SUBJECT TEST FOR GAS CONTROL OF TUBE ELEMENTS AND GETTERS

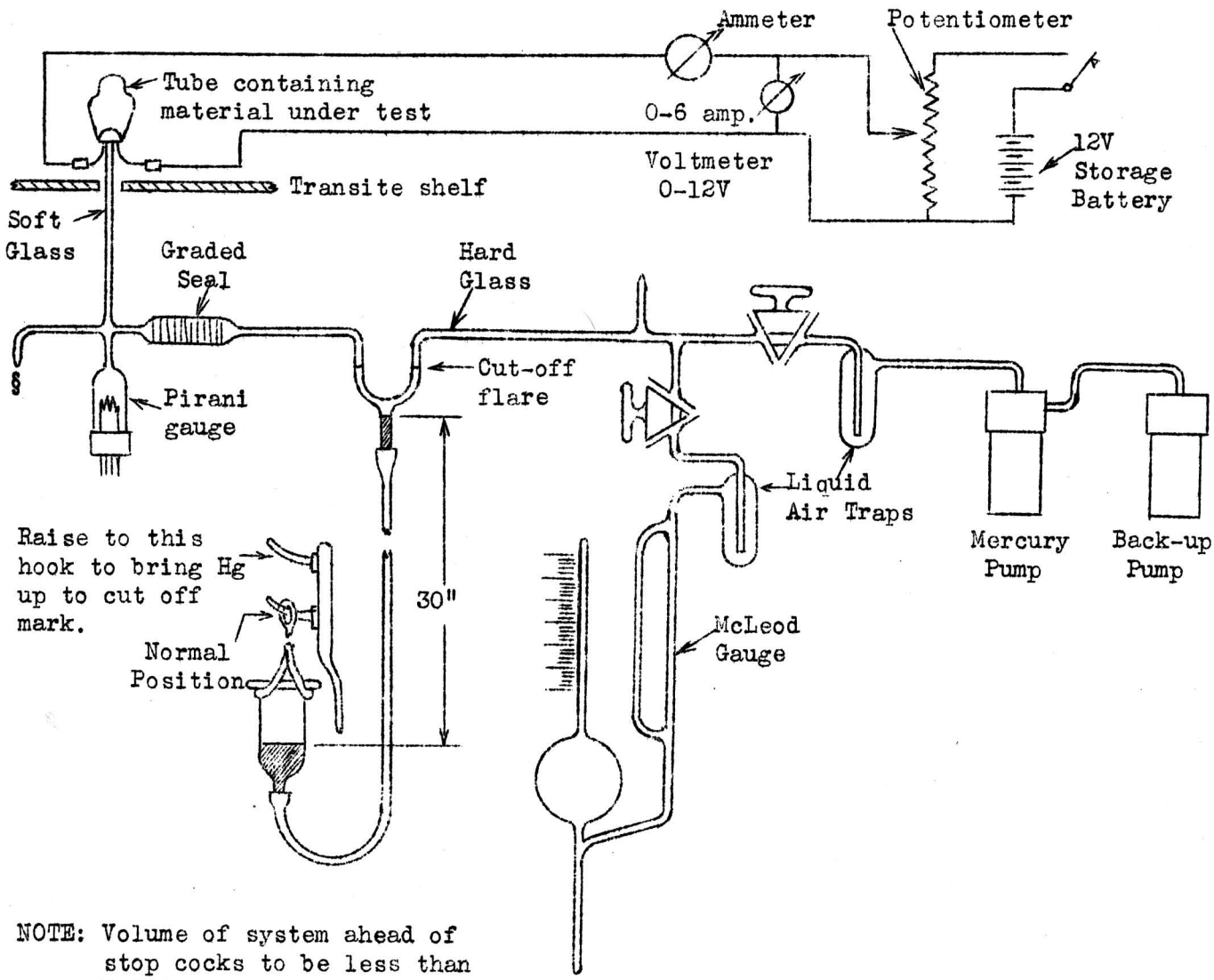
Supersedes former 34-37-4A

1. EQUIPMENT REQUIREMENTS Refer to sketch.

a. The vacuum system should be capable of producing a "sticking" vacuum when measured with a McLeod gauge, as may be obtained with a mercury pump backed by a Cenco Hyvac pump.

b. An oven to give a temperature of 300-350°C is required.

c. All lines and connections ahead of the mercury pump should be glass, no castor oil treated rubber connections being permitted.



NOTE: Volume of system ahead of stop cocks to be less than 1 liter.

§ Seal a ST16 bulb to this tubing when making determinations for gas content of FZ asslys.

2. SAMPLING

Whole spools (numbered) are to be delivered to laboratory, where they shall be handled with clean gloves. When taking sample from spool, care must be exercised not to unwind the remaining ribbon, inasmuch as spool is to be returned to factory for getter production. The outer 2 ft. shall be discarded and clean tools must be used to cut the 32mm length samples.

3. PROCEDURE

The samples are mounted on the two heavy outer support rods of the FSU1235A stem, and not closer than 1/2 inch to the stem press. The dead-end support rod has three stem leads welded to it, and the support rod at the other end of the press has an adjacent thru-lead welded to it. The pant leg support rod is removed. The heating current is passed thru the combined leads.

When the stem is sealed in, there should be no fires on the bulb other than those actually making the seal.

In making the gas test, there should be a 300-350°C low pressure bake-out for at least 5 minutes.

After bakeout, the ribbon is degassed at 900°C for 30 seconds with the pumps removing the gas. After the gas has been removed from the system, it is then closed off. The ribbon temperature is then set at 1200°C and held for 1 minute. The maximum pressure is then read from the Pirani bridge, and gas content is recorded in liter microns.

Limits will be found in Material Handling Notices.

STANDARDIZING SECTION
ENGINEERING DEPT.