

MORE
Efficient



RECTIFICATION

by Ecwelite

Ecwelite

More Efficient

The *Ecwelite* is the most efficient cinema arc rectification equipment yet produced.

Of the mercury pool type it employs new and exclusive features.

Therein lies the ability:

To convert the highest possible proportion of incoming mains alternating current (every unit of which must be paid for) into a smooth and constant direct current supply to the arc points.

The *Ecwelite* design with the robust and exacting specification to which it is built results in:

Extreme fitness for purpose.

Outstanding reliability.

Capacity to continue its function at peak performance without impairment from ageing effects throughout a long life and with a minimum of attention.

Rectification

Ecwelite



The ELECTRIC CONSTRUCTION Company Limited (E.C.C.) who manufacture the *Ecwelite* at their Wolverhampton Works, have had long experience in the development and manufacture of conversion equipment of all kinds, including rotary convertors, motor generators and rectifiers of both glass-bulb and metal type.

E.C.C. manufacture mercury-arc rectifiers for such eminent bodies as *London Passenger Transport Board*, *British Broadcasting Corporation*, *General Post Office*, and many other important undertakings here and abroad.

Ecwelite

The *Ecwelite* is designed to give maximum flexibility and to supply two arcs and a slide lantern or spotlight. The larger types are suitable also for theatre stage work.

The two 4-way rotary tapping switches can be used on or off load and provide 16 positions for the control of arc voltage and current.

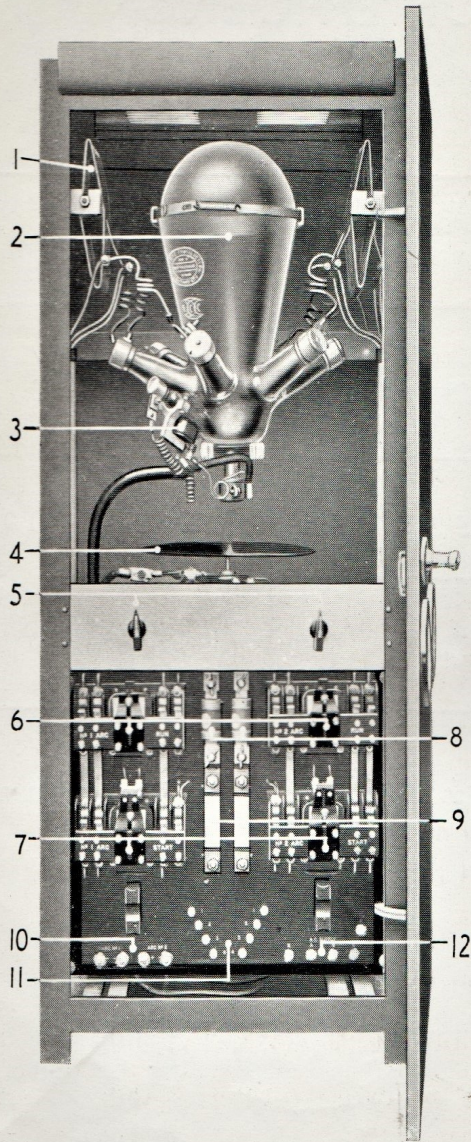
The start resistances, one in each arc circuit, enable the carbon crater to be formed at a reduced arc voltage and current, but are out of circuit during normal running so avoiding current wastage.

The switching of the current to the arcs is handled only by contactors of heavy duty type accessibly mounted in the rectifier cabinet. They require the minimum of maintenance.

Particular attention is drawn to the use of these contactors as opposed to switches. Contactors are considerably more expensive, but they are much more reliable and lasting.

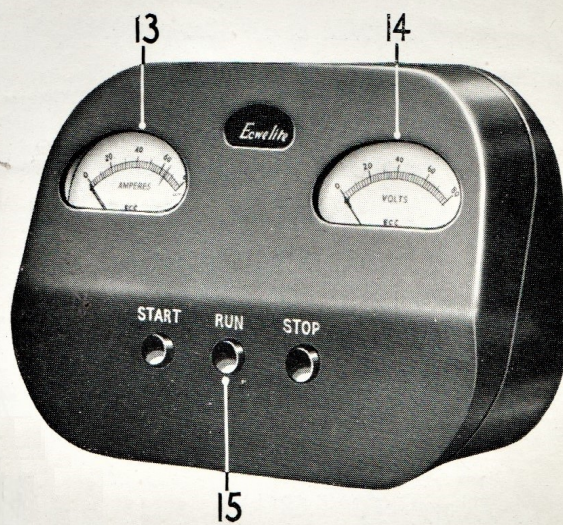
The contactor control boxes are mounted within arm's length of each projector: Each control box is equipped with start, run, and stop push buttons for arc control, and its own voltmeter and ammeter for immediate check that carbons are trimmed to the most efficient and economical setting.

The long life and inbred quality of the E.C.C. mercury-arc bulbs are such that many continue to give efficient and trouble free service after fifteen years continuous use involving many thousands of hours actual duty.



Front view with door open

1. Running in resistances.
2. Mercury-arc rectifier bulb.
3. Starting coil assembly.
4. Air circulating fan.
5. Coarse and fine tap switches.
6. Normal run position contactors.
7. Start position contactors.
8. D.C. fuses in each arc circuit.
9. D.C. shunt for each ammeter.
10. D.C. terminals for each arc.
11. Terminals for auxiliary cables control boxes to rectifier.
12. A.C. supply terminals.
13. Ammeter.
14. Voltmeter
15. "Start" and "run" and "stop" push buttons.



Control Box

THE NEW STANDARD OF EFFICIENCY AND ECONOMY

Type of Conversion Equipment	Units consumed per hour on H.I. 65 amp. arc.	P.F.	K.V.A.	Units consumed per 60 hour week	Units consumed per year
A. 3-phase mercury-arc rectifier with ballast resistance or a motor generator set.	9.12	.83	11.0	546	28400
B. Single phase mercury-arc rec- tifier choke controlled.	4.55	.5	9.1	273	14200
Ecwelite	2.50 4.02	.71	5.68	241	12520

CURRENT CHARGES FOR ONE YEAR (60 hour week) at say, £4 10s. 0d. per kVA. maximum demand and 1d. per kWh. (unit).

A. 11.0 kVA. at £4 10s. per kVA.	=	£49	10s.	0d.
28400 units at 1d. per unit	=	£118	6s.	8d.
Your Electricity charges per year	=	£167	16s.	8d.

B. 9.1 kVA. at £4 10s. 0d. per kVA.	=	£40	19s.	0d.
14200 units at 1d. per unit	=	£59	3s.	4d.
Your Electricity charges per year	=	£100	2s.	4d.

Ecwelite 5.68 kVA. at £4 10s. 0d. per kVA.	=	£25	11s.	3d.
12520 units at 1d. per unit	=	£52	3s.	4d.
YOUR ELECTRICITY CHARGES PER YEAR	=	£77	14s.	7d.

SPECIFICATION AND GENERAL INFORMATION

Ecwelite HIGH EFFICIENCY RECTIFIER

(PATENTS APPLIED FOR)

This rectifier is of the single bulb type and requires no ballast resistances. It is built to carry the dual arc load for a prolonged changeover.

INPUT. Standard 380—440 volts, 3-phase, 50 cycles.

OUTPUT. TYPE A. To supply two 45/65 ampere H.I. arcs.

TYPE B. To supply two 35/50 ampere H.I. arcs.

TYPE D. To supply two 60/75 ampere H.I. arcs.

A special type is available to supply two 20/35 ampere L.I. arcs (hand or auto feed). Single phase equipments can be supplied to special order.

Voltage adjustable according to carbons and lamps used.

The equipment (which should be located as near as possible to the Projection Room) is housed in a grey finished sheet steel cubicle with front access door.

Cubicle Dimensions		Width	Depth	Height
Types "A" and "B"	...	25-ins.	29-ins.	60-ins.
Type "D"	...	34-ins.	26-ins.	72-ins.

Operation.

Operation is extremely simple. No. 1 control box "start" button energises one main contactor. No. 1 arc is then struck and the carbon crater formed at running in current. Pressing No. 1 "run" button closes the second contactor, when arc will run at normal current. No. 2 control box operates No. 2 arc in a similar way, and the two arcs can be operated together during the change-over period without affecting each other.

Maintenance.

The design and manufacturing standard of the *Ecwelite* reduce maintenance to a minimum. Periodical attention to the main contactors and starting relay is all that is necessary.

The rectifier bulb has no moving parts, and will take very considerable overload without harm. Its high efficiency gives constant output without impairment of performance throughout its long life.

Ecwelite

manufactured by

The Electric Construction Company Limited

at Wolverhampton, and designed by
them in collaboration with Western
Electric Company Limited, the sole
distributors in Great Britain

*and there is
Western Electric
Service
behind it*

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