laying second track	10 April 1945
(e) 283 Benevento-Avellino		25 July 1945
(f) 294 Avellino-Rocchetta		25 July 1945
(g) 279 Campobasso-Teramo		15 April 1945
(h) Private Rome-Viterbo (Priv. Nord Roma)	Finished & operating	
(i) 257 Rome-Viterbo (I.S.R.)		30 March 1945
(j) 88 Rome-Avezzano	Rome-Mandela	Finished & operating
	Mandela-Roviano	31 May 1945
	Roviano-Avezzano	Uncertain
(k) 92 Petrace Bridge (Calabria)		30 June 1945
(l) 244 Bastia-Eltera		30 May 1945
(m) 50 Vado-Rosignano		5 March 1945
(n) - Port of Civitavecchia (First Section)		31 March 1945
(o) 65 Arezzo-Florence	Work on this section is being covered in two phases. Phase (I) is in operation of clearing permanent way and stations and building the piers of bridges to springing level only owing to the considerable amount of cement required to complete. Phase (II) complete reconstruction.	

Sections under construction by Military D.M.R.S.

86 Rimini-Bologna	Open and operating to Forli
213 Pisa-Pistoia-Florence	Open and operating to Montecatini Tm.

Line

65 Prato-Bologna	Finished to Grizzano. Can be operated as soon as Line 213 is completed to Prato through Pistoia.
210 Pistoia-Bologna	not being reconstructed to date by U.S.R.S. or A.G.

U.S.R.S. and A.G. find reconstruction is considerably curtailed owing to great difficulty being experienced in securing sufficient cement and timber. An additional delay to A.G. is caused owing to lack of tyres. I.S.R. engineers and contractors' vehicles of all kinds are continually being held up for this reason.

Recovery and Repair of Freight Cars.

Considerable progress is shown in the recovery of freight cars. An A.G. Transportation officer in liaison with U.S.R.S. are daily releasing vehicles throughout liberated Italy. Wrecker cars are systematically clearing line by line. In example, 108 cars in good condition were released on the Rome-Tivoli line and 79 from the Rome-Viterbo.

Rail Freight Cars are now being repaired at some 18 repair shops equally distributed over liberated Italy, opened for this purpose.

Recovery and Repairs of Locomotives.

The recovery of locomotives is almost completed. Pre-war loco repair shops are working to present day capacity. These are equally spread over liberated Italy. Locomotives from the mainland are now being repaired in the Naval Yard at Palermo.

Five box steel and essential repair materials are expected in the near future which will enable these locomotives to be taken back into service. Electric locomotives are being repaired in Calabria, Naples and Littorio (Rome)

Comparison of facilities in October 1944 with those available in 1936, south of the Pisa-Rimini Line.

a. Rail Facilities

Italian State Railways

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Comparison of facilities in October 1944 with those available in 1936, south of the Pisa-Vimercati Line.

a. <u>Rail Facilities</u>	<u>Italian State Railways</u>	
	1936	1944
Miles of line in operation	16,839	6,700
Miles of second track in operation	4,160	157
Miles of yard track	8,210	3,000
Rail wagons in operation		
(a) Flat	11,893	2,804
(b) Box	53,013	7,672
(c) Gondola	54,267	7,365
(d) Tankers	1,735	1,009
(e) Refrigerator, Guards' Van, etc.	3,767	1,221
Engines in operation		
Steam Type A	436	118
" " B	847	474
" " C	1,247	323
" " D	750	211
Shifting		
Diesel Type A 650 V	38	-
" " B	185	72
Shifting	-	-
Electric Type A 3 phase curr. 16.7 p. 591		-
" " B " " 45 " 23		-
" " C direct curr. 3000 V 321		133
" " D " " 650 V 19		-
Shifting		-
Electric Trains (Littorina) 3000V	2	30
Diesel Electric 650V	38	-
Diesel (Littorina)	185	72
Narrow Gauge		
Steam	117	35
Electric	14,696	-

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	1936	1944
N ^o . of Electric Locomotives in running order which cannot operate for lack of power or other facilities	-	105
Miles of railway operated electrically	km. 3,242	699
Capacity of locomotive shops	4,449	126
Capacity of locomotive repair shop	245,775	14,183
Number of signal blocks (automatic)	km. 397	8
Number of bridges : steel	3,253	1,176
brick	km. 88 10,838 km. 247	29 3,226 73
Miles of Line Telephone	km. 37,189	11,134
Miles of Line Telegraph	km. 49,649	6,906
Miles of Tunnel	km. 912	476
Number of stations, Telephone	12,500	2,639
Number of stations, Telegraph	7,000	773
<u>Work performed in month of October</u>		
Ton-Miles of Freight Carried		
Civilian and A.C.	148,687,596	26,383,000
Military	-	23,728,854
Passengers		
Civilian and A.C. (approx)	7,658,797	2,932,900
Military	-	-
List military facilities which may be withdrawn and must be replaced	-	-

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	Private Railways	
	1936	1944
<u>Normal gauge</u>		
Miles of line in operation		
not electric	679	315
electric	410	235
Miles of second track in operation		
electric	25	15
non electric	-	-
Rail wagons in operation		
passenger cars	370	252
freight open cars	367	174
freight box cars	439	312
tankers	120	100
Engines in operation		
Steam type	92	58
Diesel type	8	7
Electric type	72	35
No. of electric locomotives in running order which cannot operate for lack of power or other facilities	10	14
Work performed in month of October		
Civilians carried	2,500,000	1,852,000
Ton-mil. of freight	15,600,000	3,136,000
<u>Narrow gauge</u>		
Miles of line in operation		
non electric	2,163	1,946
electric	701	251
Miles of second track in operation		
electric	5	5
Rail wagons in operation		
passenger cars	721	465
freight open cars	2,050	1,968
freight box cars	1,138	892
tankers	200	150

0 3 2 6

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	1936	1944
Engines in operation	243	205
Steam type	67	58
Diesel engines	149	49
Electric engines		
Work performed in month of October	2,238,780	4,761,800
Civilians carried	3,040,800	2,820,000
Ton-km. of freight		

B. Highway Facilities

Vehicles in operation
October

	1936	1944
Passenger Cars	No. 243,330	-
Motor Buses	" 7,865	-
Street Cars	" 4,863	-
Trucks up to 18 quintals	" 29,020	
" from 10 " to 35	" 10,400	
" " 35 " " 76 & beyond	" 6,680	
Garages in operation	" 7,500	(1) 3,000
Tyre repair plants in operation	" 6,000	(2) 3,000
Tyre factories in operation	" 6	(2) 5
Battery manufacturing plants in operation	" 15	-
Battery repair plants in operation	" 2,000	(3) 500
Miles of Highways in operation		
Autostade	km. 550	150
State	" 25,000	12,000
Provincial	" 40,000	20,000
Highway Bridges out of service, 3 meters span		830
larger span than 3 meters		723
		1,553
Ton-miles of freight carried	1,876,000	-
Number of passengers carried	2,255,580,400	-
Miles of bus line operating	66,048	-
No. of Horses		324,615
" " Donkeys		455,334
" " Oxen		283,764
" " Mules		246,234

(1) garages (2) military (3) garages

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	1936	1944
<u>c. General Shipping</u>		
No. of schooners in operation	2,053	631
Gross tonnage	130,000	31,000
No. of Coasters in operation		
up to 2,000 tons	-	23
from 2,000 " to 7,000 tons	-	11
" 7,000 " up	-	16
No. of Schooners awaiting repairs	-	74
Gross tonnage	-	4,350
No. of Coasters awaiting repairs		
up to 2,000 tons	-	4
from 2,000 " to 7,000 tons	-	3
" 7,000 " up	-	12
No. of Schooners available without engines including half-finished, new constructions and sailing vessels already in operation and which could be motorised	-	about 85
Barges and tugs (including those under repair)	-	5,000
Estimated number of Schooners sunk which can be raised	-	100
Gross tonnage	-	10,000
Total Gross Tonnage of Schooners and Coasters in operation	436,000	84,500
Yards in operation for production of Schooners	145	166
No. of plants in operation for manufacture of engines	-	-
No. of shipyards in operation for building of coasters	6	6
		692
No. of shipyards in operation for repair of coasters	10	10

0328

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	1936	1944
Ton-km. of traffic carried by schooners Civilian and A.C. tonnage	-	1,311,600
Military	-	-

Imports requirements for special material needed to make schooner production possible.

(1) Materials for wooden motor vessels, sailing vessels with auxiliary motor, tugs, etc.

Item	Unit	Quantity
Pitch	Tonn	250
Vegetal bitumen - stockholm tar	"	150
Paints		
a) submarine for - any colour wooden hulls	"	150
b) for out-board	"	150
c) for water line	"	30
Flexible steel cables		
a) for keel anchor		
<u>diameter</u>	Meters	
23 mm.	"	6,500
19	"	7,000
19	"	7,500
18	"	1,200
15	"	1,200
b) for derricks		
<u>diameter</u>	"	
10 mm.	"	5,000
c) for rigging		
<u>diameter</u>	"	
12,7 mm.	"	60,000
8,9	"	25,000
8	"	10,000
d) for towing		
<u>diameter</u>	"	
22 mm.	"	7,000
20	"	10,000
18	"	9,000
17	"	1,500

691

(for towing cont'd.) 16 cm.	meters	1,500
Motor-driven winlasses for stud link chains for schooners and tugs		
<u>diameter</u>		
17,5	"	15
20,5	"	15
22	"	100
24	"	50
26,5	"	60
Motor-driven cargo winches of 1,5 tons		300
Liquid ship compasses (small size) for 100-200 gross tonnage		500
Machinery for portoon cranes for portoon of 20 tons lifting capacity		20
- machinery complete including boilers		20
- warping steam winches with two drums		
for 40 to 50 tons lifting capacity portoons		
- machinery complete including boilers		6
- warping steam winches with two drums		6
(11) Propelling machinery, auxiliary machinery and accessories for wooden motor vessels, sailing vessels with aux. motor, tug, etc.		
Propulsion motors with shafts (without propellers) stern tube and spare parts, motors to be complete with starting air bottles, piping for air, fuel, lubricant, exhaust, filters, valves, etc.		
B.M.P. Distance from forward end of motor to propeller cone,		
15-20 4 meters (approx)	no.	200
30-60 5,50 " "	"	100
		690

B.H.P.	Distance from forward end of motor to propeller cone. (cont'd)	no.	
110-130	7,50 meters (approx)	"	100
175-200	8 " "	"	100
250-300	8,50 " "	"	50
400-450	9 " "	"	60

2. Propelling machinery & auxiliary machinery for tugs - fitted for salvage - Propulsion steam engines complete with boilers, auxiliaries, line of shafts I.H.P.

I.H.P.	Distance from end of motor to propeller cone.	no.	
150	8	"	12
350	10	"	12

Steam-driven electric generators	no.	
3 Kw 110 V D.C.	"	12
5 " " "	"	12

Steam-driven fire pumps	no.	
capacity 50 tons per hour	"	12
" 100 " " "	"	12

Steam-driven exhaust pumps (for salvage)	no.	
capacity 150 tons per hour	"	12
" 250 " " "	"	12

Steam-windlasses	no.	
for chains of 17,5 mm.	"	12
" " " 20,5 "	"	12

Internal combustion propelling motors complete with auxiliaries & line of shafts, etc. as under 2.

B.H.P.	no.	
140/150	"	12
300/320	"	12

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3

Diesel electric generators		
(as above)		
3 @ 110 V A.C.	NO.	12
5 " 110 V D.C.	"	12
Motor-driven fire pumps		
capacity 50 tons per hour	NO.	12
Motor-driven fire pumps		
capacity 100 tons per hour	NO.	12
Motor-driven exhaust pumps (for salvage)		
capacity 150 tons per hour	NO.	12
" " " " "	"	12
Motor-driven windlasses		
for chains of 17.5 mm.	NO.	12
" " 25.5 "	"	12

03321

Movements of commodities required during the next six months of a war period.

Grain	540,000	tons
Fertiliser	144,000	"
Coal	1,624,270	"
Pel	600,000	"
Sulphur	132,000	"
Cement and lime	180,000	"
General foods	1,272,250	"
Supplies and equipment	664,200	"
Raw materials	2,494,386	"
	<hr/>	
Total	7,061,039	"
	<hr/>	

Monthly Movements Estimate.

1,150,000 tons

Estimated Civil rail traffic	314,000	
Estimated G.P.Coy and Civil Road traffic	145,000	
Estimated Coastwise Shipping	50,000	
	<hr/>	
	509,000	"
	<hr/>	
	641,000	"

To complete haulage estimating a 3 ton truck 100 T.P.M. = 6,410 Trucks

10% addition trucks to maintain daily lift 641

Total 3 Ton Trucks required 7,050

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Presuming that civilian local haulage is available to and from stations the above figure of Trucks required could be reduced, but it can be assumed that 3% of these civilian trucks each month will become complete casualties due to lack of repair shops, spare parts for maintenance or tyre shortage.

LIST OF I.S.R. MATERIALS REQUIRED FOR SIX MONTHS OPERATION

Item
XXX

1	Steel in unwelded pipes <u>Outside dia.</u> various sizes	<u>Inside dia.</u> various sizes	Total Tonnage Tons	1459
2	Steel in pipes for gas	<u>Inside dia.</u> various sizes	Total Tonnage Tons	141

NOTE: The pipes must be between 14 and 20 ft. long, excluding those marked by an asterisk that must be no less than 20 ft. long. The pipes marked by an asterisk will be used as flues for locomotives. The others will be used as accessories for locomotives (as compressed air piping brakes, sand boxes, etc.) for the manufacture of ferrule and other workshop uses.

3	Steel plates R. between 50.8 and 71.1 lbs. x sq inch. <u>Thin plates</u> various sizes	Total Tonnage Tons	100
4	<u>Thick plates</u> various sizes	Total Tonnage Tons	400
5	Plates for locomotives fire boxes various sizes	Total Number No.	456

NOTE: These plates will be used for the construction of locomotives fire boxes. The characteristics of the steel should be equivalent of that produced by "Società Acciaierie Ferriere Lombarde Falck" at Sesto S. Giovanni (Milano).

Item
xxx

Mechanical characteristics:

Tensile strenght Lbs x sq. inch 45.472/56.896
 Elastic limit: Lbs. x sq. inch 28.448
 Elongation: 24% on 10 diameters (concerning plates
 between 25/64 and 25/32").

Chemical characteristics:

Carbon between 0.06 and 0.10
 Manganese " 0.25 and 0.60
 Phosphorous 0.040
 Sulphur 0.040
 Silicium 0.10

- 6 High speed steel for lathe fit for a speed of work of 118
 ft. per minute on pieces with R. 71,200 to 85,000 lbs. x
 sq. inch.
 46 feet per minute on pieces with R. 113,612 to 128,128 lbs.
 x sq. inch.

Diameter in. various sizes	Total Weight Lbs.	1800
Square in. various sizes	Total Weight Lbs.	1800
Rectangular in. various size	Total Weight Lbs.	2700

- 7 High speed steel for lathes (I.S.R. Type A.2) fit for a
 speed of work per minute equal to feet:
 95 on pieces with R. 71,120 to 85,344 lbs. x sq. inch
 29 " " " " 113,612 " 128,128 " " " "

Diameter in. various sizes	Total weight Lbs.	3080
Square in. various sizes	Total weight Lbs.	1320
Rectangular in. various sizes	Total weight Lbs.	1540

Item
XXX

NOTE: The above mentioned steel will be used for the construction of lathe tools. Item 6 for high speed work of construction of parts of locomotives (strong steels) to be made at less speed.

- 8 Chrom Wolfram Steel fit for making chisels, punches, (not thru heating) pneumatic tools, "punching" shears.

Diameter in.
various sizes

Total weight
Lbs. 4,400

NOTE: This steel will be used for the manufacture of the above mentioned tools or other of the same kind.

- 9 Silicious manganese rolled steel for cambered or semielliptical springs of I.S.R. cars.

Plain rolled rectangular in bars:

Commercial length: Total Tonnage
Tons 25

- 10 Ribbed steel rectangular bars of Commercial length Total Tonnage
Tons 1075

- 11 Plain rolled steel (rectangular) for manufacture of volute springs for cars:

in.	Length	Thickness	Length of bars inches	Tons
5	1/8	x 0.2955	89	100
"	5	1/8 x 0.3345	60	1,200
"	5	1/8 x 0.4135	82	300
"	5	3/4 x 0.394	65	100

NOTE: The bars can be supplied also in lengths multiple of those shown.

- 12 Flux coated electrodes for arc welding: Total Number
various sizes No. 600,000

- 13 Iron rods, Swedish type, for oxy-acetylene welding: 683

Item
xxx

	Various sizes	Total Number No.	300,000
14	Small silicious cast iron rods for oxy-acetylene welding: Various sizes	Total Number No.	100,000
15	Extra soft steel in wire for oxy-acetylene welding: various sizes	Total Tonnage Tons	50
16	<u>Steel screws for metal with whitworth thread</u> Hexagonal head various sizes	Total Number No.	337,000
17	Cylindrical head bored: various sizes	Total Number No.	12,000
18	Half cup, countersunk in. 5/16 x 29/32 Round head Various sizes	Ea. Total Number No.	3,000 353,000
19	Countersunk in. Various sizes	Total Number No.	250,000
20	<u>Lag screws:</u> Hexagonal head various sizes	Total Number No.	41,000
21	Square Head Various sizes	Total Number No.	53,000
22	Countersunk head Various sizes	Total Number Gr.	30,900

Item
xxx

23	Half Cup Countersunk Various sizes	Total Number Gr.	9,500
24	Monkey Wrenches (Upright Jaws) Various lengths	Total Number No.	2,000
25	Blades for Mechanical Hack Saws Various lengths (10 teeth for inch)	Total Number Dz.	2,000
26	Blades for Hack Saws Various lengths	Total Number Dz.	6,000
27	Rail Saws, 13 53/64 x 1 13/16 x 19/32	Dz.	250
28	Wood Band Saw Blades Various widths	Total Ft.	32,810
29	Twist Drills with parallel Shank Dia. in. Various sizes	Total Number No.	17,000
30	Twist Drills with Morse Taper Shank Dia. in. Various sizes	Total Number No.	30,000
31	Flat Files Smooth inches Various sizes	Total Number No.	10,000
	2nd cut Various sizes	Total Number No.	20,000
	Bastard inches Various sizes	Total Number No.	60,000

Item
XXX

32	Half Round Files Smooth inches Various sizes	Total Number	10,000
	2nd cut inches Various sizes	Total Number No.	20,000
	Bastard inches Various sizes	Total Number No.	20,000
33	Square Files Smooth inches Various sizes	Total Number No.	6,000
	2nd cut inches Various sizes	Total Number No.	12,000
	Bastard inches Various sizes	Total Number No.	12,000
34	Triangular Files Smooth inches Various sizes	Total Number No.	20,000
	2nd cut inches Various sizes	Total Number No.	25,000
	Bastard inches Various sizes	Total Number No.	25,000
34A	Black steel netting with wire 0.0079, with mesh 25 per inch	Tons	10
34B	Varnished galvanized steel mosquito netting.	Tons	15
35	Seamless copper tubes inches: Various sizes	Total Tonnage Tons	160
36	Aluminium in sheets inches: Various Sizes	Total Tonnage Tons	680 10

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Item
xxx

37	Arsenious Copper per loco Fire-Boxes inches: Various sizes	Total Number No.	31
38	Zinc in Sheets inches: Various sizes	Total Tonnage Tons	5
39	Babbitt metal.	Tons	30
40	Copper in ingots.	Tons	100
41	Tin in ingots.	Tons	50
42	Arsenic in metal or alloy rich in AS for copper materials for loco. Fire boxes	Tons	5
<u>NOTE:</u> It is used for the manufacture of bearings for rolling			
39.	stock (locomotives and vehicles). The type used is composed as follows: 15% Sn, 14% Sb, 1.5% Cu, 69.5 Pb.		
40.	It is used for the manufacture of alloys (copper and bronze tin and brass) for vehicles (welding alloys), etc.; to make conductors of electric lines, and for the construction of flue sheets for locomotives, etc.		
41.	For the manufacture of alloys (as above) and for the tinning of wires and plated.		
42.	The copper materials for locomotive fire boxes contain sundry percentages of AS. To make the metal more resisting to the action of the fire. The percentage is between 0.15 and no more than 0.35 for stay bolts; and between 0.25 and no more than 0.50 for sheets.		
43	Glass and emery paper of Various Numbers	Total Sh.	29,500
44	Emery cloth of Various Numbers	Total Sh.	679 30,000

Item
xxx

45 Manganeseite

Tons 25

Steel in blooms - ultimate strength 53,000

46 Square
Various sizes

Total Tonnage
Tons 1,600

47 Rectangular
Various sizes

Total Tonnage
Tons 1,000

48 Steel in bloom for forging - alternate strength - lbs. x sq.
inches between 60,000 to 70,000
Elongation 24%
Yield point lbs. x sq. inch. 33,000

Square inches
Various sizes

Total Tonnage
Tons 200

49 Steel in blooms for forging - ultimate strength - lbs. x sq.
inch. 85,000 to 100,000
Elongation 15%
Yield point lbs. x sq. inch. 43,000

Square inches
Various sizes

Total Tonnage
Tons 300

50 Cast iron in ingots
for sundry parts of loco-
motives, vehicles and various
equipment

Tons 10,350

52 Oxygen cylinders
geometric capacity U.S. gal-
lons 11 1/2 to 13

Ea. 500

Item
XXX

53 Acetylene cylinders
geometric capacity U.S. gal-
lons 8 1/2 to 13

	No.	500
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NOTE: Such cylinders to be supplied with all their accessories,
(reducing and closing valves).

54 Half hard steel
for the manufacture of tires
and axles of locomotives,
having the following
characteristics:

For axles: Breaking load between 71,000 and 85,000 lbs. x sq.
inch.
Elongation 18% on long small bars
25% on short " "Sulphur 0.05 - phosphorous 0.05 - S - P - 0.09

For tires: Breaking load between 106,000 and 120,000 lbs. x
sq. inch.
Elongation 12% on short small bars
Sulphur 0.04 - phosphorous 0.04 - S - P - 0.07

Steel for manufacturing axles	Tons	700
Steel for manufacturing tires	"	600

MATERIALS AND MECHANISMS FOR WAY, SIGNALLING, LIGHTING,
POWER AND R. R. TELEGRAPH.

Raw Materials

55 Insulating oil
for electric cables

	Tons	120
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Impressing powders
for insulating electric mate-
rials (Bakelite and the like)

	"	20
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56 Semi-worked materials

Insulating paper for cables	"	877 50
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Item
XXX

Galvanized iron wire 0.11811" for telegraph Sheets for constructing cores for electromagnet. For telephones and telegraphs, thickness: 0.01377" - loss 1.5 watt" for 2 ounces - 1 weber per 0.03937" sq.	Tons	800
	"	6

57 Finished Products

Telephonic armored cable fitted with 7 pair of conductors - 0.05906 in dia. - insulated in impregnated paper	Miles	80
Telephonic cables, in impregnated paper, covered in tarred canvas - 0.03937 in diameter:	"	4
3 pairs	"	5
7 "	"	15
12 "	"	14
19 "	"	11
24 "	"	7
30 "	"	

58 Telephonic cables, lead covered in impregnated paper, conductor dia. 0.03937":	"	19
3 pairs	"	22
7 "	"	77
12 "	"	60
19 "	"	34
24 "	"	26
30 "	"	

59 Telegraphonic cables with double insulation and special protection:		
-20 pairs	"	3
3 double-pairs, dia. 0.05118"	"	
14 pairs " 0.05906"	"	
-26 pairs	"	
4 double-pairs, dia. 0.05112"	"	676
14 pairs " 0.05906"	"	

Item
xxx

-23 pairs			
3 double-pairs, dia. 0.05118"	Miles	24	
3 pairs " 0.05118"			
14 pairs " 0.05906"			
-27 pairs			
4 double-pairs, dia. 0.05118"	"	18	
5 pairs " 0.05118"			
14 pairs " 0.05906"			
-28 pairs			
6 double-pairs, dia. 0.05118"	"	7	
16 " " " 0.05906"			
-29 pairs			
4 double-pairs, dia. 0.05118"	"	16	
5 pairs " 0.05118"			
16 pairs " 0.05906"			
-30 pairs			
10 double-pairs, dia. 0.05118"	"	2	
19 pairs " 0.05906"			
-Small cable (military type), a one pair item, with accessories for gripping and coupling, for semi-permanent connections, section 0.14175" square	"	94	
-Insulating conductor (military type) for temporary telephonic connections, 0.01575" in dia.	"	750	
-Small bipolar cable, with metallic cover, for inter- nal lighting installations, 0.07874 area sq. in.	"	31	
-Cable with lead cover for lighting, with special protec- tion, for 500 Volts:			
unipolar 0.015748 sq. inch	"	8	
bipolar 0.05748 " "	"	19	
" 0.23622 " "	"	38	
tripolar 0.23622 " "	"	19	
" 0.15748 " "	"	13	

60 Insulators for telegraph-
as per drawing annexed (Encl.
n. 1) Ea. 100,000
675

0345

3

Item
xxx

Materials for Fixed Elec-
tric Lighting Installations
and for Charging of Accumu-
lators.

61	Switches, plug connections, etc. (Encl. L) according to drawing M1				Pc.	500
	Ditto	"	"	L2	"	500
	"	"	"	L3	"	500
	"	"	"	L4	"	1,000
	"	"	"	L5	"	1,000
	"	"	"	L6	"	1,500
	"	"	"	L7	"	1,250
62	Edison lampholders, external				Ea.	15,000
63	Edison lampholders, internal				Ea.	5,000
64	Ditto, with wall fittings				Ea.	1,300
65	Low tension lines insulators See Encl. I and drawing N 12.				Ea.	10,000
	" " R " "	"	"	K1	"	3,000
	" " K " "	"	"	K2	"	2,000
	" " K " "	"	"	K3	"	10,000

Materials for Substations
and Electric Traction Lines.

66	Cap and pivot insulators for high tension conductors and contact conductors. See annexed drawing N.				"	60,000
67	Suspension insulators for contact conductors and for feeders. See annexed drawing P I 489 as per drawing P1				"	2,500
	I 489 " " " P2				"	2,500

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Item
xxx

Various Insulating Materials
for Electric Traction Eng-
ines.

68	Bakelite cardboard	Lbs.	3,350
69	Electro-thermic insulating sheets for electric apparatuses	"	5,700
70	Incombustible insulating mixture to be used near electric arcs	"	4,500
71	Sterling tape	Yds	55,000
72	Sterling tubes	Lbs.	6,700
73	Mica in sheets	"	2,250
74	Asbestos, for fittings	"	4,500
75	Asbestos in rope simply twisted Various diameters	Total Weight Lbs.	3,100
76	Asbestos in rope covered with graphite, square section, having the following dimensions, in. Various dimensions	Total Weight Lbs.	10,300
77	Asbestos in rope covered with graphite, square section Various dimensions	Total Weight Lbs.	6,050
78	Asbestos in sheets Various thickness	Total Weight Lbs.	22,850
	Cardboard (Bristol Board) 0.05906 inches thick	"	29,000

673

0347

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Item
xxx

79	White adhesive gummed tape	Yds	85,000
80	Black " " "	"	75,000
81	Aluminium - steel cable of twenty-six 0.12036 inch aluminium strands and seven 0.09396 inch galvanized steel strands (0.76296 total dia.) For H.T. electric lines (Primary)	Tons	200
82	Trolley copper wire, 0.4675 inch. in dia. Resistance: 0.176 Ohm. ultimate strength lbs. x sq. inch 54,000/60,000. See annexed drawing R for contact lines	Tons	200
83	Electrolytic copper cable of 19 strands 0.1105 inch each (0.551 inches total dia.) Resistance: 0.176 Ohm ultimate strength lbs. x sq. inch 55,000/60,000. Minimum elongation 1%	Tons	100
84	Phosphorous bronze wire 0.118 inch. in dia., having electric resistance not above 1.91 microhms at 15° C temperature? Ultimate strength lbs. per sq. inch: 71,000 maximum elongation 1.3%	Tons	500
<u>VARNISHES, COLORING MATERIALS, BRUSHES, FLAT PAINT</u> <u>BRUSHES (for varnishing of wood parts of cars)</u>			
85	Turpentine essential	Tons	100
86	Crude and boiled linseed oil (for varnishing and water-proofing of canvas cloth for car roofs)	Tons	572 250

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3m
xx

37	Mineral turpentine	Tons	50
88	Zinc white	"	25
89	Snow zinc white	"	5
90	Red Lead	"	15
91	Wagon red paint	"	40
92	Lampblack	"	5
93	Varnish remover	"	15
94	Shellac (used to prepare insulating varnishes)	"	2
95	Bridle Brushes Various type and size	Total Number No.	3,300
96	Horse hair brushes, for glue and gun Various types and sizes		1,700

LEATHER BELTS

(used in railway workshops for transmission of power to tool machine)

Single

97	Various width and thickness	Total Length Yds.	6,000
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98 Double

	Various width and thickness	Total Length Yds.	1,500
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LEATHERS AND THIN LEATHERS

(used at railway workshops for the manufacture of various packings for locomotives, hydraulic pumps, etc.)

671

Item
XXZ

99	Dorsal dry leather thickness between 1/8" & 1/4"	Tons	3
	Dorsal greasy leather thickness between 1/8" & 1/4"	"	2
	Thin leather uniform thickness 3/16"	"	2
	Thin leather uniform thickness 3/32"	"	3

CHEMICALS

100	Common glue for joinery works	Tons	2.5
101	Gumming paste for labelling of cars	"	25
102	Refined borax for workshops and welding	"	2.5
103	Ammonium chloride for workshops and cells	"	60
104	Ferrocyanide of potassium for workshops	"	5
105	Colophony for workshops and electric insulators	"	65
106	Torpedoes for signalling	Ex.	500,000
107	Sulphuric Acid for batteries and workshops	Tons	5
108	Hydrochloric acid 20° Be° for workshops	"	2.5
109	Nitric acid 36/40 Be°	"	1
110	Material for filtering low pressure acetylene gas	"	5
111	Soft common soap for lubricating machine tools	"	10

Item
xxx

CLOTHS AND YARNS

112	Wool and horse hair for locomotive journals	Lbs.	4,000
	Spun wool for locomotive journals	"	5,000
	Flat wick, for petroleum lamps		
	Various sizes	Total Length	
		Yds	60,000
	Canvas cloth of cotton or hemp	Total Length	
	Various width for car roofs	Yds	26,500
	Cotton rags for cleaning machines	Tons	55
	Cotton waste for cleaning machines, locomotives etc.	"	300
	Lamp wicks, Standard	"	5
	White spun and twisted cotton for sewing in spools of 400 yards	Total Number	
	Various types	Spools	13,000
	Black spun and twisted cotton for sewing in spools of 400 yards	Total Number	
	Various types	Spools	16,500

LAMPS

113	Acetylene lamps between 500 and 1,000 candle-power (they are necessary for work in tunnels)	Each	50
	Acetylene lamps between 3,000 and 5,000 candle-power (they are necessary for work in tunnels)	"	50
	Brass burners (type n.2) for oil lamps (Encl. d A)	"	10,000
	Burners, for portable acetylene lamps (3 gallons capacity) U.S. Standard (°)	"	30,000
	Burners, for portable acetylene lamps (4 gallons capacity) U.S. Standard (°)	"	20,000

(°) Tapered thread connection 3/8" to 1/4"

Item
xxx

OIL

114	Creosote oil To be used for treatment of sleepers and other timbers	Tons	750
115	Engine oil For oil boxes of steam and electric locomotives, electric railway motor cars, mechanical parts of steam and electric locomotives and workshop	"	1,250
116	Cylinder oil for steam cylinders	"	60
117	Superheat oil for steam cylinders	"	210
118	Transformer oil, electrical	"	275
119	SAE 30 Motor Oil	"	135
120	SAE 50 Motor Oil	"	75
121	Extradense Transmission Oil for gears and motor cars	"	6
122	Transmission soluble cutting oil - for machine tools	"	6
123	Glycerine (or substitute Prestone) for hydrodynamic apparatus, jacks, etc.	"	70
124	Mineral grease. For lubricating Westinghouse brakes, gears of electric locomotives and railway motor cars	"	30
125	Liquid vaseline For lubricating tachometers, commutators with metallic brushes, for photo-electric searchlights and other delicate rigging of steamers. For the preservation of the leather of railway car bellows, etc.	"	1

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0352

Item
xxx

126	Paraffin Wax For the treatment with solid paraffin of timber and other material in electric work	Tons	1
127	Pitch-pine-Oregon-pine, or Spruce (beams 6" x 10" x 12' (feet) and up or boards 1" x 8" x 10' (feet) and up) For repair and rebuilding of railway coaches and cars	MB Ft.	2,200
128	Timber for construction of railway cars (Beach-oak-etc.) Sizes as in 127	MB Ft.	1,100

MOTOR VEHICLES AND RUBBER MATERIALS

129	Trucks, capacity of 4-5 tons	Ea.	30
	" " " 1-1 1/2 tons	"	150

NOTE: For transporting of maintenance materials to railway lines.

130	<u>Tires/Tubes for motor vehicles:</u> Various sizes	Total Number No.	920
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NOTE: To be used on eighty three I.S.R. vehicles indispensable to operation purposes. The tires on most of these vehicles are already in a very bad state and cannot be repaired.

131	Tires/Tubes for trucks Various sizes	Total Number No.	1,460
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Item
xxx

132	Rubber sheets with matt surface Various sizes	Total Weight Lbs.	3,800
	having smooth surface Various sizes	Total Weight Lbs.	700
	with canvas inserted into them Various sizes	Total Weight Lbs.	3,600
133	Canvas and rubber hose 29/32" x 33/64", 33 ft. long. For pneumatic device and for compressed air and gas (oxygen excluded)	Yds.	5,000
134	Canvas and rubber hose 43/64" x 9/32", 33 ft. long. For acetylene gas and oxygen	"	4,500
135	Canvas and rubber hose containing galvanized spiral steel wire, 2 3/8" x 1 25/32", 13 feet long for hot washing of boilers	"	2,000
136	Canvas and rubber hose, 19/32" x 3/8" for conveying soaped water to machine tools, for dampening coal and for transmitting gas to lamps.	"	3,500
137	Canvas and rubber hose 1" x 19/32" for transmitting soaped water to machine tools, for dampening coal and conveying gas to lamps	"	2,500
138	Canvas and rubber hose, 1 9/64" x 7/8" for protecting fastening parts of electric motor cables.	"	350
139	Rubber hose reinforced with canvas 5/16" x 19/32" for transmitting air for braking system	"	1,600 607

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Item			
140	Canvas and rubber hose, 2 3/8" x 2 49/64" in diameter, for piping of cooling water to Diesel engines.	Yds.	100
141	Para rubber solution	Lbs.	250
142	White friction tape	Yds.	100,000
143	Black friction tape	"	90,000
144	Rubber tubes with four layers of canvas inserted into them for compressed air conduit to Westing-house brakes:		
	1" x 1 7/8"	"	1,500
	1 7/64" x 1 3/4"	"	4,550

GLASS PANES AND GLASS MATERIALS

145	Plano-convex lenses for signalling casette-shaped Various base diameters and rise	Total Number No.	16,300
146	Glass chimneys for kerosene lamps, base dia. 1 17/32" and 9 41/64" high	No.	150,000
147	Clear glass for hand lanterns 1/16" to 3/32" thick	Sq. Yds.	900
148	Clear glass for signal lamps 3/32" to 1/8" thick	"	5,400
149	Red glass for hand lanterns 1/16" to 3/32" thick	"	600
150	Red glass for signal lamps 3/32" to 1/8" thick	"	360
151	Green-blue glass for hand lanterns 1/16" to 3/32" thick	"	600

Item
xxx

152	Green-blue glass for signal lamps 3/32" to 1/8" thick	Sq. Yds	340
153	Blue-violet glass - 3/32" to 1/8" thick	"	240
154	White opaque glass for signal lamps 3/32" to 1/8" thick	"	360
155	Yellow colored glass for signal lamps 3/32" to 1/8" thick	"	480

NOTE: Items 147 to 153 are to be supplied in sheets of about one sq. yard.
 Items 154 and 155 to be supplied in sheets of about 1 1/4 sq. yard.

156	Sepia paper (basic)	Tons	1 1/2
	Cyanographic paper	"	3 1/2
	Heliographic paper	"	5

NOTE: Paper for sensitization in Italy. Mixture: Rags (about 25% cellulose-wood pulp excluded). Glue Content: Must be such as to allow absorption of sensitizing solution. Supply: In rollers, 1 yard 4 inches wide, 550 yards long in one piece. They may also be accepted if they are in two pieces provided they are connected with glue so as not to offer any impediment to the passing of paper thru the rollers of the sensitizing machine. Paper to be wound on wood rollers having a square opening thru them to let in the machine shaft, whose square section is 2 inches. Weight: per square meter: 2 ounces (sepia); 2.5 ounces (cyanographic); 3.5 ounces (heliographic).

157	Glossy drawing paper in rollers (6' x 22 yds)	Tons	1 1/2
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NOTE: For reproduction of drawings concerning I.S.R. structures and installations.

158	Small cards for forms for "Watson" Machine	Tons	25
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Item xxx			
159	Small cards for railway tickets (to be printed with Goebel machine)	Tons	50
160	Paper in rolls for Morse telegraphic machine. Standard specification.	"	19
161	Guanoed Morse Teletype Paper Standard specification	"	3

SUNDY MATERIALS

162	Large padlocks 2 35/64" x 1 13/16" Small padlocks 2 5/64" x 1 1/2"	Ev.	3,000
		"	12,000

RAIL

The track materials are for maintenance of 6700 Km of single track equivalent in Liberated Italy.

163	Type A.R.A.-weight per yd 90 lbs - Section 9020 as rolled by U.S. STEEL Corp. 39 ft; lengths Drilling 2 21/32" x 5 1/2" for 5 1/2" x 5 1/2" x 5 1/2" joints. Holes 13	Tons	18,000
164	Rail joints - 4 holes 24" long Head free and Skirtless - Hole spacing 5 1/2" x 5 1/2" x 5 1/2"	"	1,200
165	Bolts and nuts 7/8" x 5 1/2" Oil treated U.S. Std. thread	"	160
166	Tie plates 7 1/2" x 10 1/2" oant 1" in 20.4 hole per plate holes for 7/8" screwspikes	"	4,800
167	Rail anchors - Modified Fair 90 lb. 400,000	"	400

0 3 5 7

Item
xxx

166	Screw Spikes size 7/8" x 6" - threads U.S. Std for screwspikes	Tons	300
169	19/16" Lock washers - Hy - Chrome Reliance - Hy Chrome - Spring Washers Standard - "Hy Chrome" or equal. As mfg. by Eaton Mfg. Co., Massillon, Ohio	"	20
170	(9020) Section) Insulated Rail Joints - complete with insulation- Hole spacing 5 1/2" x 5 1/2" x 5 1/2" - 1" hole	Ea.	1,000
171	90 lb. turnouts complete with switch plates, 16 1/2 ft. Switch points, rail braces, switch rods, connecting rods and main track, low switch stands, with switch lamps, red and green targets.	"	100
	R.R.	"	100
	L.R.		
172	90 lb. No. 10 Rigid O.H. Steel frogs 17 ft. long, 11 ft. 90 lb. guard rails complete with plates, fillers, blocks and bolts.	"	200

MATERIALS AND MACHINES FOR MAINTENANCE OF
ELECTRIC TRACTION
AND REACTIVATION OF ELECTRIC POWER TO UTI-
LIZE ELECTRIC LOCOMOTIVES AND SAVE COAL

173	Three-phase transformers (oil cooled) 15,000 KVA. frequency 50 cycles. 3 windings for 120/60/10/KV	Ea.	6
174	Three-phase transformers (oil cooled) 12,000 KVA - 2 windings for 120/10 KV with regulating unit, frequency 50 cycles.	"	1

664¹

Item
xxx

175	Three-phase 12 phases transformers (oil cooled) for rectifier cylinders 2090 KVA - 120/6x2 (2.5) KV).	20
176	Transformers as above 60/6x2 (2.5) KV - frequency 50 cycles	12
177	Three-phase "y" connected transformers (oil cooled) Primary: 10,000 V - Secondary 250/150 V frequency 50 cycles:	
	KVA 2,000	2
	" 1,500	2
	" 1,000	2
	" 800	2
	" 500	5
	" 400	10
	" 200	15
	" 100	10
	" 50	10
	" 20	
180	Transformers as above, for insulating on poles	20
	KVA 100	20
	" 50	
181	Constant current self regulating monophase transformers (air cooled) Primary 10,000 V - Secondary current 9.6A. - Frequency 50 cycles.	
	KVA 60	16
	" 40	20
	" 20	24
	" 10	40
182	12 Anode Mercury Arc rectifier for 670 A at 3,000 V complete with all access- ories and spare parts	30
183	Movable substations Mercury Arc rectifiers for 670 A at 3000 V and transformer for 120 and 60 KV primary voltage	8

Item
xxx

REQUIREMENTS FOR ACCUMULATORS FOR AUXILIARIES OF
D.O. LOCOMOTIVES. FOR LIGHTING OF STEAM LOCOMOTI-
VES. AND GENERAL RAILWAY SERVICE.

184	Batteries for auxiliaries on electric and steam locomotives (type A) - 12 volts, 150 Amp. hours (see Encl. II)	Ea.	7,000
185	Batteries for telephone and telegraph (type U) 4 volts, 50 Amp hours, dimension of space occupied: height 10 15/32" 6 11/16" x 4 3/8"	"	4,000
186	Batteries for railway Diesel cars (in ebonite box) 6 volts, 112 Amp. hours (Type C) dimension of space occupied: height 8 1/4" base 10 13/32 x 7 9/32"	"	2,000
187	Batteries for railway Diesel cars, in ebonite cases - contained in wooden boxes type 3Y 14, 6 Volt, 224 Amp. hours (Type C) dimension of space occupied: height 8 1/4" base 23 5/8 x 10 5/8"	"	1,000

ASSORTED MALLEABLE CAST IRON CONNECTIONS FOR GAS AND WATER
PIPES FOR RAILROAD

188	One end Male, Other Female Various Sizes	Total Number Ea.	7,100
189	as above, both female Various Sizes	Total Number Ea.	2,350

Item
XXX

191	Curves 45° One end Male, Other Female Various sizes	Total Number Ea.	2,550
192	Elbows 90° Various sizes	Total Number Ea.	4,800
193	As above reducing Various sizes	Total Number Ea.	1,650
194	Elbows at 90° with one end threaded: Various sizes	Total Number Ea.	2,750
195	Tee 90° Various sizes	Total Number Ea.	3,200
196	Tee 90° reducers Various sizes	Total Number Ea.	2,250
197	Tee 45° Various sizes	Total Number Ea.	1,400
198	Curved Tee 90° One curve various sizes	Total Number Ea.	1,650
199	Curved Tee 90° One curve various sizes Two curves various sizes	Total Number Ea. Total Number Ea.	150 1,600
200	Gross connection 90° Various sizes	Total Number Ea.	2,150

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Item
xxx

201	Cross Connection 90° reducers Various sizes	Total Number Ea.	1,400
202	Unions Various sizes	Total Number Ea.	9,650
203	Union reducers Various sizes	Total Number Ea.	10,750
204	Couplings Various sizes	Total Number Ea.	5,950
205	Double nipples with bolt head Various sizes	Total Number Ea.	15,000
206	Nipple reducers male and female Various sizes	Total Number Ea.	11,150
207	Double nipple reducers with bolt head Various sizes	Total Number Ea.	10,950
208	Hexagonal lock nut Various sizes	Total Number Ea.	13,000
209	Plugs (Female) with Hex. head Various sizes	Total Number Ea.	1,150
210	Plugs (Male) with Square head Various sizes	Total Number Ea.	1,150
211	Flanges Various sizes	Total Number Ea.	4,700

Amount Weight Approx. Tons 25 (Items 188 to 211) 669

899

AMALFI	82	350	350	141	623	52	186	340	278	538	205	211	158	153	497
ANGONA	747	362	604	538	57	717	532	619	957	175	702	687	524	566	199
ARZIO	51	435	314	230	708	73	271	304	175	623	204	217	243	243	582
AUGUSTA	285	217	107	77	457	255	43	122	476	402	202	187	63	93	360
BALIA	40	369	357	168	642	12	205	347	254	557	212	228	177	172	516
BARI	549	161	400	336	163	519	328	415	745	53	492	480	322	353	16
BARLETTA	577	193	432	364	131	347	360	447	773	21	527	512	350	386	16
BRIINDISI	481	97	337	273	217	451	287	352	671	119	432	417	259	295	77
CAPRI	64	350	338	169	623	34	186	328	262	538	193	209	158	153	497
CAST. GOLFO	229	336	155	159	620	182	173	142	360	527	44	60	152	123	486
CAST. STABIA	65	363	351	162	636	30	199	341	275	531	206	222	171	156	510
CATANIA	270	210	121	62	450	240	20	138	461	396	216	201	48	78	354
CATANZARO	334	197	202	126	394	304	106	217	520	292	297	282	112	142	250
C/VEGHIA	108	492	371	287	765	130	328	362	118	680	261	274	300	300	639
CROTONI	364	73	232	157	360	334	136	247	560	258	327	312	143	173	216
GAETA	-	414	402	213	687	38	250	392	224	602	257	273	322	217	561
GALLI POLI	414	-	282	206	310	304	200	297	605	219	377	362	192	222	177
GELA	402	282	-	165	557	350	141	15	469	456	100	85	151	181	416
GIOIA TAURO	213	208	165	-	487	163	42	175	405	389	184	200	16	32	348
GIULIANOVA	637	310	557	467	-	657	480	572	883	125	652	637	473	509	147
ISCHIA	38	364	350	183	657	-	220	340	245	572	205	221	182	187	531
IONIA	250	200	141	42	480	220	-	356	441	386	236	221	28	58	344
LICATA	392	297	15	175	572	340	156	-	453	473	90	75	161	191	431
LIVORNO	224	605	469	405	883	245	441	453	-	798	366	379	413	413	757
MANFREDONIA	502	213	458	385	123	572	385	473	798	-	553	538	275	411	37
MARSALE	257	377	100	184	552	205	236	90	366	553	-	16	177	147	511
MAZARA	273	362	85	200	637	221	221	75	379	538	-	-	193	165	496

637

AMALFI	462	35	258	610	245	32	272	195	401	165	7	66	85
ANCONA	227	730	706	69	884	697	634	854	565	513	685	559	523
ANZIO	552	90	258	625	132	33	271	92	355	249	115	161	178
AUGUSTA	323	230	209	485	445	235	137	393	69	57	44	176	160
BALIA	460	7	265	629	211	9	279	171	468	185	487	440	424
BARI	12	502	502	151	702	499	430	662	362	316	468	468	452
BARLETTA	44	530	534	119	730	527	462	690	394	344	515	372	356
BRINDISI	39	434	429	205	628	481	367	588	299	253	74	74	91
CAPRI	461	17	246	610	239	14	260	179	389	165	172	172	166
CASS. GOLFO	440	162	301	607	317	179	115	277	402	179	36	87	104
CASS. STABIA	474	13	165	478	418	220	151	378	83	42	208	161	145
CATANIA	316	223	223	582	477	284	232	437	164	188	272	225	209
CATANZARO	213	287	304	752	75	150	320	35	422	306	172	216	235
C/VEGUEIA	609	147	742	343	517	514	262	477	193	137	302	255	239
CRONCHI	179	317	333	674	181	53	324	141	453	239	89	138	155
GALTA	521	50	310	298	562	384	312	522	244	186	352	305	289
GALLIPODI	136	367	384	298	425	352	45	386	50	145	354	357	340
GELA	376	355	110	545	362	163	202	522	138	467	143	101	85
GIOLIA TAURO	317	166	252	474	840	637	587	800	519	200	59	578	362
GIULIANOVA	172	640	644	12	202	20	272	162	401	42	186	141	125
ISCHIA	495	17	258	644	398	200	171	358	103	155	344	347	330
IGNIA	306	203	243	468	410	342	27	376	65	159	290	336	353
LICATA	391	345	95	560	43	265	426	83	520	419	540	494	478
LIVORNO	721	262	400	870	753	552	488	715	420	369	209	212	195
MAHREDOZIA	77	535	560	111	323	207	63	283	145	183	215	228	211
MAESALA	471	639	62	640	356	223	48	296	130	130	149	215	211
MAZARA	456	225	52	625	356	356	356	356	356	356	356	356	356

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N° 4

Località	GRANIO	SOIACCA	SINAOUSA	SOVERATO	TARANZO	TERRINI IM.	TRANI	TRAPANI	S. DEL GREGO	VIHO VALEN.	VIESTE
AMALFI	62	240	228	265	368	170	507	163	163	30	130
ARCONA	638	659	552	450	405	651	169	706	706	695	574
ANZIO	157	244	313	340	453	213	592	189	189	95	225
AUGUSTA	175	162	14	122	235	169	370	217	217	233	115
BAIA	89	255	247	284	387	177	526	190	190	12	157
BARI	439	455	347	239	204	437	26	495	495	497	372
BARLETTA	467	467	379	271	236	465	6	527	525	525	400
BEVERESI	371	392	267	179	140	370	87	435	429	429	309
CAPRI	70	236	228	265	368	156	507	171	12	12	138
CAST. GOLFO	171	87	217	254	355	52	496	28	177	177	177
CAST. STABIA	93	249	241	276	381	171	20	184	218	7	96
CATANIA	160	176	29	111	227	145	260	280	282	282	162
CATANZARO	224	257	126	6	120	209	619	246	152	152	282
CIVITAVECCHIA	214	301	370	397	510	276	226	310	312	312	193
CROTONE	254	267	156	45	86	239	571	235	56	56	202
GARA	134	300	292	329	432	269	187	370	362	362	242
GALLIOLI	204	337	221	112	47	426	426	116	350	350	201
GELA	355	60	95	197	292	203	350	178	161	161	32
G. TRURO	100	227	84	121	224	107	350	655	635	635	523
GIULIANOVA	577	612	500	399	353	580	137	188	23	23	172
ISCHIA	104	248	262	299	402	192	541	241	198	198	78
IONIA	149	196	49	101	125	125	354	106	340	340	211
LIGATA	345	90	110	212	307	192	441	267	267	267	400
LIVORNO	332	406	463	510	623	370	767	550	550	550	425
MAFFREDDONIA	493	513	405	297	262	490	593	205	205	205	202
MANZANA	210	43	150	292	367	94	521	16	16	16	218
MAZARA	226	27	175	277	372	110	596	32	32	32	221

500

MESSINA	153	524	243	243	65	177	522	350	259	158	152	171	46	112	300	143
MILAZZO	159	566	243	243	93	172	553	385	253	153	123	156	78	142	300	173
MOLINETTA	497	199	552	552	360	516	16	16	77	497	486	510	554	250	639	216
MONOPOLI	461	227	552	552	323	480	12	44	59	161	449	474	316	213	609	179
NAPOLI	35	700	90	90	238	7	502	530	434	17	182	13	223	457	147	317
NAPOLI	600	50	685	685	475	618	141	109	185	600	597	613	468	372	742	338
PALERMO	164	641	192	192	180	171	444	472	376	152	32	165	165	229	248	259
PANTELLERIA	258	706	258	258	209	265	502	534	439	246	101	259	229	304	315	333
PESCARA	610	59	695	695	485	629	151	119	205	610	607	623	478	382	752	348
PIOMBINO	245	884	132	132	443	211	702	730	628	239	317	232	416	477	75	517
PORFICI	32	697	93	93	235	9	490	527	481	14	179	10	220	284	150	314
P. RAPPEDUGLIA	272	634	271	271	137	275	430	462	367	460	115	273	151	232	328	232
P.S. STAFFANO	155	854	92	92	593	171	652	690	508	179	277	192	370	437	35	477
POZZALLO	401	566	363	363	69	408	362	394	299	389	206	402	83	164	422	193
R. CALABRIA	165	516	249	249	57	185	316	344	253	166	150	178	42	106	306	237
BALERNO	7	685	115	115	223	44	487	515	419	25	181	38	208	272	172	302
SAPRI	66	699	161	161	176	92	440	468	372	74	173	87	161	225	218	255
SCALEA	83	623	178	178	160	110	424	452	356	91	166	104	145	209	235	239
SCARIC	62	638	157	157	175	89	439	467	371	70	171	83	150	224	214	254
SCIACCA	248	659	244	244	162	255	435	487	392	236	87	249	176	257	301	287
SIRACUSA	228	582	313	313	14	247	347	379	287	228	217	241	29	126	370	156
SOVERATO	205	450	340	340	122	284	238	271	179	265	254	276	111	6	397	45
TARANTO	368	435	433	433	235	387	204	236	140	268	355	381	227	120	510	86
TERRACINA	170	631	213	213	160	177	437	465	370	159	52	171	145	209	270	239
TRANI	507	169	552	552	370	526	26	6	87	507	436	520	364	260	649	226
TRAPANI	183	706	189	189	217	190	493	527	435	171	28	184	221	280	246	510
T. DEL GARICO	30	695	95	95	233	12	497	525	429	32	177	7	216	282	152	312
VIBO VALENT.	130	574	225	225	113	157	372	400	303	138	177	151	98	162	282	193
VIGEVANO	551	153	626	626	419	560	60	26	136	551	530	554	413	309	683	275

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no 6	GARBA	GALLIPIOLI	GRILA	GIOLA SAURO	GIULIAROVA	IGERIA	JONIA	LIGURA	LIVORNO	LAMPEDUSA	MARSALE	MAZZARA	MESSINA	MILAZZO	MOLIPETRA	30
MESSINA	222	192	151	16	472	182	26	151	412	375	177	193	193	-	30	334
MILAZZO	217	222	181	32	509	187	58	191	412	411	147	165	165	30	-	370
MOLIPETRA	561	177	416	348	147	531	344	411	737	37	511	496	496	334	379	28
MONOFOLI	521	136	376	317	172	455	306	391	721	77	471	456	456	303	170	514
MAPOLI	50	367	355	166	640	17	203	345	262	555	210	226	226	175	450	125
ORTONA	664	288	539	464	25	634	450	550	860	101	330	615	615	450	486	456
PALERMO	216	309	185	124	890	169	145	172	355	497	74	90	90	117	93	518
TAFFERBERIA	310	364	110	232	659	258	243	95	408	560	62	52	52	245	215	135
ZESCARA	674	296	545	474	12	644	466	560	870	111	640	625	625	460	496	714
FIGUINO	181	562	426	362	840	202	398	410	42	733	323	326	326	376	378	511
PORTICI	53	364	352	163	637	20	200	342	265	552	207	223	223	172	167	446
PIMPREGOLA	524	312	45	202	587	272	171	27	426	488	63	48	48	188	158	674
P.S. STEFANO	141	522	366	322	800	162	356	376	83	715	203	236	236	330	330	378
POZZALLO	453	244	50	138	319	401	103	93	520	420	145	130	130	124	154	328
R. CALABRIA	230	186	145	23	467	200	22	155	419	369	193	199	199	6	31	499
BALERMO	99	392	354	113	625	58	188	344	290	540	209	215	215	160	153	452
SAPRI	138	305	357	101	578	108	141	347	336	494	212	228	228	115	113	436
SCALFA	155	209	340	85	562	125	125	330	353	478	135	211	211	99	97	451
SCARLO	134	304	355	100	577	104	140	345	332	493	210	226	226	116	112	471
SCIACCA	300	337	60	227	612	248	196	50	406	513	43	27	27	220	190	163
SIRACUSA	292	281	95	84	500	262	49	110	483	405	196	173	173	70	100	255
SOVERATO	329	112	197	121	399	299	101	212	510	297	232	277	277	107	137	220
TARANTO	432	47	292	224	353	402	217	307	623	262	357	372	372	210	241	449
TERMINI IMER.	222	239	805	107	580	192	125	192	370	490	94	110	110	106	70	449
TRANI	571	187	426	358	137	541	354	441	767	27	521	506	506	244	300	10
TRAPANI	235	370	116	178	655	188	241	106	349	555	15	221	221	170	165	509
T. DEL GRECO	55	362	350	161	535	23	196	340	267	550	205	216	216	49	50	384
VIGO VALENTIA	202	242	201	32	523	172	78	211	400	425	202	218	218	49	50	384
VIESTE	605	236	475	392	103	575	403	499	801	20	570	555	555	373	414	44

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no	7	NOOPOLI	HAPOLI	ORTONA	PALERMO	PANTALIERIA	BRIGARA	PIOMBINO	PORTICI	P. EMPED.	P. G. STEF.	POZZALLO	R. CALABR.	SALERNO	SAPRI	SCALINA	CS
MESSINA	103	175	450	117	245	460	370	172	188	330	124	6	160	115	99	97	
MILAZZO	339	170	486	93	215	496	370	157	153	330	154	31	155	113	97		
MOLIFETTA	28	514	125	456	518	135	714	511	446	674	370	328	499	452	436		
MONOPOLI	-	478	148	410	478	159	678	475	406	638	338	227	463	416	400		
NAPOLI	478	-	617	170	263	627	219	3	277	179	406	183	42	91	108		
ORTONA	148	617	-	567	637	10	817	614	565	777	497	444	602	556	540		
PALERMO	410	170	567	-	151	577	312	166	145	272	236	123	168	157	140		
PANTALIERIA	478	263	637	131	-	647	827	260	81	325	136	251	262	265	254		
PESCARA	159	627	10	577	647	-	-	624	575	787	507	454	612	566	550		
PIOMBINO	678	219	817	312	365	827	-	222	383	40	477	376	247	293	310		
PORTICI	475	3	614	166	260	827	222	-	274	182	403	180	39	83	105		
P. EMPEDOCLE	406	277	777	145	81	575	383	274	-	343	437	182	276	279	262		
P. S. STEFANO	638	179	497	272	325	787	40	182	343	-	437	336	207	253	270		
POZZALLO	338	406	497	236	136	507	477	403	80	437	-	119	405	408	391		
R. CALABRIA	297	183	444	123	251	454	376	180	182	207	119	-	168	405	105		
SALERNO	463	42	602	168	262	612	247	39	276	207	405	168	-	121	105		
SAPRI	416	91	556	157	265	566	293	88	279	253	408	121	68	-	27		
SCALEA	400	108	540	140	254	550	310	105	202	270	591	105	85	27	-		
SCARIC	415	87	555	155	263	565	289	64	277	249	406	120	64	5	26		
SCIACCA	431	253	570	117	67	600	363	259	30	323	105	226	252	255	238		
SIRAGUSA	226	245	478	187	197	488	440	242	125	400	57	64	230	183	167		
SOVERATO	218	282	377	224	299	387	467	279	227	427	159	101	267	220	204		
TARANTO	179	385	331	328	395	341	580	582	322	540	254	204	370	323	307		
TERMINI IMER.	404	175	560	20	151	570	327	172	165	297	256	106	174	155	138		
TRANI	38	524	115	466	528	125	724	521	456	684	388	338	509	462	446		
TRAPANI	471	188	633	58	76	643	306	185	79	266	159	177	187	190	173		
T. DEL GRECO	473	6	612	164	258	622	224	3	272	184	401	178	37	86	103		
VIBO VALENTIA	353	155	500	142	270	510	357	102	220	317	174	55	132	91	75		
VIESTE	96	558	81	500	577	91	758	555	509	718	437	372	533	497	480		

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MESSINA	116	220	70	197	220	100	344	171	170	49	378
MILAZZO	112	130	100	137	241	70	380	141	155	50	414
MOLISSETTA	451	471	365	255	220	445	10	511	509	384	44
MONOPOLI	415	431	226	218	179	404	38	471	473	353	56
MAFOLI	87	253	245	262	365	175	524	188	6	155	528
ORTONA	555	590	478	377	331	560	115	633	612	500	61
PALERMO	155	137	187	224	320	20	465	38	164	142	300
PANTABLERIA	263	67	197	299	395	151	528	76	258	270	577
PESCARA	555	600	488	367	341	570	125	643	622	510	91
PIOMBINO	289	363	440	467	580	327	734	300	224	357	758
PORFICI	34	250	242	279	382	172	521	185	3	102	555
P. RAFFAELLO	277	30	125	227	322	165	456	79	272	220	505
P. S. STEFANO	245	323	400	427	340	297	684	266	184	317	718
POZZALLO	406	105	57	159	254	296	388	159	401	174	437
R. CALABRIA	120	226	64	101	204	106	330	177	178	55	372
SALERNO	64	252	250	267	370	174	509	187	37	132	553
SAPRI	5	255	165	220	323	155	462	190	86	91	457
SCALFA	26	238	167	204	307	138	446	173	193	75	480
SCARIO	=	253	182	213	322	133	461	138	82	90	495
SCIACCA	253	=	150	292	347	137	481	59	248	245	530
SIACUSA	182	150	=	121	238	167	373	205	249	120	422
SOVERATO	219	252	121	=	125	204	265	275	277	157	314
TARANTO	322	347	238	125	=	308	230	336	330	200	279
TERMINI IMER.	153	137	167	204	303	=	458	78	170	125	493
TRANI	461	481	373	265	230	459	=	521	519	394	34
TRAPANI	186	59	295	275	388	78	521	=	183	196	560
T. DEL GRECO	82	248	240	277	380	170	519	183	=	150	593
VIBO VALENTIA	90	245	120	157	260	125	394	196	150	=	428
VIESTE	496	590	422	314	279	492	34	560	553	428	=

Distanze in miglia fra porto e porto (Rotte dirette)

DISTANCES IN MILES BETWEEN PORT AND PORT (Direct Routes)

da	ad	(e viceversa)	
da Cagliari	ad Ancona	(e viceversa)	846
" "	" Augusta	" "	569
" "	" Bari	" "	645
" "	" Brindisi	" "	581
" "	" Catania	" "	370
" "	" Civitavecchia	" "	230
" "	" Grotone	" "	460
" "	" Gaeta	" "	248
" "	" Gallipoli	" "	514
" "	" Livorno	" "	294
" "	" Messina	" "	522
" "	" Napoli	" "	263
" "	" Ortona	" "	772
" "	" Palermo	" "	216
" "	" P. Spedocole	" "	240
" "	" Taranto	" "	532

da Olbia a Civitavecchia (e viceversa) 125

SARDEGNA - periplo - SARDEGNA - circumnavigation

da	a	(e viceversa)	
da Cagliari	a Torrevecchia	(e viceversa)	23
" T. vecchia	" Muravera	" "	22
" Muravera	" Tortoli	" "	34
" Tortoli	" Dorgali	" "	22
" Dorgali	" Orossi	" "	7
" Orossi	" Siniscola	" "	20
" Siniscola	" Olbia	" "	30
" Olbia	" Maddalena	" "	30
" La Maddal.	" S. Teresa Gallura	" "	12
" S. Ter. Gallura	" Castelsardo	" "	33
" Castelsardo	" Porto Torres	" "	16
" Porto Torres	" Alghero	" "	64
" Alghero	" Bosa	" "	20
" Bosa	" Oristano	" "	34
" Oristano	" Carloforte	" "	54
" Carloforte	" S. Antiaco	" "	22
" S. Antiaco	" Teulada	" "	23
" Teulada	" Cagliari	" "	33

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COMITATO ITALIANO GESTIONE NAVI
" CO. G. E. NA "

APPENDIX 650

TARIFF FOR TRANSPORT OF GOODS BY MOTOR-SCHOONER HIRED BY THE MINISTRY OF MARINE (General Direction Mercantile Marine)

Distance in miles		GOODS			
from	to	Prices per ton in lire			
		I	II	III	IV

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COMITATO ITALIANO GESTIONE NAVI

" CO. G. B. NA "

NOLI PER IL TRASPORTO DI MERCI SU MOTOGUERRIERI NOLEGGIATI DAL MINISTERO DELLA MARINA (di
rezione Gen.le Marina Mercantile)

Distanza in miglia		M E R C I			
da	a	Prezzi per tonn. in lire			
		I	II	III	IV
	108	3.969	3.275	2.417	1.512
eino	119	4.127	3.279	2.478	1.542
109	129	4.287	3.384	2.538	1.573
120	140	4.444	3.490	2.599	1.602
130	151	4.604	3.596	2.658	1.634
141	162	4.761	3.702	2.716	1.663
152	173	4.857	3.753	2.757	1.690
163	183	4.973	3.807	2.795	1.715
174	189	5.079	3.859	2.833	1.742
184	194	5.079	3.859	2.833	1.742
190	205	5.184	3.913	2.871	1.767
195	216	5.290	3.965	2.907	1.794
206	227	5.317	3.992	2.934	1.821
217	237	5.342	4.017	2.961	1.845
228	243	5.369	4.044	2.986	1.872
238	248	5.369	4.044	2.986	1.872
244	259	5.394	4.068	3.013	1.897
249	270	5.421	4.095	3.038	1.924
260	281	5.448	4.122	3.065	1.951
271	291	5.472	4.147	3.092	1.976
282	302	5.499	4.174	3.117	2.003
292	313	5.524	4.199	3.144	2.028
303					

619

0373

Distanza in miglia		M R C I			
da	a	Prezzi per tonn. in live			
		I.	II.	III.	IV.
314	324	5.551	4.226	3.168	2.055
325	335	5.578	4.253	3.195	2.082
336	345	5.603	4.278	3.222	2.106
346	356	5.630	4.305	3.247	2.133
357	367	5.655	4.329	3.274	2.158
368	378	5.682	4.356	3.299	2.185
379	389	5.709	4.383	3.326	2.212
390	399	5.733	4.408	3.353	2.237
400	410	5.760	4.435	3.378	2.264
411	421	5.785	4.460	3.405	2.289
422	432	5.812	4.487	3.429	2.316
433	443	5.839	4.514	3.456	2.343
444	454	5.864	4.539	3.483	2.367
454	464	5.891	4.566	3.508	2.394
465	475	5.916	4.590	3.535	2.419
476	486	5.943	4.617	3.560	2.446
487	497	5.970	4.644	3.587	2.473
498	507	5.994	4.669	3.614	2.498
508	518	6.021	4.696	3.639	2.525
519	529	6.046	4.721	3.666	2.550
530	540	6.073	4.748	3.690	2.577
541	551	6.091	4.766	3.711	2.593
552	561	6.111	4.786	3.729	2.615
562	572	6.129	4.804	3.749	2.633
573	583	6.150	4.824	3.767	2.653
584	594	6.168	4.842	3.785	2.671
595	605	6.186	4.860	3.805	2.689

./.

3)

Distanza in miglia		M E R C I			
da	a	Prezzi per tonna, in lire			
		I	II	III	IV
606	615	6.206	4.881	3.823	2.709
616	626	6.224	4.899	3.845	2.727
627	637	6.244	4.919	3.861	2.748
638	648	6.262	4.937	3.879	2.766
649	659	6.280	4.955	3.900	2.784
660	669	6.300	4.975	3.918	2.804
670	680	6.318	4.993	3.938	2.822
681	691	6.339	5.013	3.956	2.842
692	702	6.357	5.031	3.974	2.860
703	713	6.375	5.049	3.994	2.878
714	723	6.395	5.070	4.012	2.898
724	734	6.413	5.088	4.032	2.916
735	745	6.433	5.108	4.050	2.937
746	756	6.451	5.126	4.068	2.955
757	767	6.469	5.144	4.089	2.973
768	777	6.489	5.164	4.095	2.993
778	788	6.507	5.182	4.127	3.011
789	799	6.528	5.202	4.145	3.031
800	810	6.546	5.220	4.163	3.049
811	821	6.564	5.238	4.183	3.067
822	831	6.584	5.259	4.201	3.087
832	842	6.602	5.277	4.221	3.105
843	853	6.622	5.297	4.239	3.126
854	864	6.640	5.314	4.257	3.144
865	875	6.658	5.333	4.276	3.162
876	885	6.678	5.353	4.296	3.182
886	896	6.696	5.371	4.316	3.200

./.

4)

M E R C I		Pressi per tonna, in lire			
da	Distanza in miglia	I	II	III	IV
897	907	6.711	5.391	4.394	3.220
908	918	6.735	5.409	4.352	3.238
919	928	6.753	5.427	4.372	3.256
929	939	6.773	5.448	4.390	3.276
940	950	6.791	5.466	4.410	3.294
951	961	6.811	5.486	4.428	3.313
962	972	6.829	5.504	4.445	3.333
973	983	6.847	5.522	4.467	3.351
984	993	6.867	5.542	4.485	3.371
994	1004	6.885	5.560	4.505	3.388

Napoli, 16 dicembre 1944

Allegato I

Edizione Novembre 1930



MINISTERO DELLE COMUNICAZIONI

R. ISTITUTO SPERIMENTALE (Sezione P. T. T.)

CAPITOLATO SPECIALE N. 33

per

Isolatori di porcellana mod. 1-1920 e mod. 2-1920 con fascia verde alla base

Art. 1. — Gli isolatori dovranno essere conformi ai campioni esistenti presso l'Amministrazione e corrispondere ai rispettivi disegni.

Art. 2. — Essi dovranno essere di porcellana di tipo duro, della migliore qualità, trasparente in spessori moderati, non igroscopica, di massa omogenea e compatta, senza screpolature, fabbricati in un sol pezzo e coperti regolarmente di vernice vetrificata.

Ciascun isolatore avrà alla base, sotto la vernice, una fascia di colore grigio-verde alta cm. 2.

Art. 3. — La vernice vetrificata dovrà aderire perfettamente alla massa di porcellana; essa dovrà essere molto dura, uniforme, liscia, trasparente, esente da incrinature, da bolle e da macchie.

Art. 4. — Il loro con filettatura a vite, per fissare l'isolatore sul braccio di sostegno, avrà forma cilindrica; la filettatura sarà sinistrorsa, come nei campioni, bene eseguita e senza vernice vetrificata. L'orlo della campana interna sarà verniciato; quello della campana esterna sarà senza vernice, ma dovrà risultare liscio e privo di sostanze estranee attaccate.

Art. 5. — Sulle dimensioni in genere, indicate nei disegni, sarà ammessa una tolleranza del 5 % in più o in meno. Per lo spessore delle due campane, all'orlo o all'attacco alla massa di porcellana dell'isolatore, tale tolleranza potrà, però essere del 10 % in più e del 15 % in meno; in ogni caso, sarà consentito che essa possa raggiungere un millimetro in più o in meno.

Art. 6. — L'accertamento della regolare fabbricazione e delle dimensioni verrà fatto esaminando gli isolatori ad uno ad uno; gli esemplari imperfetti saranno rifiutati.

625

Regn AG-ENG-87-45
Enclosure I
(See Item 60)

Per giudicare della qualità della porcellana, in relazione al contenuto dell'art. 2, il collaudatore potrà spezzare fino all'uno per cento degli isolatori presentati. Gli esemplari rotti a questo scopo, dovranno essere sostituiti gratuitamente dal fornitore.

Se il numero degli isolatori non completamente soddisfacenti alle condizioni prescritte raggiungerà il decimo degli isolatori esaminati, l'intera partita sarà rifiutata.

Art. 7. — Tutti gli isolatori saranno provati all'isolamento nel modo seguente:

Si immergeranno in una soluzione formata con quattordici parti in peso di acqua ed una di acido solforico (densità 5 gradi Baumé circa) e si riempiranno le due campane con tale soluzione fino a due centimetri dai lembi. Prima di immergere gli isolatori si accerterà che la loro superficie non sia unta.

Dopo dodici ore di immersione, riconosciuto che i lembi siano asciutti, si accerterà, con l'ausilio di un galvanometro sensibile e di una batteria di 200 pile italiane, il buon isolamento tra l'interno del foro filettato e l'esterno dell'isolatore, tra le due campane e attraverso la sola campana esterna. Tutti gli isolatori che in questa prova risulteranno difettosi saranno rifiutati.

Tra gli esemplari riconosciuti in buono stato il collaudatore ne esprimerà almeno l'uno per mille, con galvanometro più sensibile e con mezzi più appropriati, per determinare, in condizioni analoghe alle precedenti, la resistenza di isolamento. Tanto per il mod. 1/1920, quanto per il Mod. 2/1920, tale resistenza, misurata sia fra le due campane, sia attraverso la sola campana esterna, sia infine tra l'interno del foro filettato e l'interno dell'isolatore, non dovrà risultare minore di 10.000 megohm, alla temperatura di 15° C.

Qualora il decimo degli esemplari così sperimentati, non soddisferà a questa ultima condizione, l'intera partita sarà rifiutata.

Art. 8. — Gli isolatori dovranno essere consegnati accuratamente imballati, con paglia e con fieno, entro speciali corbelli, chiusi superiormente con tela juta.

Ciascun corbello dovrà contenere 50 esemplari, tutti del medesimo modello, e porterà stampata, sulla tela juta, l'indicazione del tipo degli isolatori imballati.

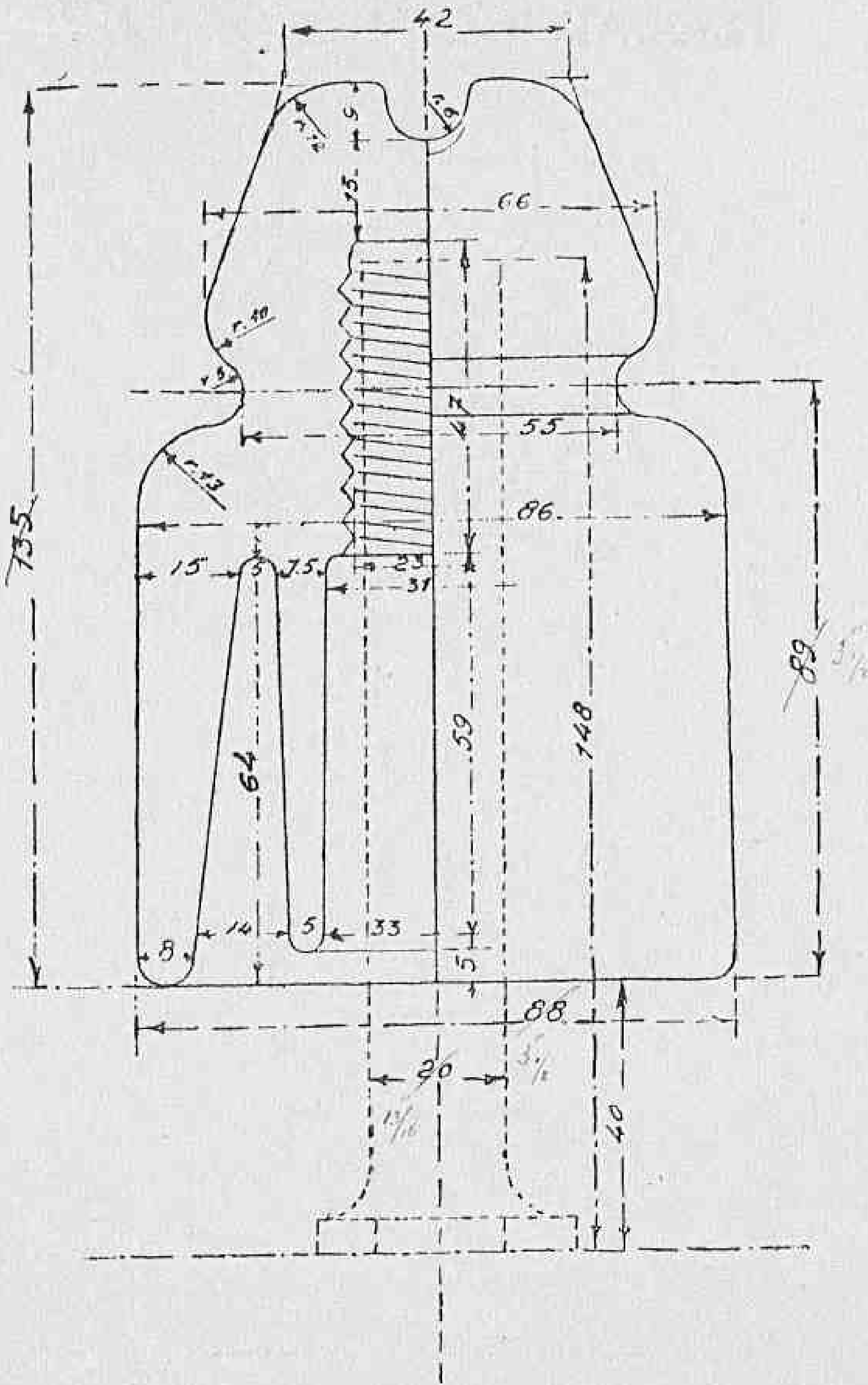
Art. 9. — La Ditta fornitrice non potrà cedere a privati o ad altre Amministrazioni di Stato isolatori dei Mod. 1/1920 e Mod. 2/1920 con fascia verde alla base, senza il preventivo consenso della Amministrazione delle Poste e dei Telegrafi.

Art. 10. — La Ditta fornitrice dovrà mettere a disposizione dell'Amministrazione il personale, i locali ed i mezzi necessari per l'esecuzione del collaudo degli isolatori, nonché i locali per custodire, in fabbrica, il materiale collaudato.

L'Amministrazione si riserva il diritto di far sorvegliare la fabbricazione degli isolatori e di fare quegli esperimenti che riterrà opportuni. In quest'ultimo caso la Ditta dovrà mettere a disposizione dei funzionari, delegati per gli esperimenti, il personale, gli elementi ed i mezzi occorrenti.

All ~~new~~
Requested
n° 100 000

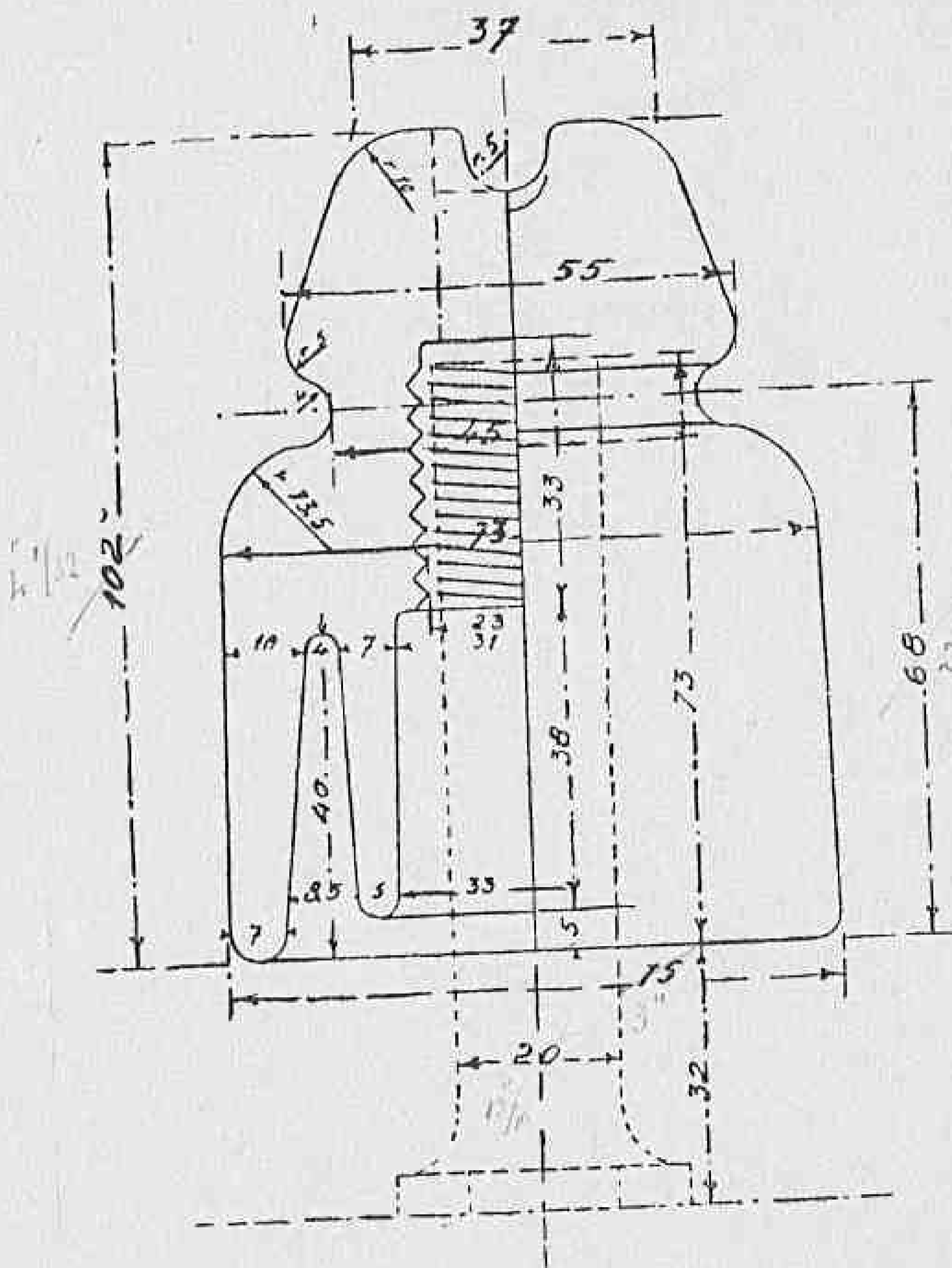
ISOLATORE MOD. 1-1920



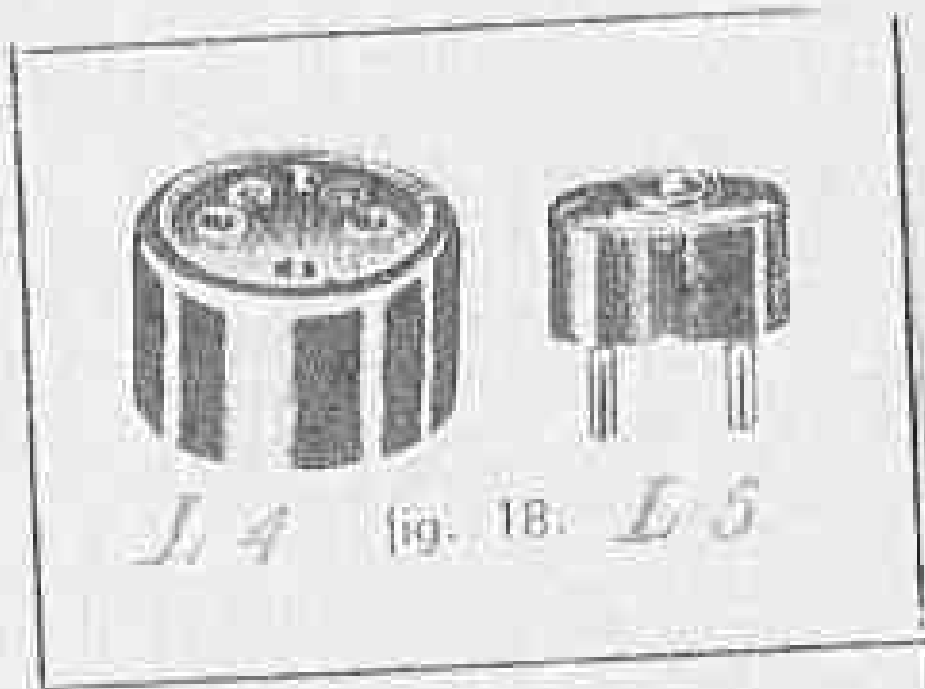
64!

All vero
Requested
n° 10000

ISOLATORE MOD. 2-1920



requested N: 1000
each



requested N: 500

L

Reqn AC-ENG-87-45
Encl L
(See Item 6)



fig. 12. L3

requested N: 1250

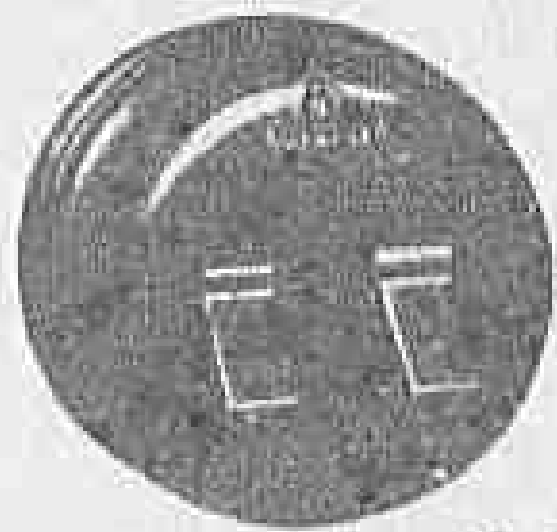


fig. 7. L7

requested N: 1500

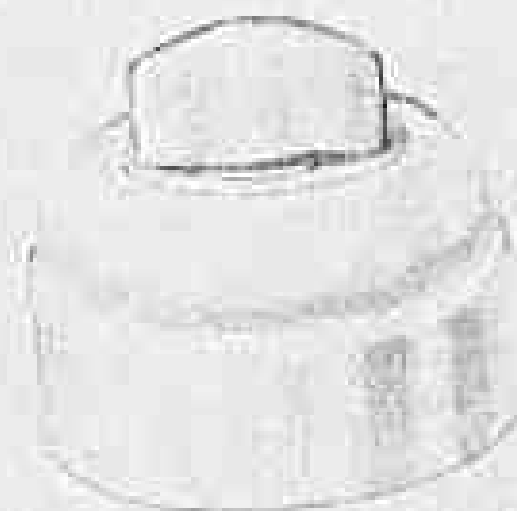


fig. 6. L6

requested N: 500



fig. 8. L2

requested N: 500

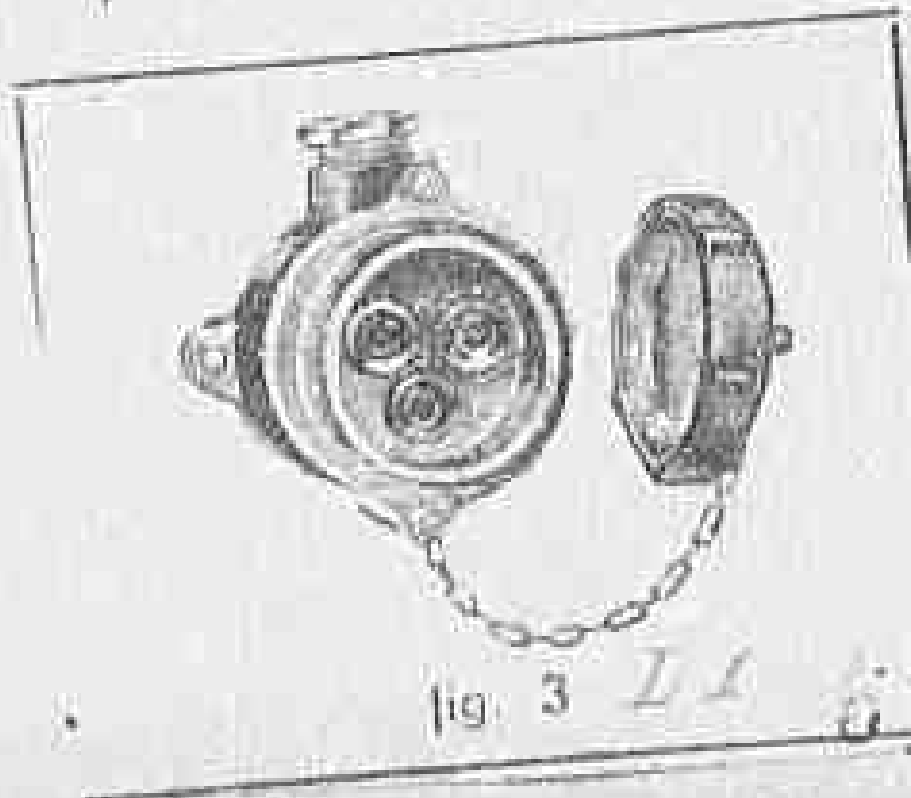
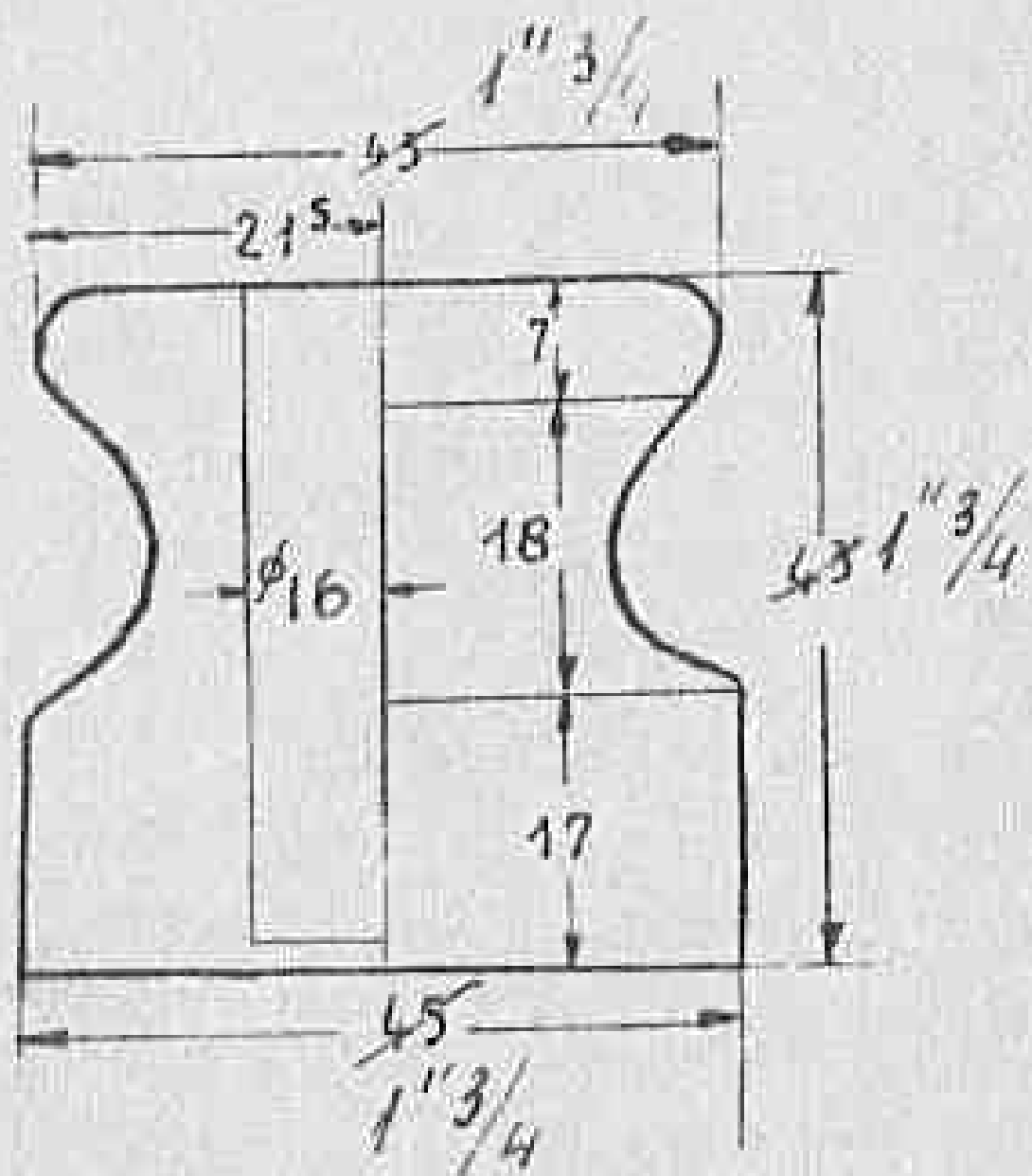


fig. 3. L1 623

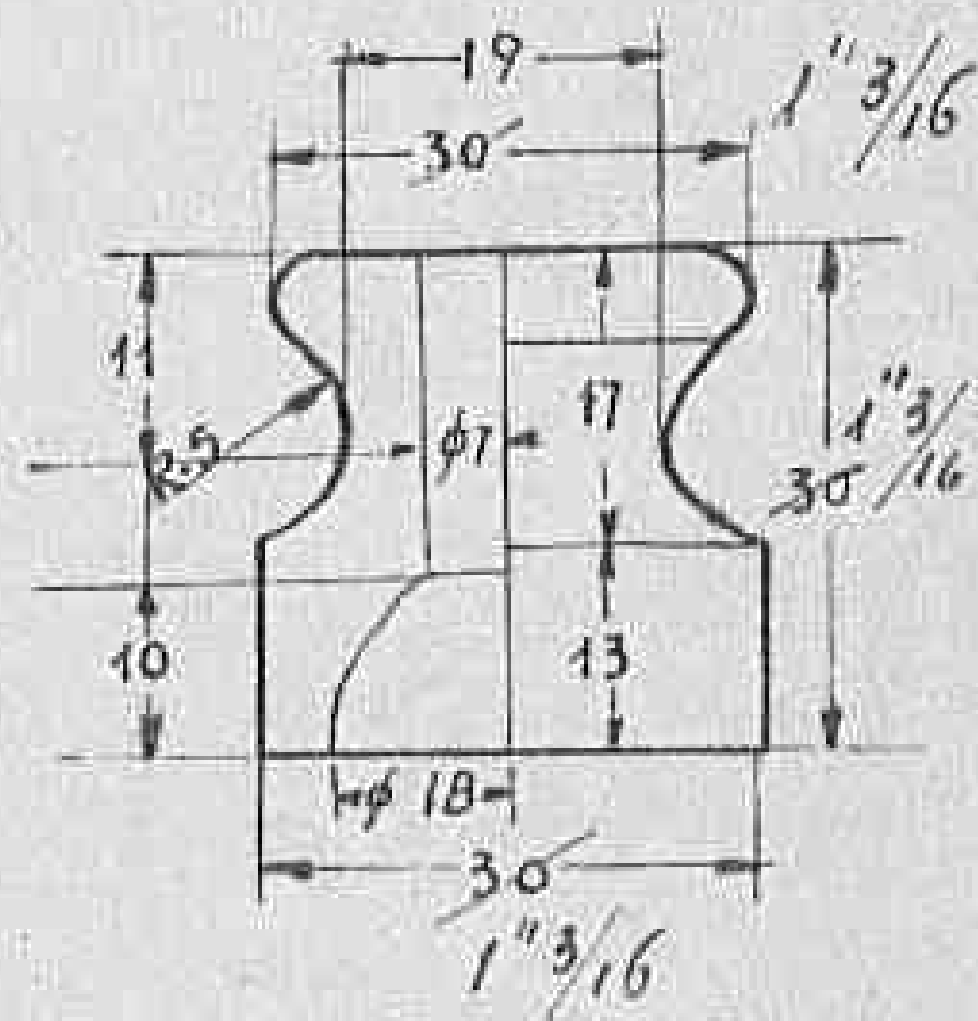
All rev

Isolatori per linea a B.T.

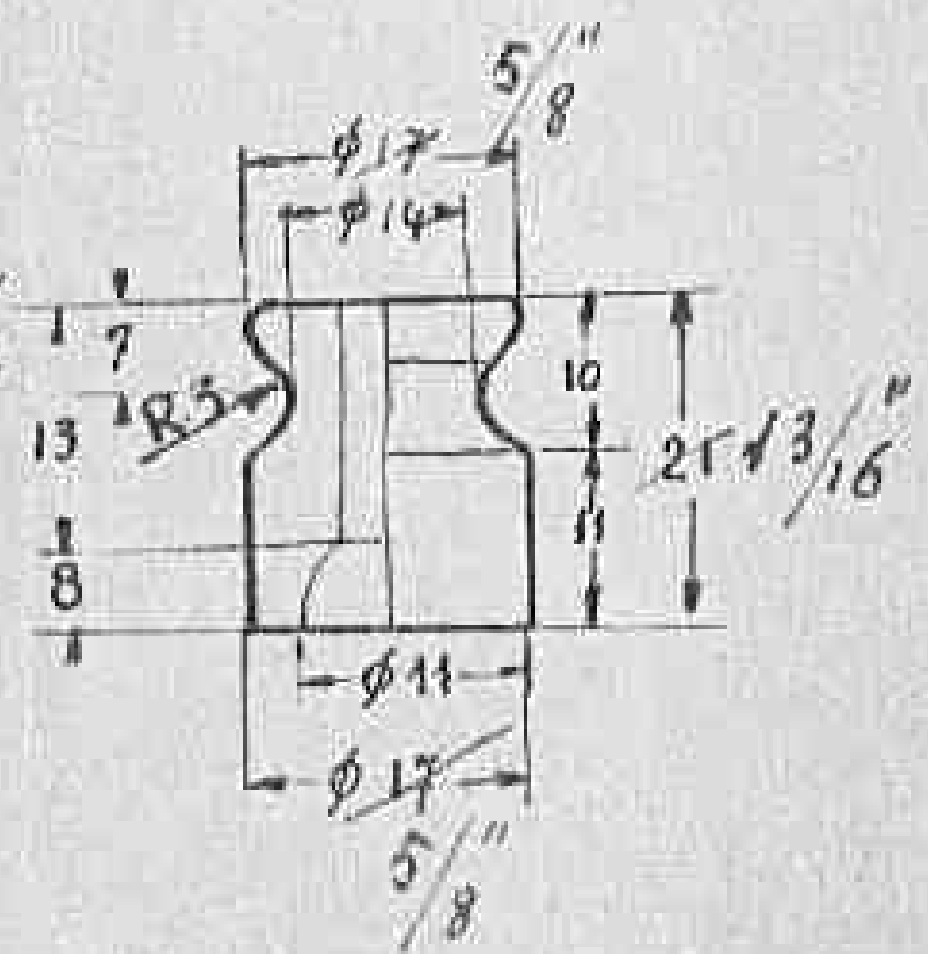
K1



K2



K3



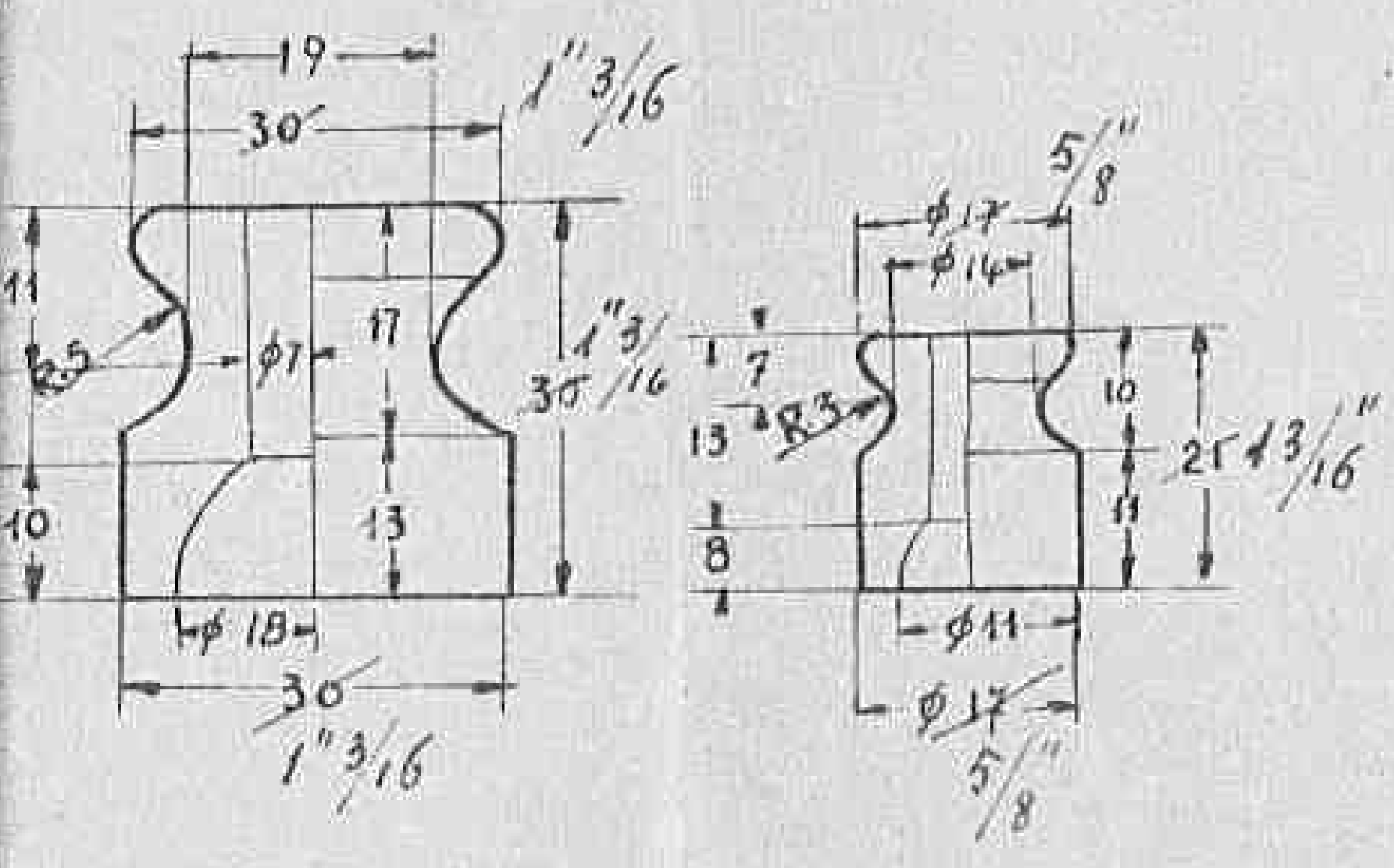
0382

APP. K

per line a B.T.

K2

K3



Reqn AC-ENG-87-45
Drawing No 12
(See Item 65)

0 3 8 3 |

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

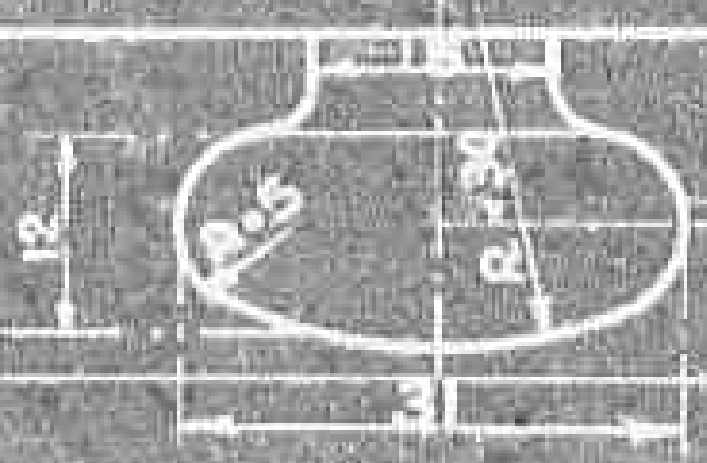
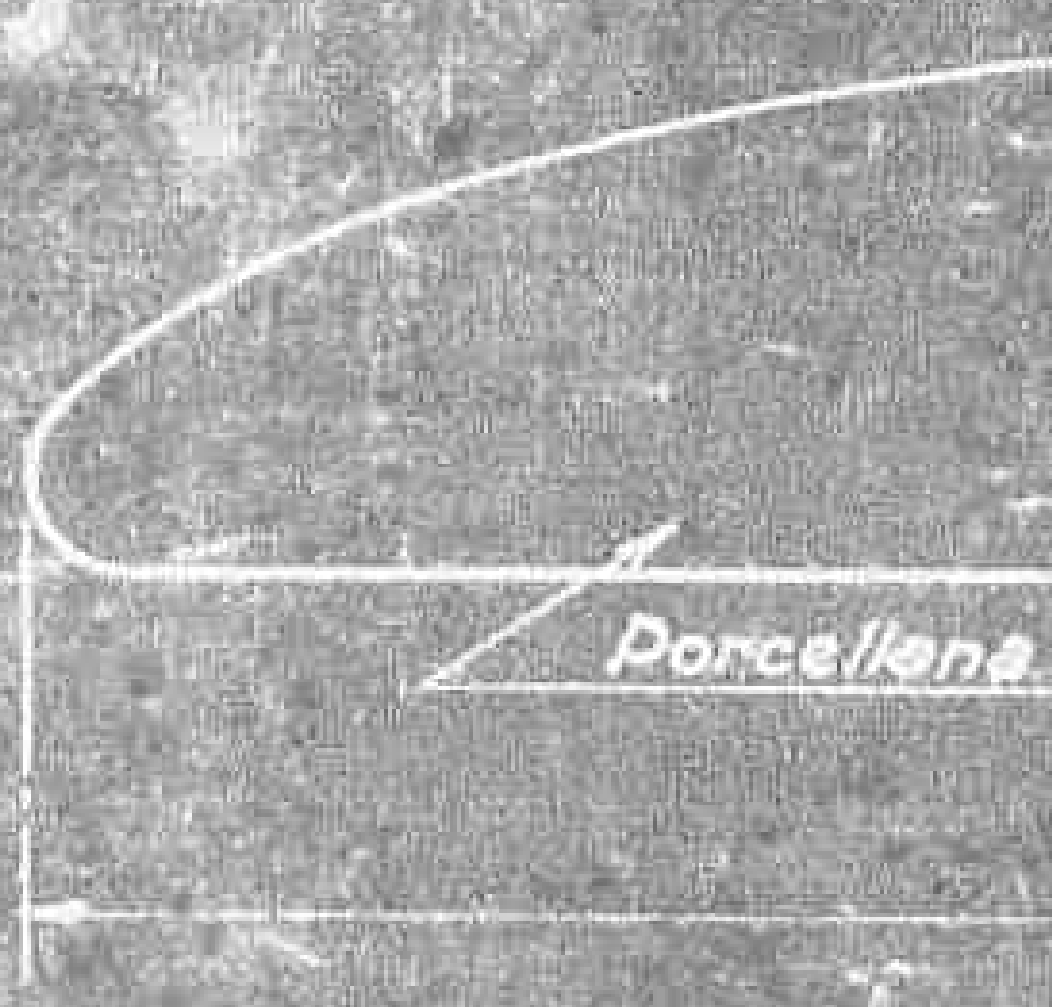
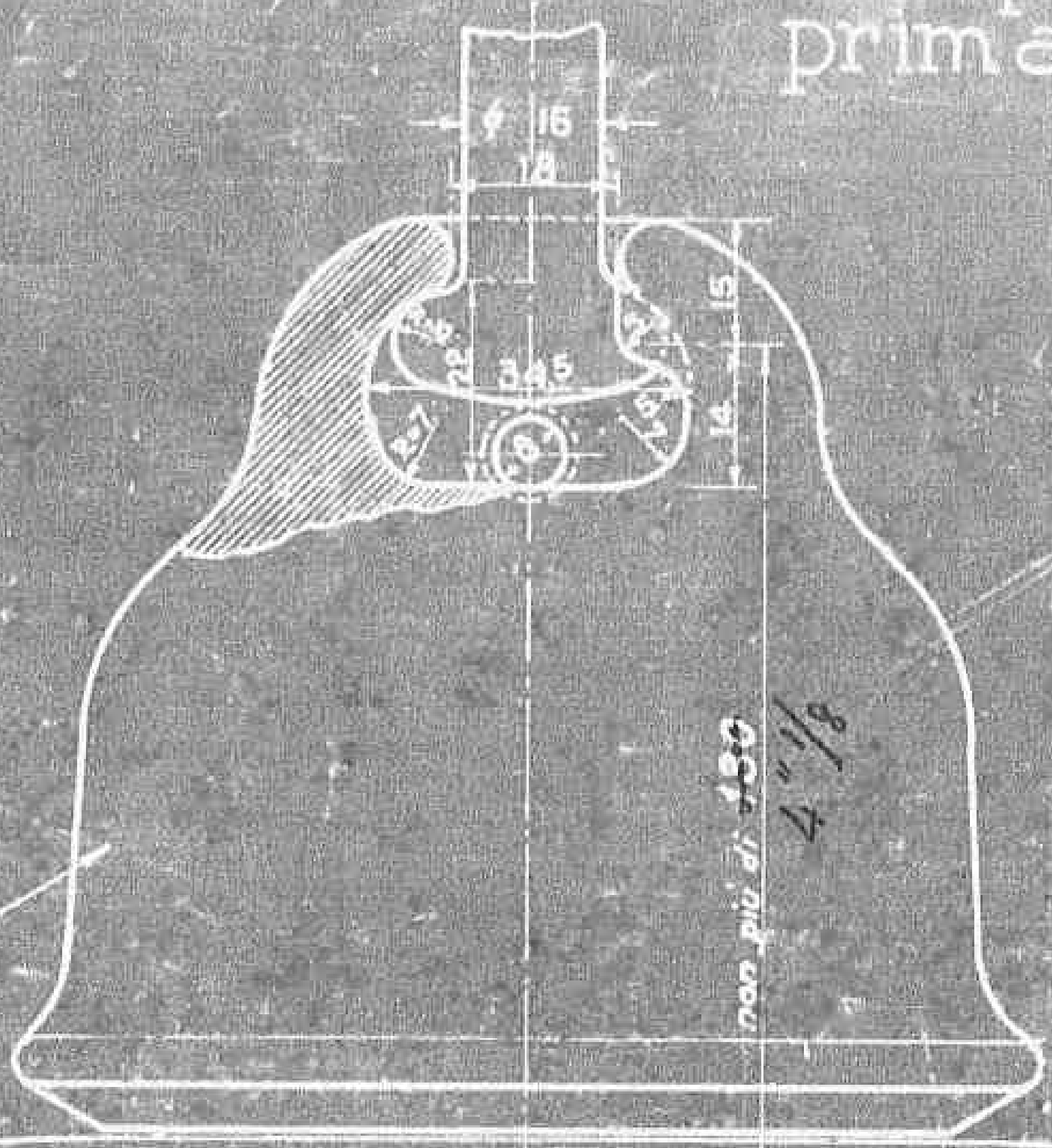
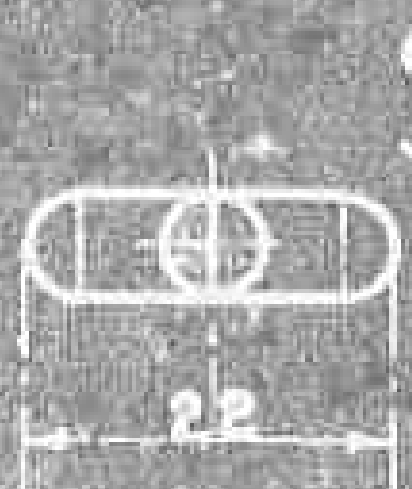
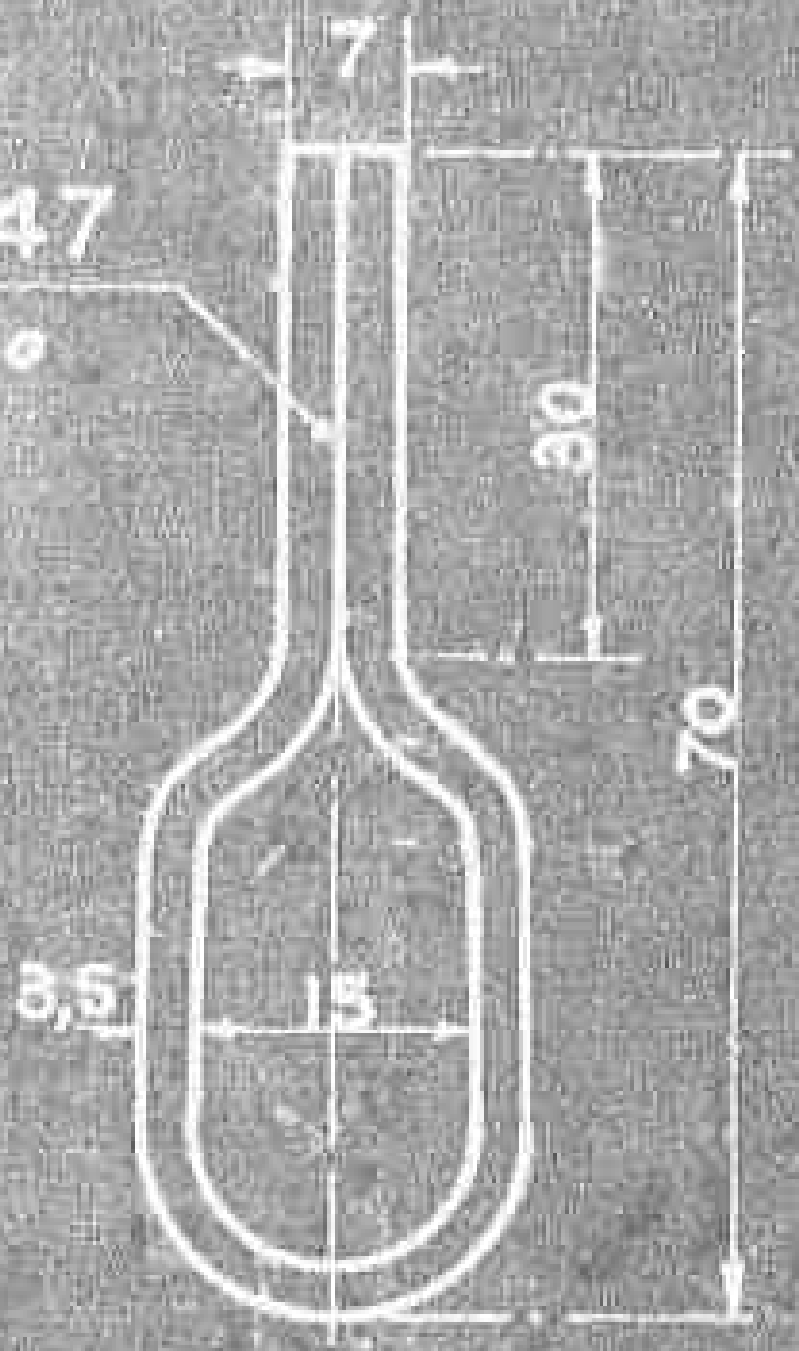
E. 2956 c.d.

Isolatore sospeso a cappa e perno primaria

ALL.

DATI CARATTERISTICI

- Arco a pecco
- Arco sotto pioggia (A.E.I.)
- Perforazione in olio non
- Carico di rottura non
- Carico critico (A.E.I.) non



9 7/8 250 + 255 10 1/16

N.B. Gli attacchi delle parti metalliche dovranno conformarsi alle identiche dimensioni delle parti in modo da assicurare l'incambiabilità.

Ream AC-EM
 Drawing AC
 (See Items etc)

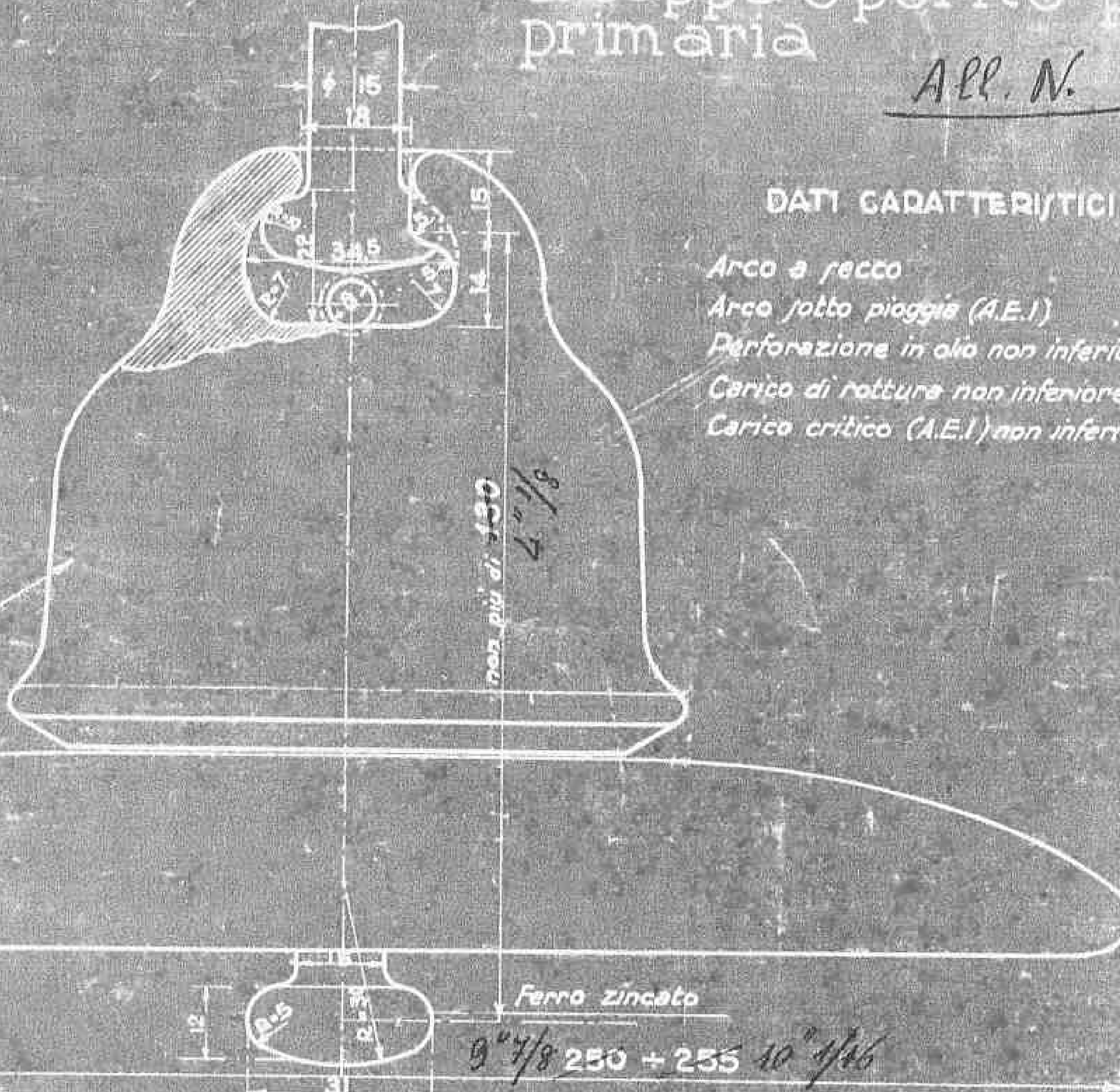
c.d

Isolatore sospeso a coppa e perno per primaria

ALL. N.

DATI CARATTERISTICI

Arco a secco	80 K.v.
Arco sotto pioggia (A.E.I.)	55
Perforazione in olio non inferiore a	120
Carico di rottura non inferiore a	5000 kg.
Carico critico (A.E.I.) non inferiore a	4500

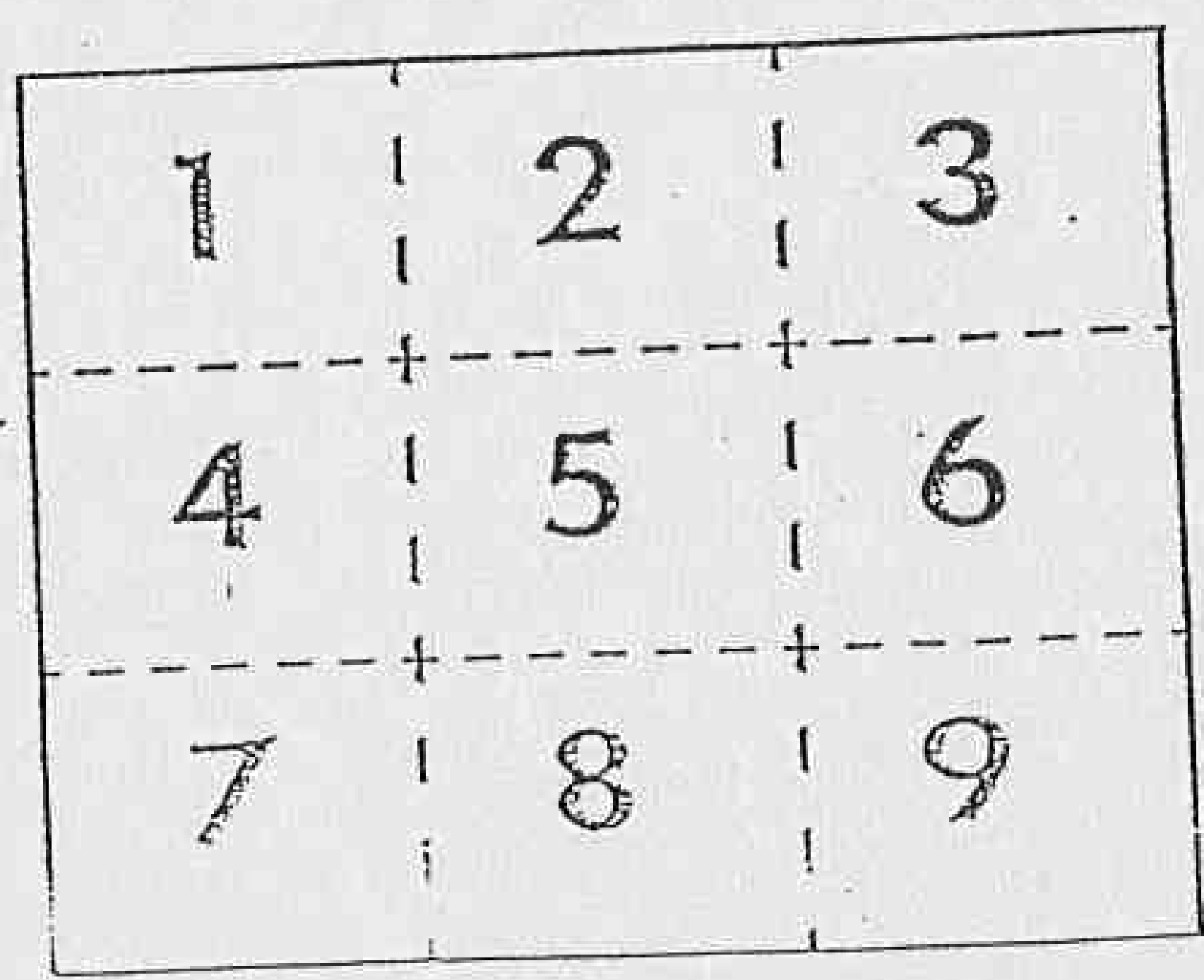
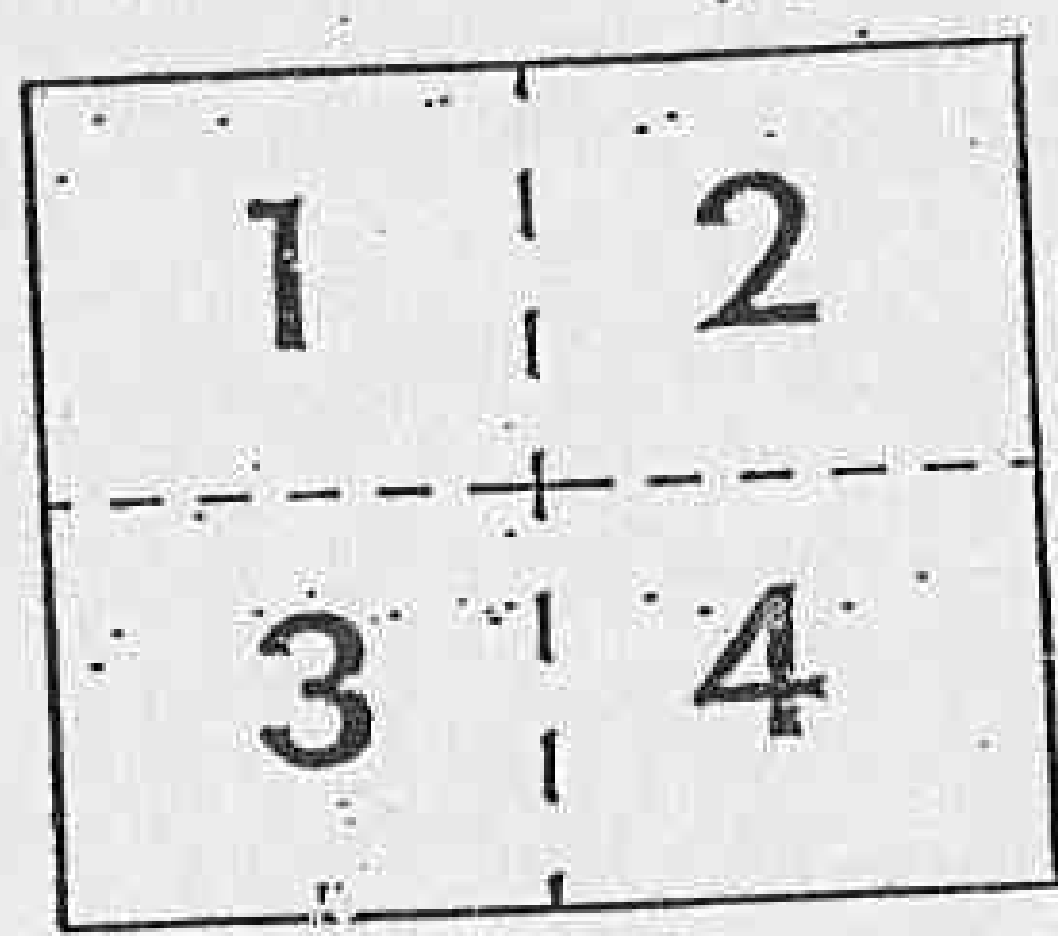
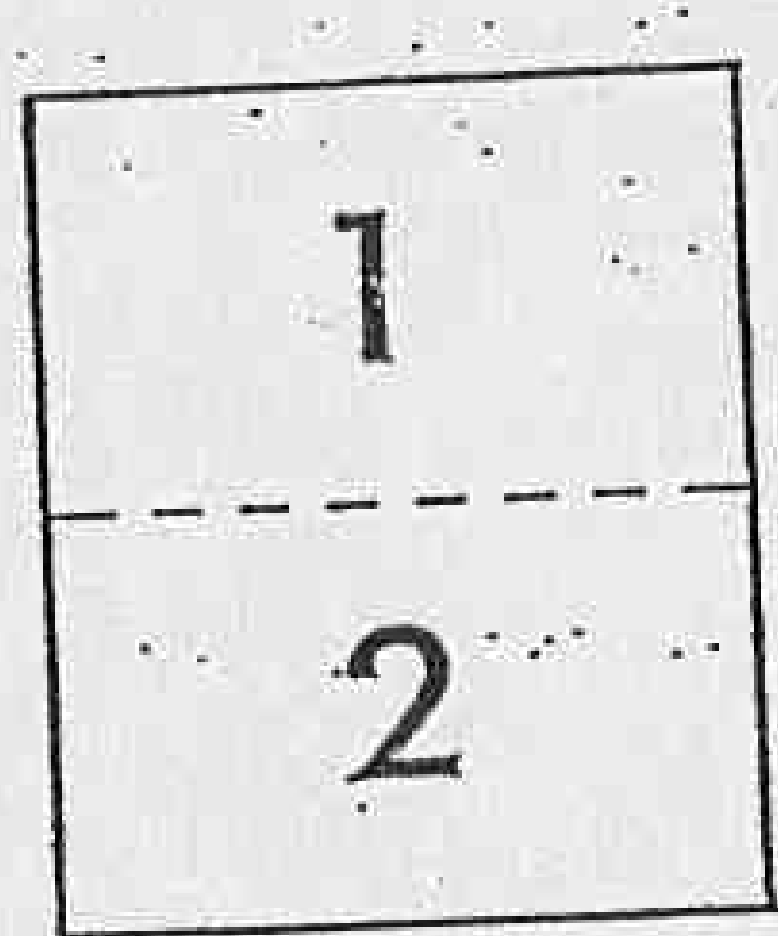


N.B. Gli attacchi delle montature metalliche dovranno conservare le identiche dimensioni del disegno in modo da assicurare l'intercambiabilità.

Reg. AC-EPG-87-15
 Dis. ing. N.
 (See Item 16)

MAPS AND CHARTS TOO LARGE TO FILM ON ONE EXPOSURE ARE FILMED CLOCKWISE BEGINNING IN THE UPPER LEFT CORNER, LEFT TO RIGHT, AND TOP TO BOTTOM.

SEE DIAGRAMS BELOW.



0386

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

E.2873 g.h.it

Allegato P

ISOLATORE I.489
E I.489a.

AL VERO

I.489 DIFFERISCE DALL'ISOLATORE I.489a PER AVERE
UNA SUPERFICIE ESTERNA DELLA CAMPANA SUPERIORE

SMALTO
BRUNO



0387

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

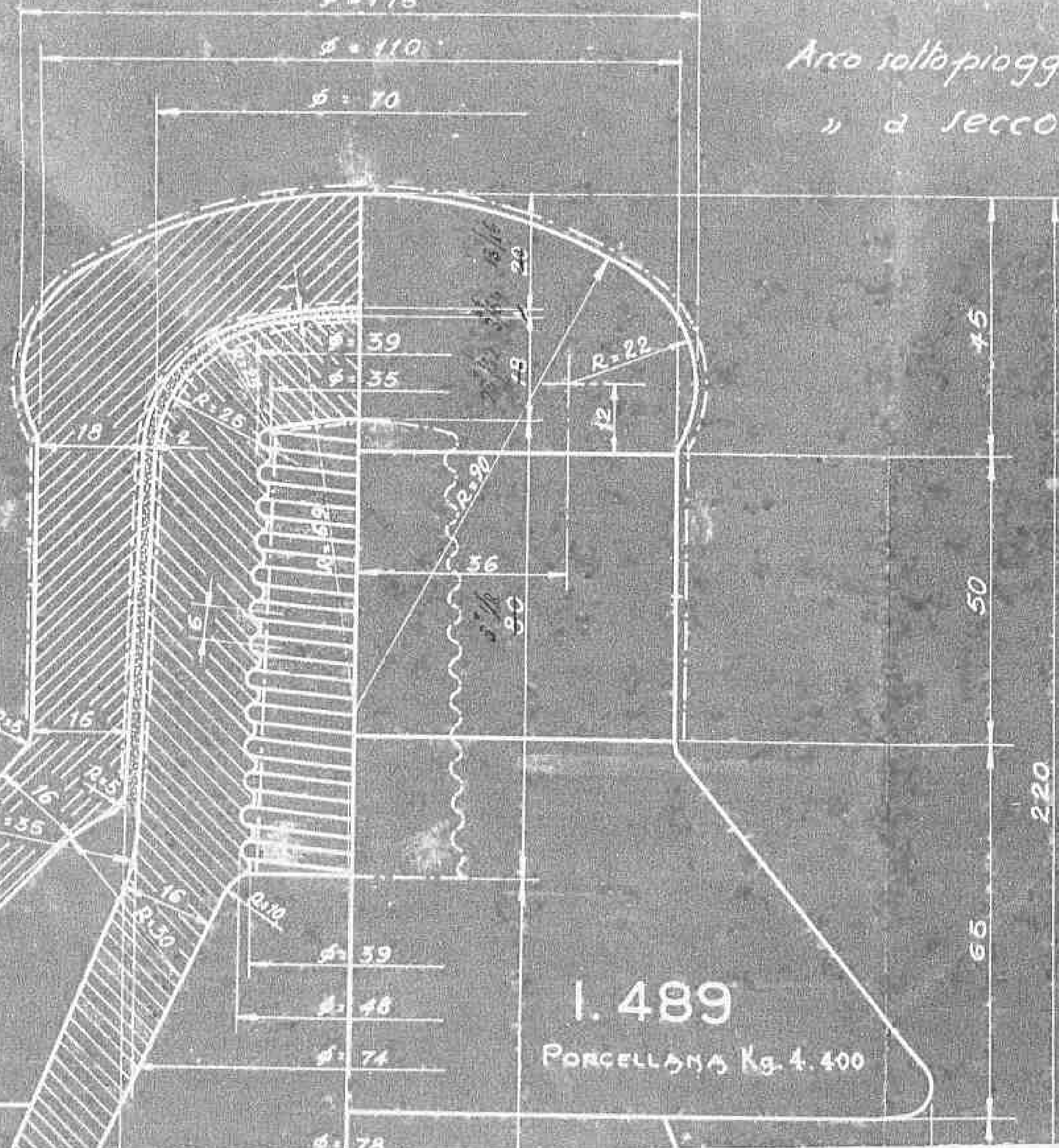
Disegno P. 1

$\phi = 115$

$\phi = 110$

$\phi = 70$

Arco sotto pioggia a 45° 60.000
" a secco 100.000



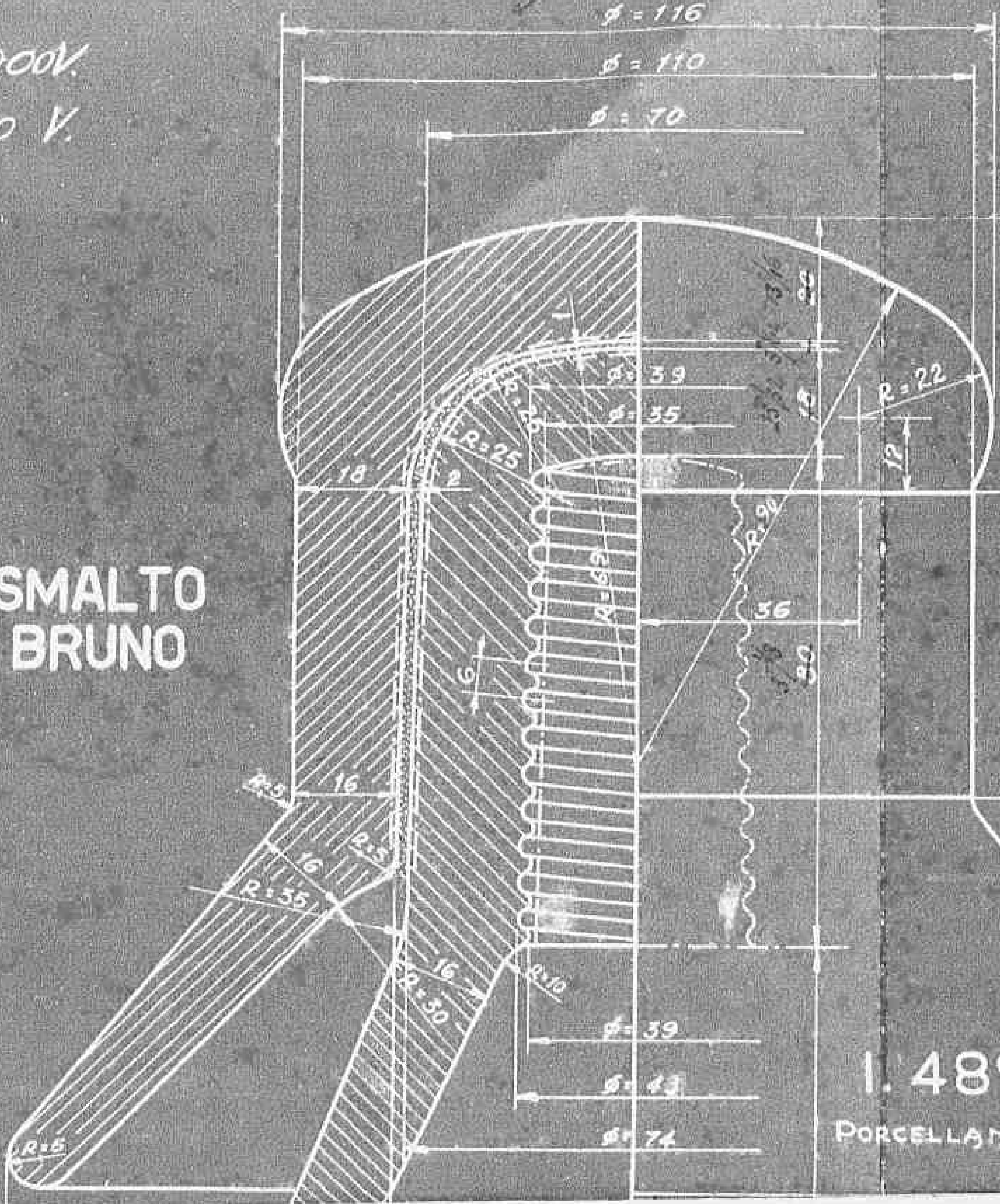
MALTO
RUNO

I. 489
PORCELLANA Kg. 4.400

Disegno P.

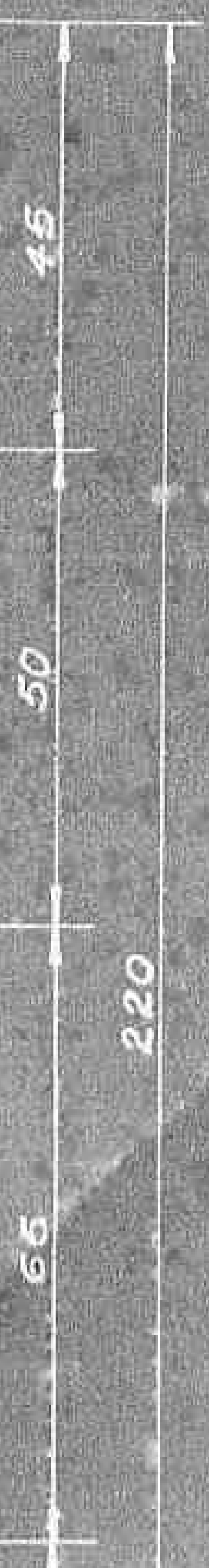
rotto pioggia a 45° 60.000 V.
a secco 100.000 V.

SMALTO
BRUNO



I. 489a.

PORCELLANA Kg. 4.400



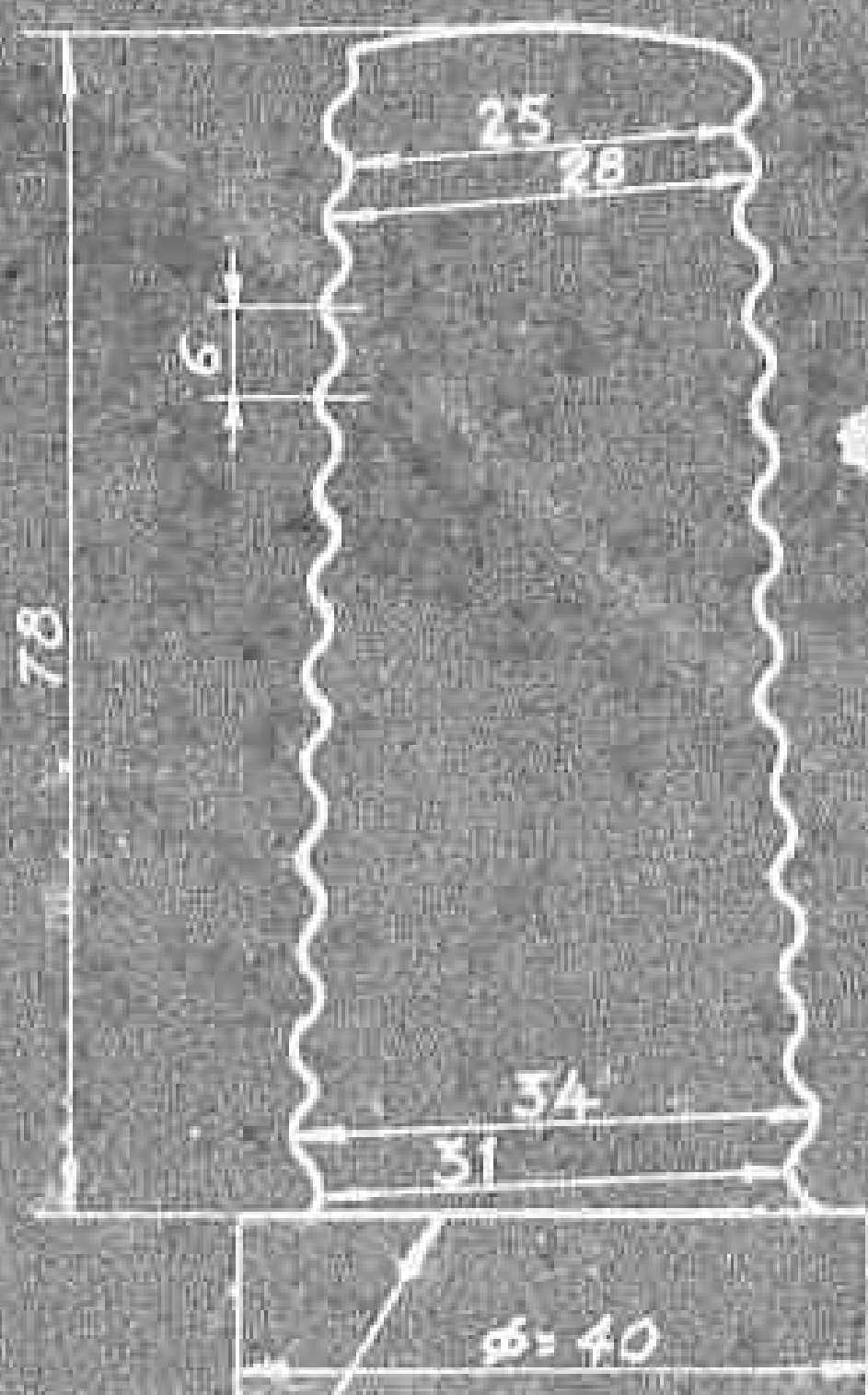
0389

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

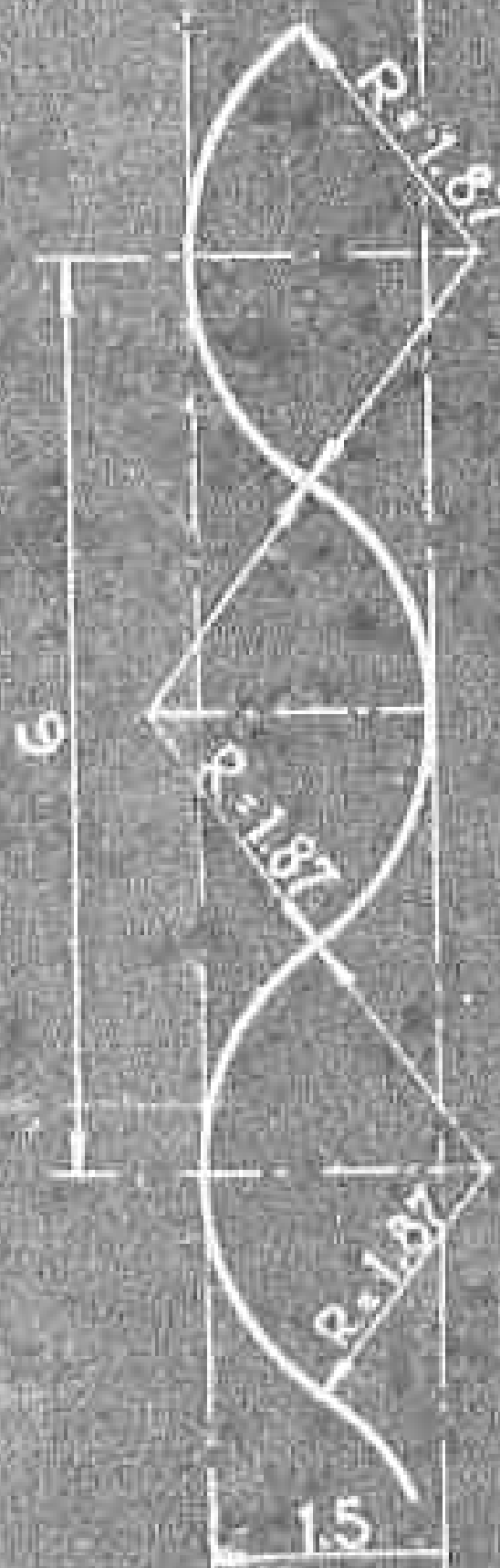
NB. PER GARANTIRE L'ADATTAMENTO DELLA CAPSULA AL PERNOTTO, SUI
DIAMETRI INTERNI DELLA CAPSULA NON SONO AMMESSE TOLLERANZE IN MENO
LA PRESENTE CAPSULA SI ADATTA ALLA FILETTATURA DEL PERNOTTO P1.1000 (DIS.E.8966)

15
50
65
220

CAPSULA DI OTTONE
Spessore mm.0,3



PARTICOLARE FILETTATURA
SCALA 10:1



P.I.699
Kg.0.035 (Dis.E.10950)

0390

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

E I.489a. -

AL VERO



809 DIFFERISCE DALL'ISOLATORE I.489a PER AVERE
LA SUPERFICIE ESTERNA DELLA CAMPANA SUPERIORE

SMALTO
BRUNO



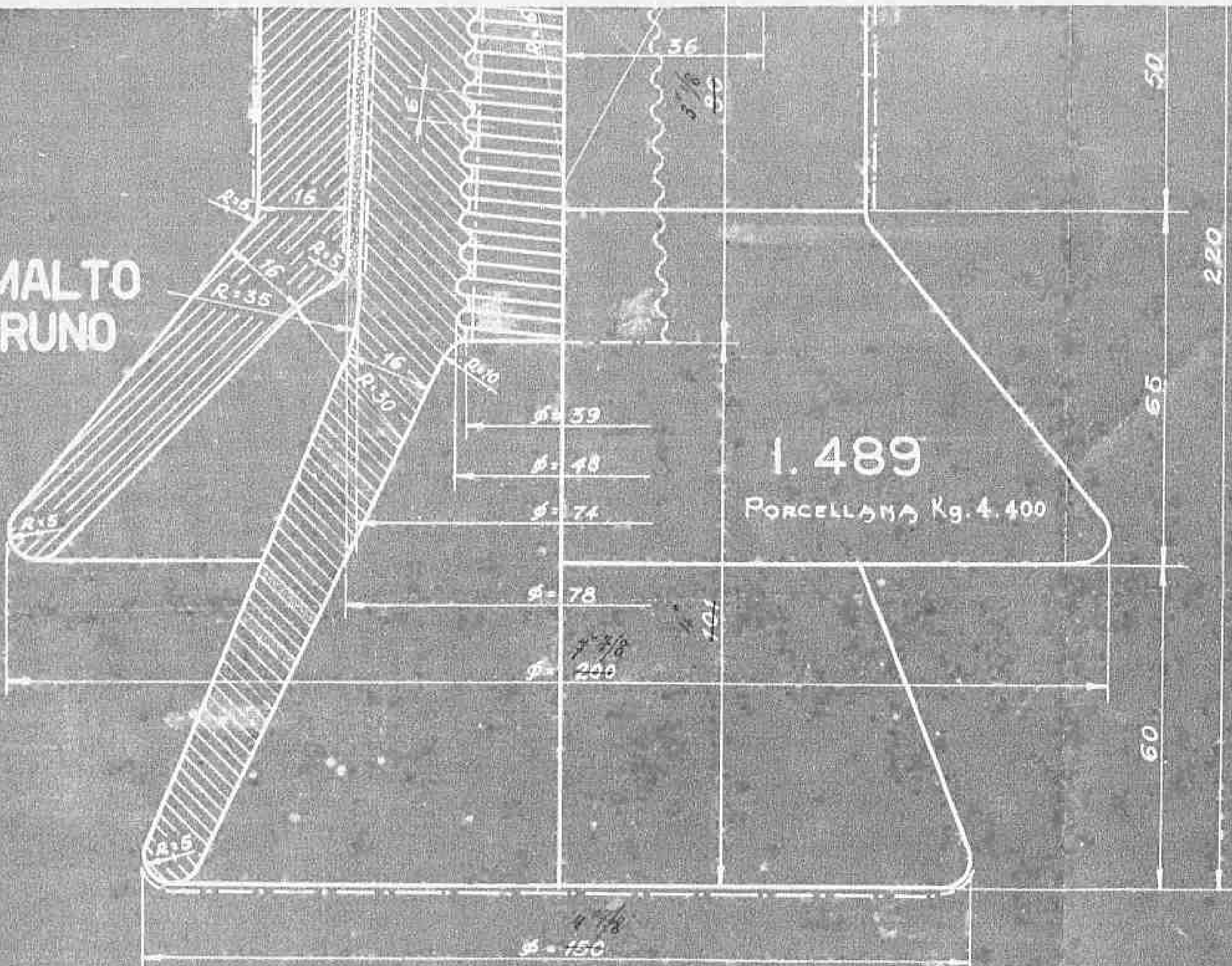
Mod. I aggiunta calibro

Posiz. Archivio	Data di compilaz.	Data delle modificazioni successive			
		8.4.956	8.4.957	22.11.77	31.11.37
C. 12 151		g.	h	l	l
ANCIANO		<i>[signature]</i>	<i>[signature]</i>		<i>[signature]</i>
CONTORE		<i>[signature]</i>	<i>[signature]</i>		<i>[signature]</i>
ES/5045		<i>[signature]</i>	<i>[signature]</i>		<i>[signature]</i>
ES/5045		<i>[signature]</i>	<i>[signature]</i>		<i>[signature]</i>

0391

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

MALTO BRUNO

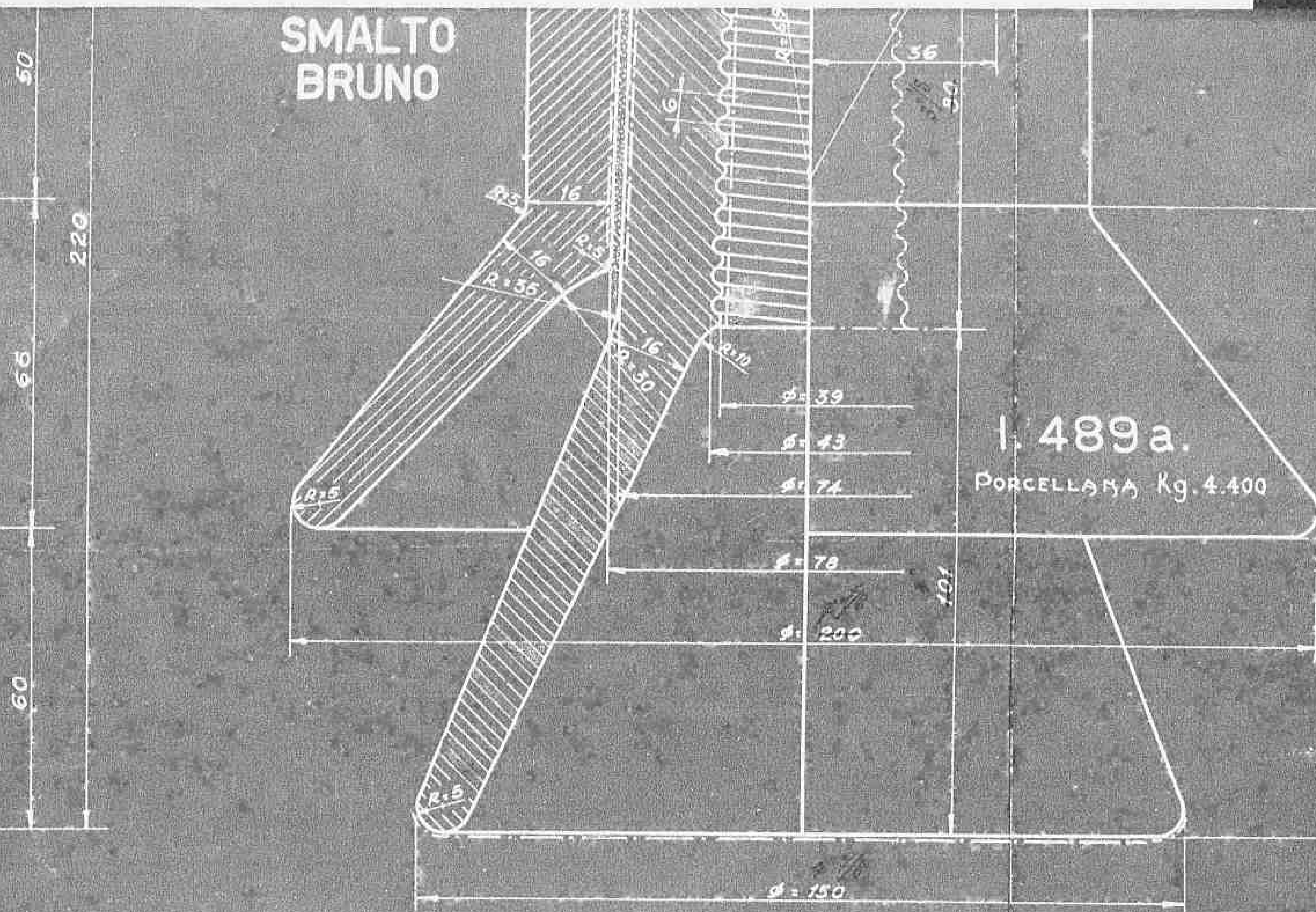


----- Superficie vetrata

0392

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

SMALTO
BRUNO



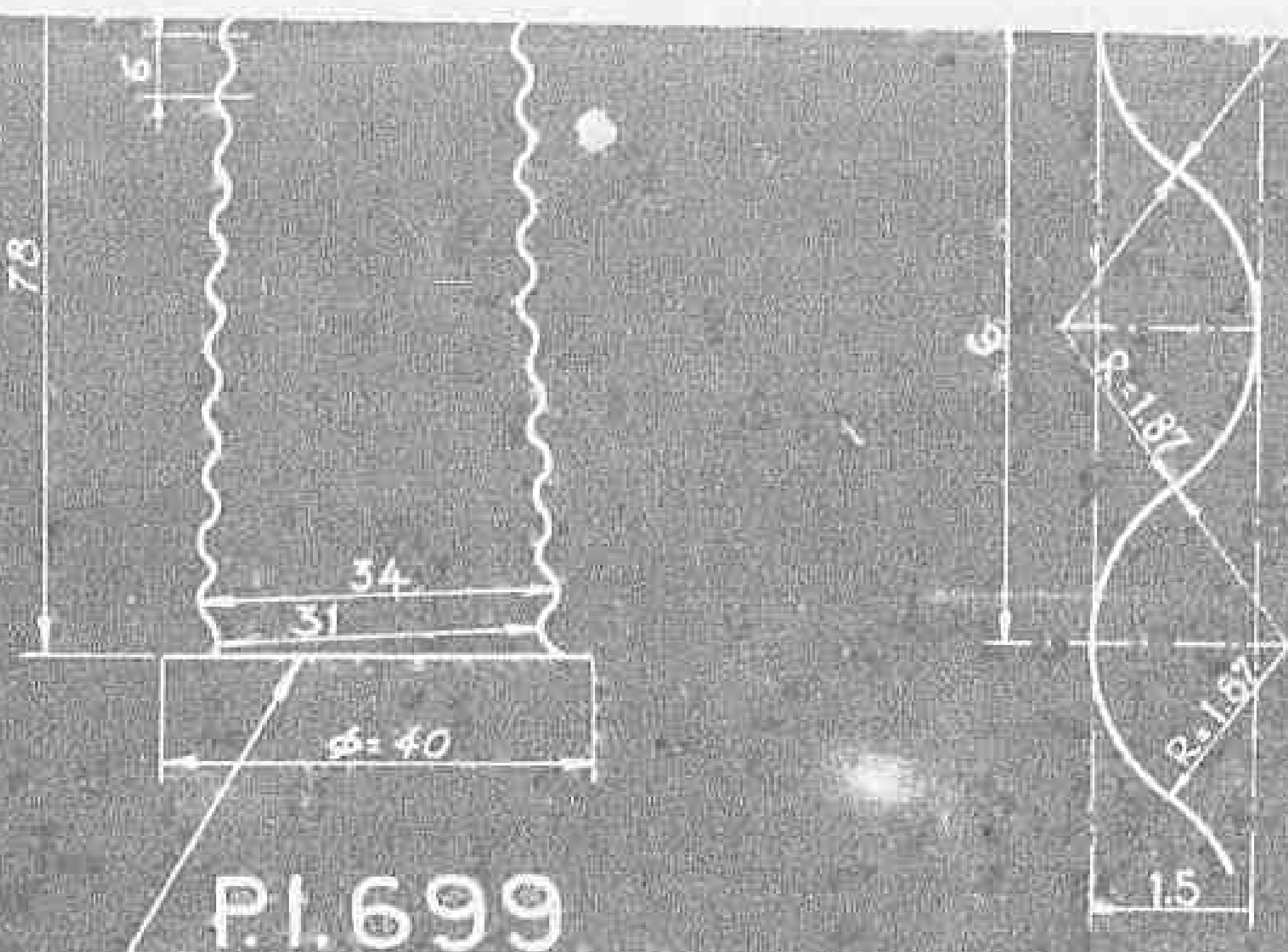
1.489a.

PORCELLANA Kg. 4.400

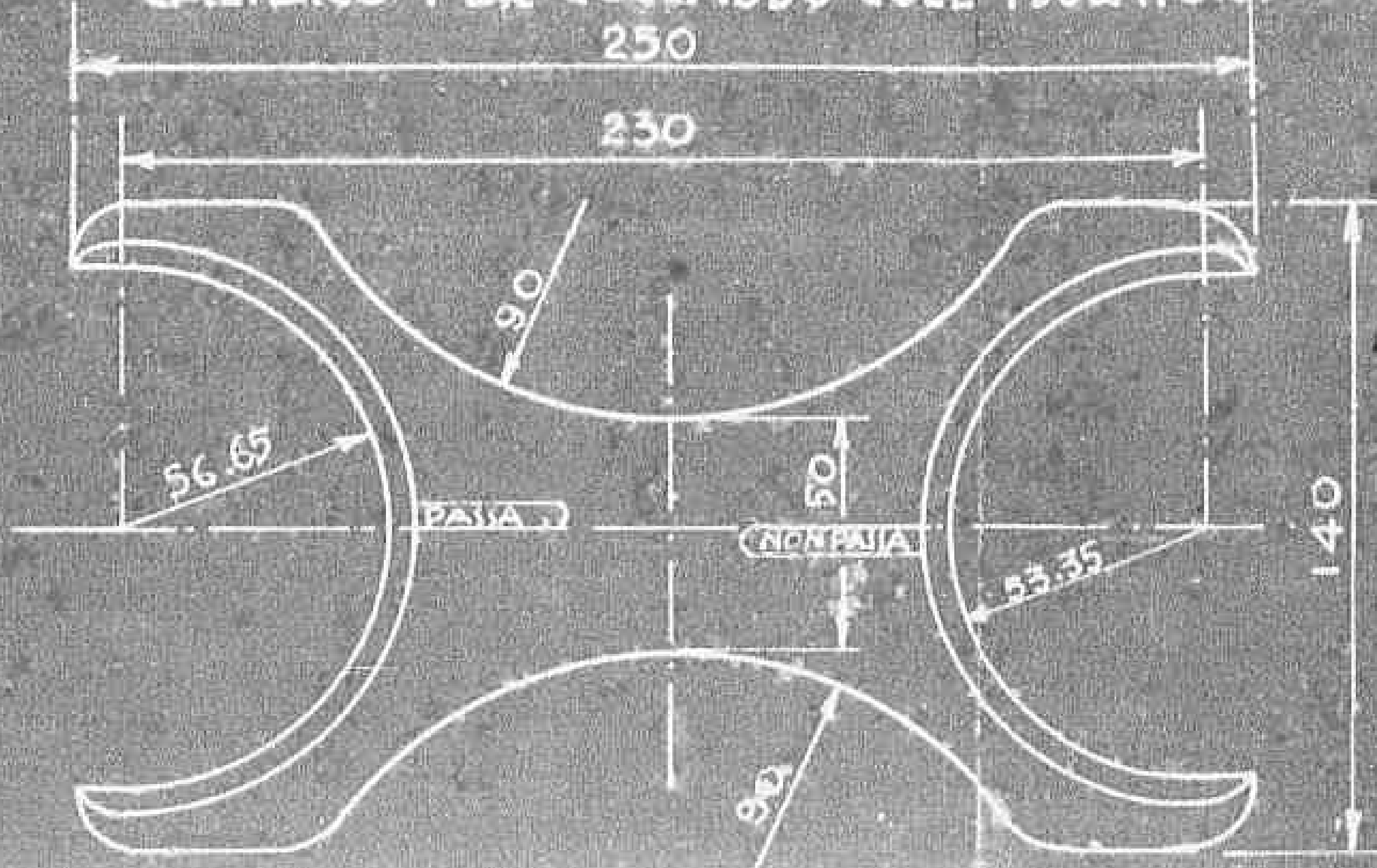
----- Superficie vetrata

0393

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



CALIBRO PER COLLAUDO GOLE ISOLATORI

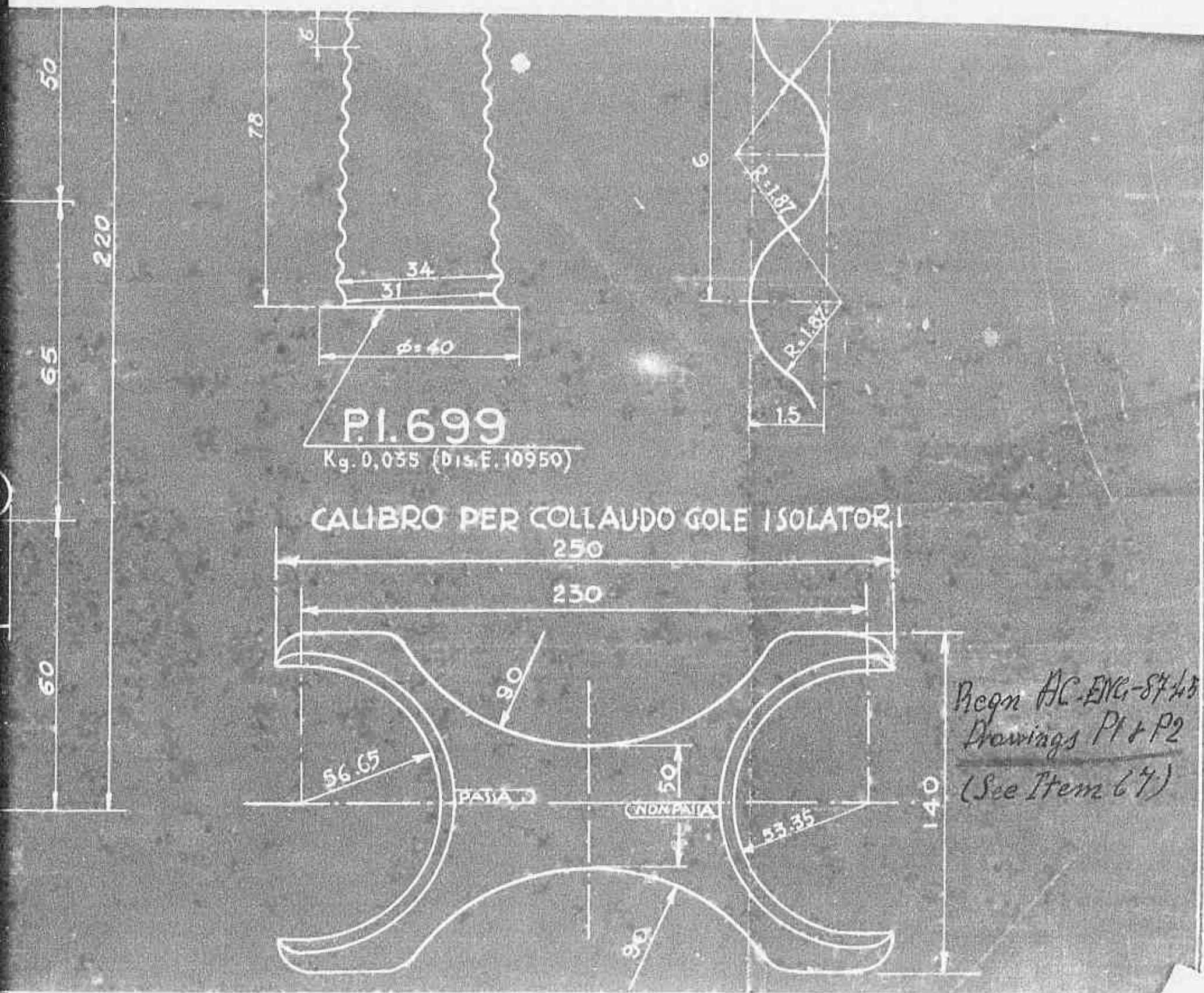


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Re
D
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0394

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



P.I. 699

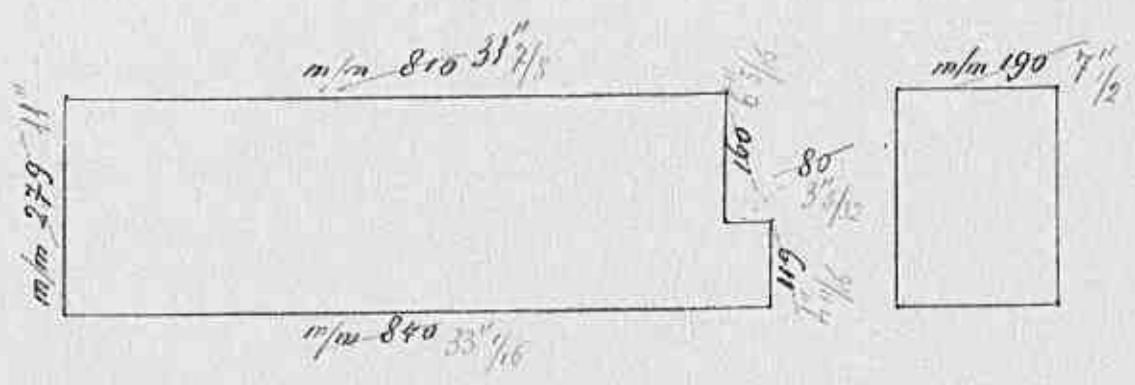
Kg. 0,035 (Dis. E. 10950)

CALIBRO PER COLLAUDO GOLE ISOLATORI

Regn AC-ENG-8743
Drawings P1 & P2
(See Item 67)

03951

BATTERIE PER LOCOMOTORI E LOCOMOTIVE
(Tipo A)



Dimensioni di ingombro

040

Regn AC-ENG-87-45
Encl II
(See Item 184)

0396

Declassified E.O. 12356 Section 3.3/NND No. 785021

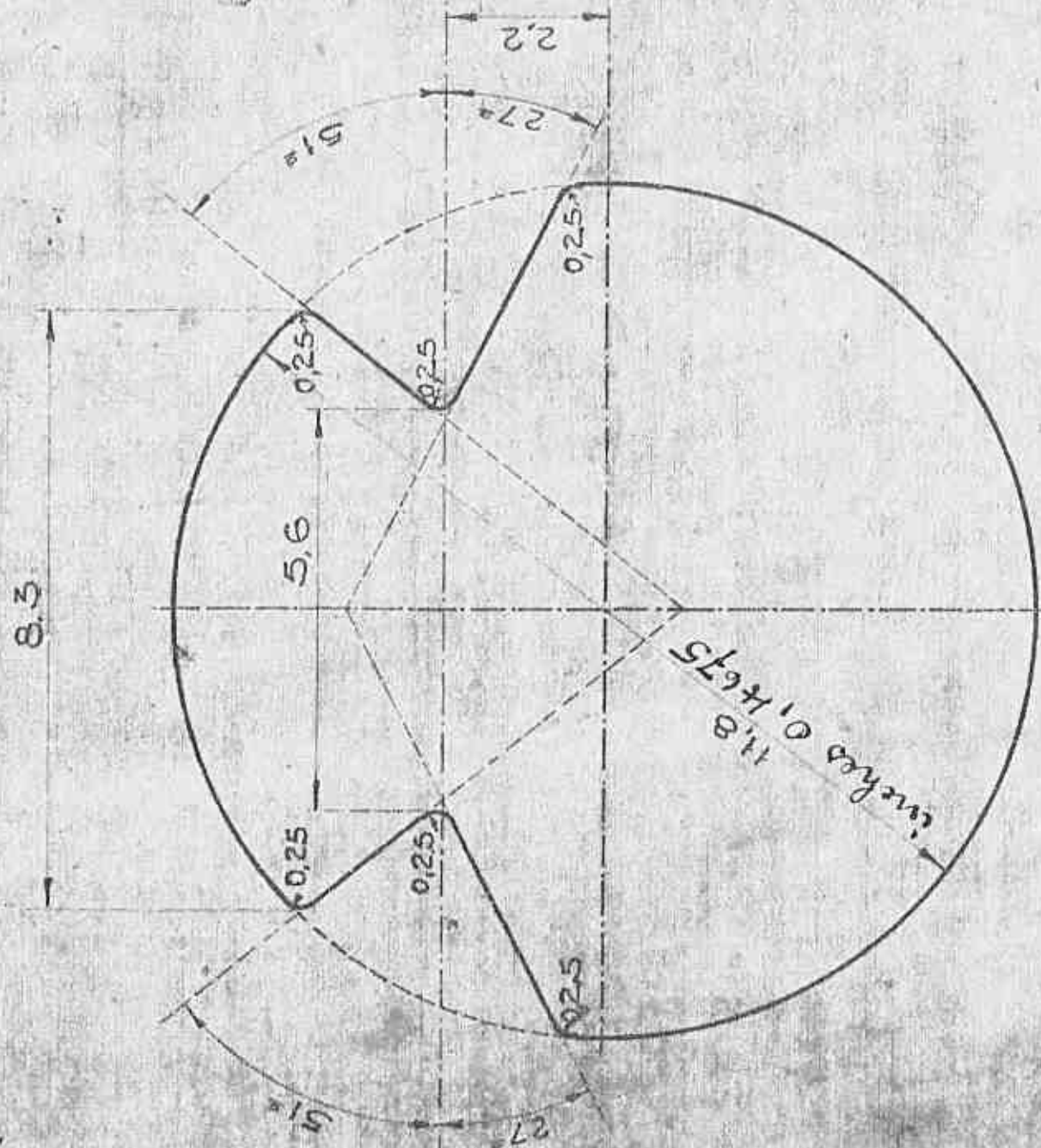
E. 4562 a.b.

SEZIONE

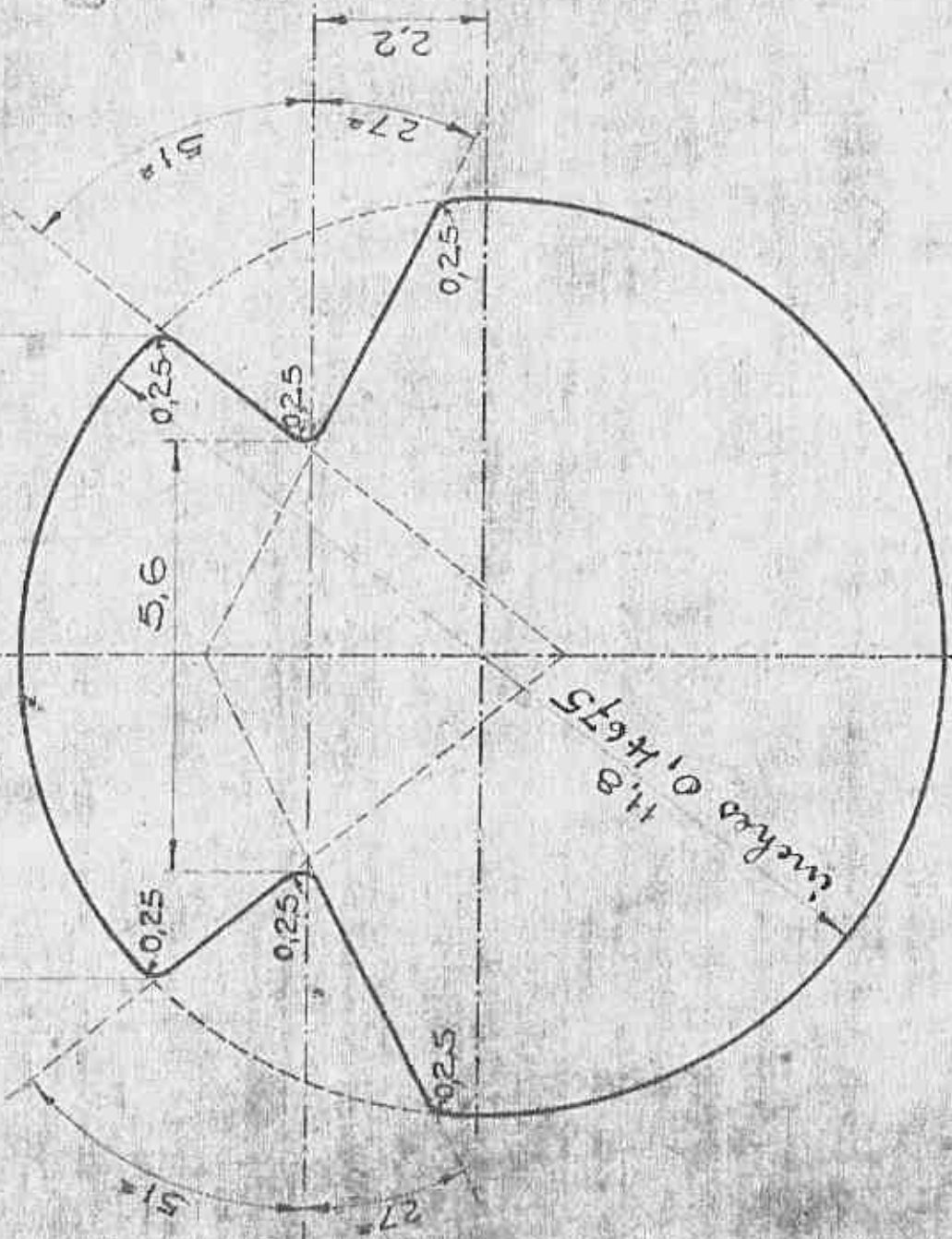
DEL FILO DI RAMME SAGOMATO

(sez. 90,8 m^2/m^2)

SCALA - 10:1



0397



TOLLERANZE.

Sulle dimensioni cinque centesimi di $\frac{1}{m}$.
in più e nulla in meno.

Regn AC-ENG-87-45

Drawing R

(See Item 82)

0 3 9 8 |