

SUBJECT SEALING OF ANODE LEAD
--BUTTON CONTACT

SUPERSEDED DATE

Initially used for sealing such 2nd anode assemblies as FM2455B into cathode ray bulbs.

1. EQUIPMENT:

1.

- a. Bulb rest consisting of a face stop and neck slot holding bulb in a slightly inclined position.
- b. Spindle with two rotating intersecting fires, which may be raised and lowered by foot pedal.
- c. Contact-sealing table with four rotating spindles (2 for preheating and 2 for annealing) toward each of which a blast burner is directed. (At present, only one preheating position is used.)
- d. Rubber stopper to fit neck of bulb with tubing and rubber hose attached to a low pressure air line.
- e. Clearance gage for height of button (1/8"), carbon paddle, tongs.

2. PROCEDURE:

Before using a bulb, inspect face for scratches and blemishes. If any are found, bulb must not be used without proper authorization.

- a. To preheat, place bulb upright on revolving spindle 5" from Fischer blast burner of contact-sealing table. A medium soft 7" flame plays on part of bulb where button contact is to be sealed.
- b. Remove preheated bulb (replacing with another for preheating) and insert into neck the rubber stopper and hose connection to low pressure air line.
- c. Place preheated bulb in holding jig which locates position for button contact under gas flame.
- d. Heat the point on bulb wall (fires intersecting at this point) where button is to be sealed until glass is pliable. With air jet, blow a bubble and break the glass. (During the blowing, bulb is protected from flames by a carbon paddle.)
- e. To firepolish the rim of the hole, the rotating burners are lowered by foot control pedal so that flames strike rim of hole.
- f. Insert button and heat to redness, whereupon lower flames to heat surrounding glass. Button will settle into molten glass; therefore it is necessary to maintain sufficient air pressure to keep button level with bulb wall.
- g. The heated area is sucked in and blown out several times to insure a better seal. The seal height is adjusted by blowing out with air until it meets the requirements of clearance gage..
- h. Bulb is placed on another spindle and annealed. After partial annealing (time elapse being that required to seal the next bulb) 1st bulb is placed on a 3rd spindle where it receives further annealing treatment.
- i. Partially annealed bulb is placed on asbestos lined tray and then conventional bulb storage racks for transit to oven for annealing to minimize strain. Bulbs remain in oven for 20 minutes during which temperature is reduced from 440° to 280°C.