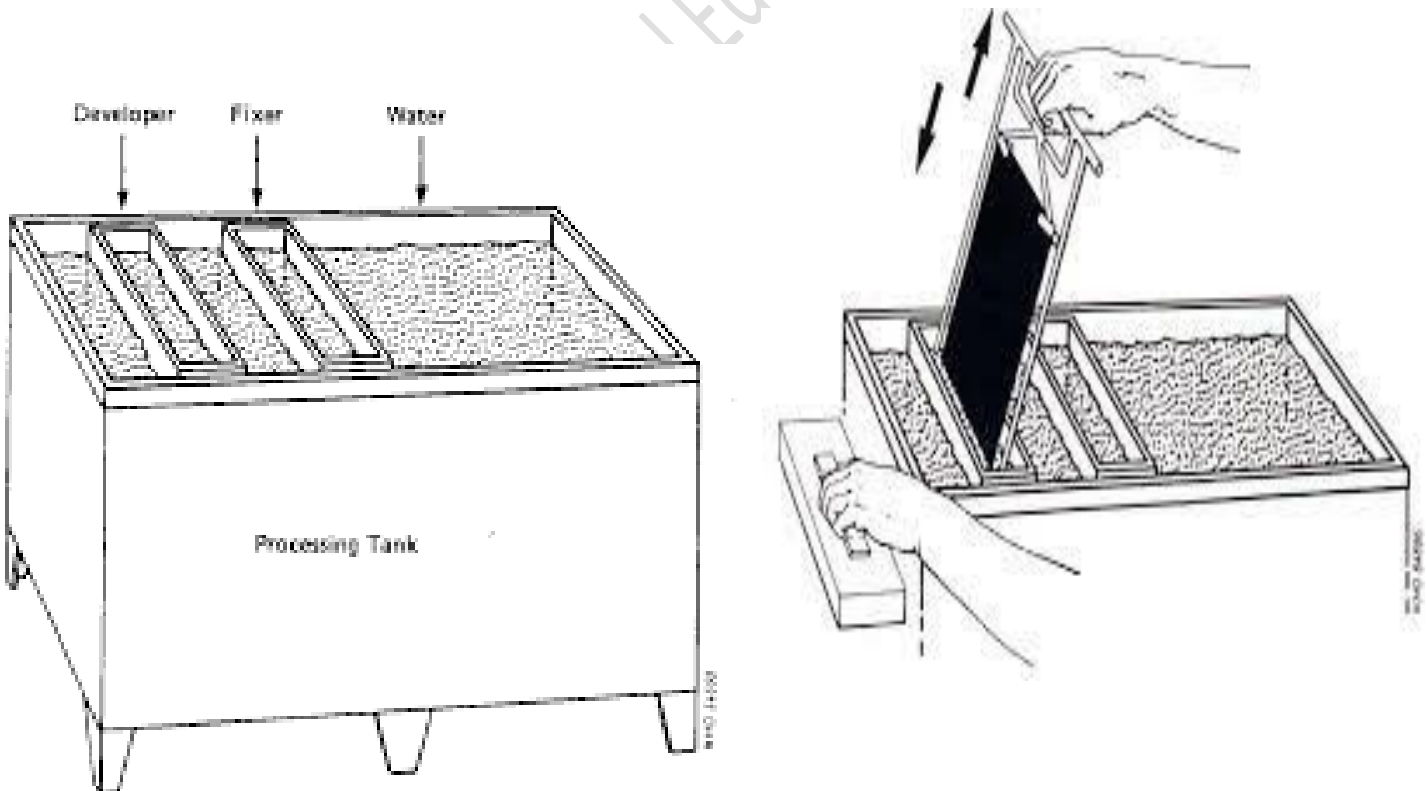


Manual Process & Automatic Process

Manual Process

The sequence of events in processing a radiograph manually:

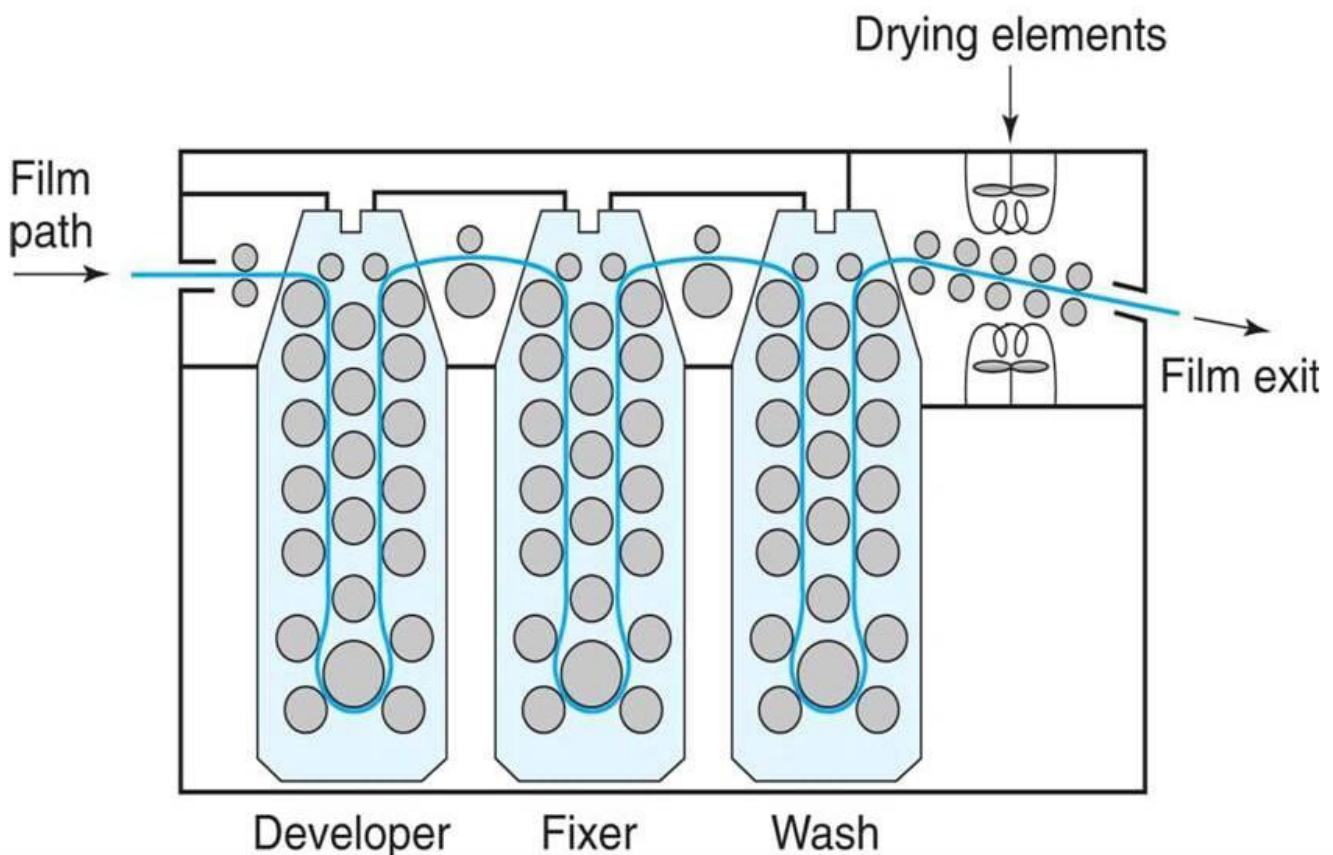
- 1_ **The first step** The wetting agent is water, it penetrates through the gelatin of the emulsion.
- 2_ **The second step** (Development) the latent image is converted to a manifest image
- 3_ **The third step** (after Development) remove excess developer chemicals from the emulsion.
- 4_ **The fourth step** (Fixation) washing of the film to remove any remaining chemicals.
- 5_ **The final step** (Dried) the film is dried to remove the water used to wash it.



Fig(1): Designing Manual Process

Automatic Process

- 1_ **The transport system** consists of three principal subsystems: rollers, transport racks and Drive motor
- 2_ **The temperature – control system** The developer's temperature is (35° C). wash water temperature is (2.8° C) lower.
- 3_ **Circulation system** agitation is necessary to continually mix the processing chemistry.
- 4_ **Replenishment system** to maintain volume and chemical activity.
- 5_ **Dryer system** the dryer system consists of a blower, ventilation ducts, drying tubes.
- 6_ **Electrical system**



Fig(2) : Designing Automatic Process