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IHR - 116

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6 kv Capacitor Charging Supply

D. M. Miller

Introduction

In order to perform the various experiments with a bubble chamber, a high intensity flash tube is used. This report briefly describes the power supplies designed and constructed to power these lamps.

Specifications

1. Charge 66 mfd to 6 kv
2. .8 sec. Reprate
3. .2 sec. time constant
4. Similar to IH-47-1-3

Facsimile Price \$ 1.10
Microfilm Price \$.80

Available from the
Office of Technical Services
Department of Commerce
Washington 25, D. C.

MASTER

Description

The power supply is constructed in two sections; the smaller containing the power and control components and the larger the H.V. supply, crow bar relay and charging resistors.

The circuit is a simple 3 ϕ full wave rectifier using silicon rectifiers with a large resistor in series with the reversible output. A vacuum relay crow bars the output and shuts off the supply if any of the interlocks are opened or if the "OFF" button is depressed. A "Powerstat" sets the metered output which is variable from 0 to approximately 7 kv.

The control section is a conventional relay operated circuit with interlock switches inserted in series with the "OFF" button. Provision is made for the use of a remote standard push button station and a fused output is provided to operate external control equipment.

The complete schematic IH-111 follows.

These units were constructed for Account 1407-20 as authorized by ILR 113813.

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H.V. CHASSIS

TOLERANCE - DECIMAL $\pm .005$.		FRACTIONAL $\pm 1/64$.		ANGULAR $\pm 30'$		BREAK SHARP EDGES .005		.015	
ITEM	NO.	USED ON DWG. NO.		NO. REQD.		BROOKHAVEN NATIONAL LABORATORY ASSOCIATED UNIVERSITIES, INC. UPTON, N. Y. GKV CAPACITOR CHARGING SUPPLY SCHEMATIC I H 111 - 1 - 3 A			
CHECKED BY	I L R NO.	ACCOUNT NO.	W. O. NUMBER						
MATERIAL SPEC.		SIZE	WEIGHT	FINISH					
DATE	DRAWN BY	CHECKED BY	APPROVED BY	SCALE					
DRAWING NUMBER					REV.				