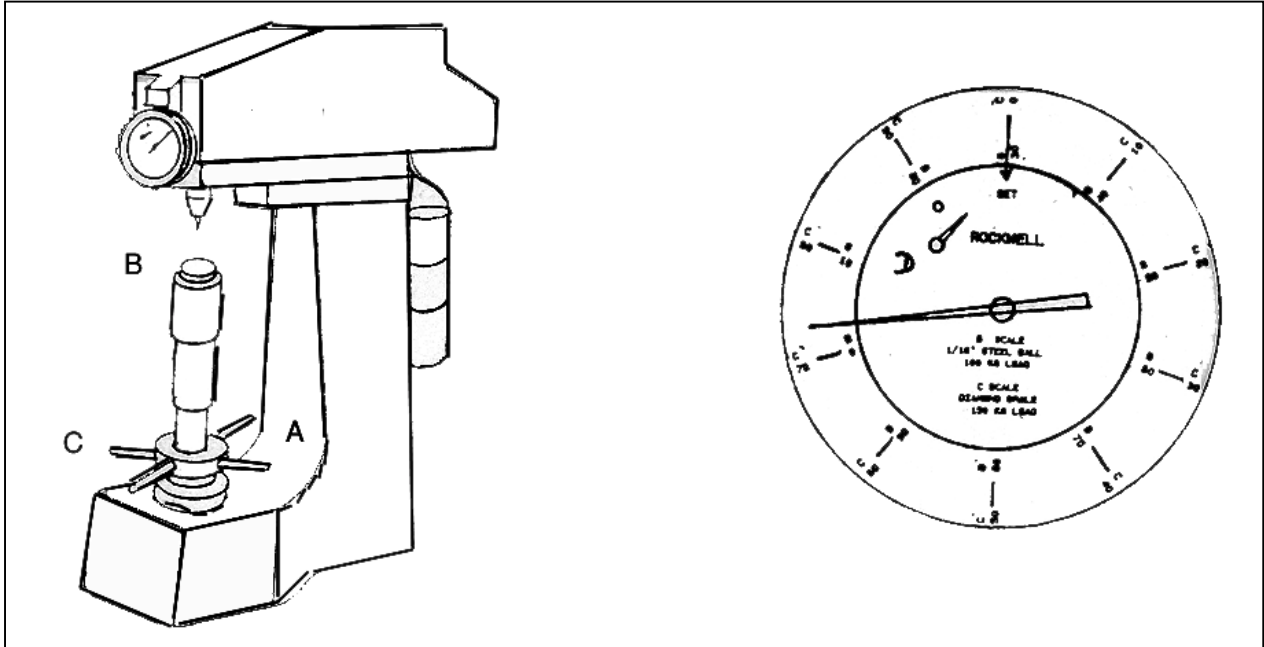


EQUIPMENT
EM 327: MECHANICS OF MATERIALS LABORATORY

ROCKWELL HARDNESS TESTER

The Rockwell tester has the capability of testing metals having a wide range of hardness. This capability is obtained by using different combinations of load and penetrator. The two most common combinations are 100 kg major load applied to a 1/16 diameter ball to give a B hardness number and a 150 kg major load applied to a shaped diamond (brale) penetrator to give a C hardness number. The C test is used for the harder materials such as cold worked or heat treated steel and the B test for low carbon hot rolled steel and softer materials.



OPERATING PROCEDURE:

1. Turn on the machine using the toggle switch **A**.
2. Install the correct weight on the back of the tester (100 kg for B test, 150 kg for C test)
3. Insert the appropriate tip (1/16 in. steel ball for B test, diamond tip for C test) and tighten set screw.
4. Place specimen on anvil **B**, below the tip. (You will need to hold it in place)
5. Turn wheel **C** clockwise until specimen touches tip. Continue to turn until the small dial on the face of the machine is pointing straight up toward the dot.
6. Turn the dial so that it is on 30 for a B test (red scale) or on 0 for a C test (black scale) using the thumbwheel below **C**.
7. Press the lever below the thumbwheel. The test will automatically be performed.
8. After the test is complete, read the hardness number from the appropriate scale (Red for B test, Black for C test).
9. Remove the specimen from the tester by turning wheel **C** counter-clockwise.