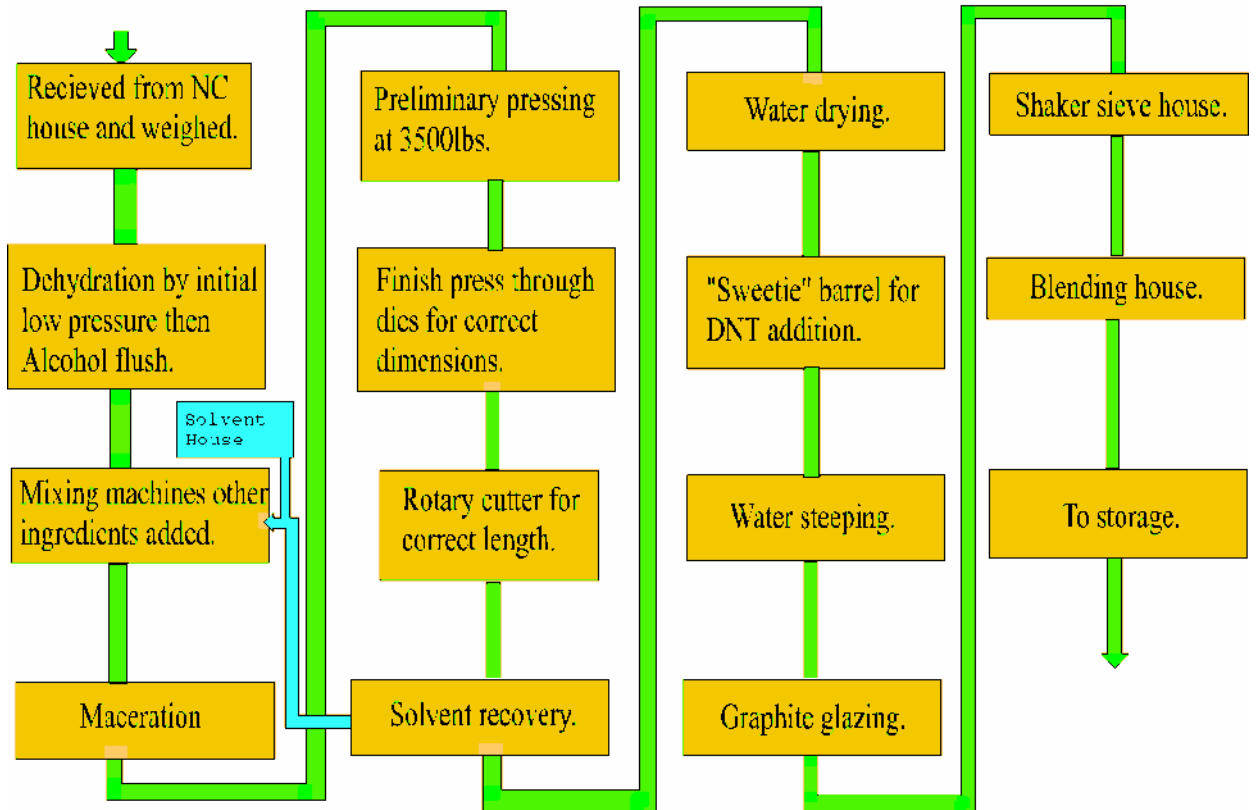


RIFLE POWDER MANUFACTURE



The flow diagram for the manufacture of Rifle powder.

SUMMARY OF MANUFACTURING PROCESS

The production of Rifle type powder is the same as for cannon powder up to the water drying stage with the exceptions that:

- a. Additives are not added during the mixing stage.
- b. Screen pressing is not carried out.

After completion of the water drying stage the powder is passed to the "Sweetie" barrel which is a mushroom shaped, inclined and rotating drum in which DNT (a moderant) is applied to the grains. Following this coating process there is a water-steeping period to fix the DNT onto the grains. This steeping lasts several hours. From the sweetie barrel the powder is passed to the tray drying area where the wet powder is placed on trays with mesh bottoms and air at the temperature of 55⁰ C is passed through the trays until the powder attains the desired moisture content.

The dry powder is then placed in a glazing barrel with a quantity of graphite and the barrel is rotated for approximately 1 hour.

The glazed powder is then passed to the Shaker Sieve house where it is sieved to remove clusters, chips and undersize grains. Air is blown through the powder to assist in the removal of fine dust particles. The powder is now blended in the same manner as for Cannon powder and is passed to the storage area for making up into cartridges.