

# Refining Process

**How does slushed Pulp/Waste get converted into fibres for papermaking?**

The process of refining pulp can be regarded as one of the most important steps in the papermaking process. This is because the properties of the finished product are highly dependent on the changes that occur to the individual fibres during refining. The process is carried out with the fibres suspended in water. Refining increases the penetration of water into the fibre to improve the property of the paper product.

Two pieces of equipment are used in the refining process. 'Morden' and 'Disc' refiners are located at the wet end of paper machines in the lead up section of pulp preparation and cleaning.



**Morden Refiner**



**Disc Refiner**

**Morden refiners** bruise/beat fibres that have already been refined and used in prior paper making. Since these fibres have already been refined they just need to be separated once again to bond to other fibres. This process is called 'fibrillation'.

**Disc refiners** or "double D's", cut across and or along the length of a fibre as opposed to the 'beating' process used by Morden Refiners. The Disc Refiner process separates the previously unbeaten fibre so the fibrillation process can occur to facilitate the bonding to other fibres.

As a general rule, fibres can be processed through a refiner about five times before they fall away with the backwater to drain.