

THE fibre is delivered to the pulp mill by an efficient conveyor system, where it is dumped into spherical cookers, called digesters. Water and alkaline chemicals are added, the cover bolted on and the digester rotated. After rotation starts, steam is allowed to enter the digester in order to digest the encrusted materials away from the cellulose fibre. Rotation helps mix the chemicals with the flax so that uniform digesting results. At the end of the prescribed cooking cycle the digester is relieved of its pressure and the pulp dumped into a channel through a large hopper. Specially designed pumps take the pulp from the channel and deliver it to the next stage of the process—the washing and beating operation.

The digested stock is pumped into large breaker beaters, each beater holding a complete cook. The fibre is worked underneath a heavy rotating roll to break it down into shorter lengths. At the same time large quantities of fresh water are added which displaces any of the alkaline solution remaining. In this way all the dissolved encrusting materials are removed, leaving the brown fibre.

The stock is then pumped from the breaker beaters through a continuous chlorinating device. Chlorine is added to the fibre as it passes through the pipe line. In order to use the chlorine as completely as practicable, a retention chest is provided for the reaction to continue to the desired limit.

After the pulp is chlorinated, it is neutralized with alkaline materials and washed on rotary vacuum washers. By chlorinating in this manner some of the brown coloring matter becomes soluble when extracted with alkali. The pulp is then bleached with hypochlorite bleaching liquor to make it white and to remove the last traces of the encrusting materials present. This operation is closely controlled in order not to degrade the fibers beyond a certain point. In order to obtain a uniform product viscosity determinations, a measure of chain length, are made while the bleaching reaction is going on. The reaction is stopped by dilution with large volumes of water at the proper point and the residual bleach liquors are washed out. This washing operation is also carried out on rotary vacuum washers. The resultant fibres are then a pure snow white pulp. This pulp is conveyed from the pulp mill to the bleached pulp storage and stored in boxes for use in the paper mill. The boxes are drawn from the pulp storage as needed in the Refining Room.

One of the 12 breaker beaters in which the fibres are shortened and the remaining alkaline solution is washed out.

