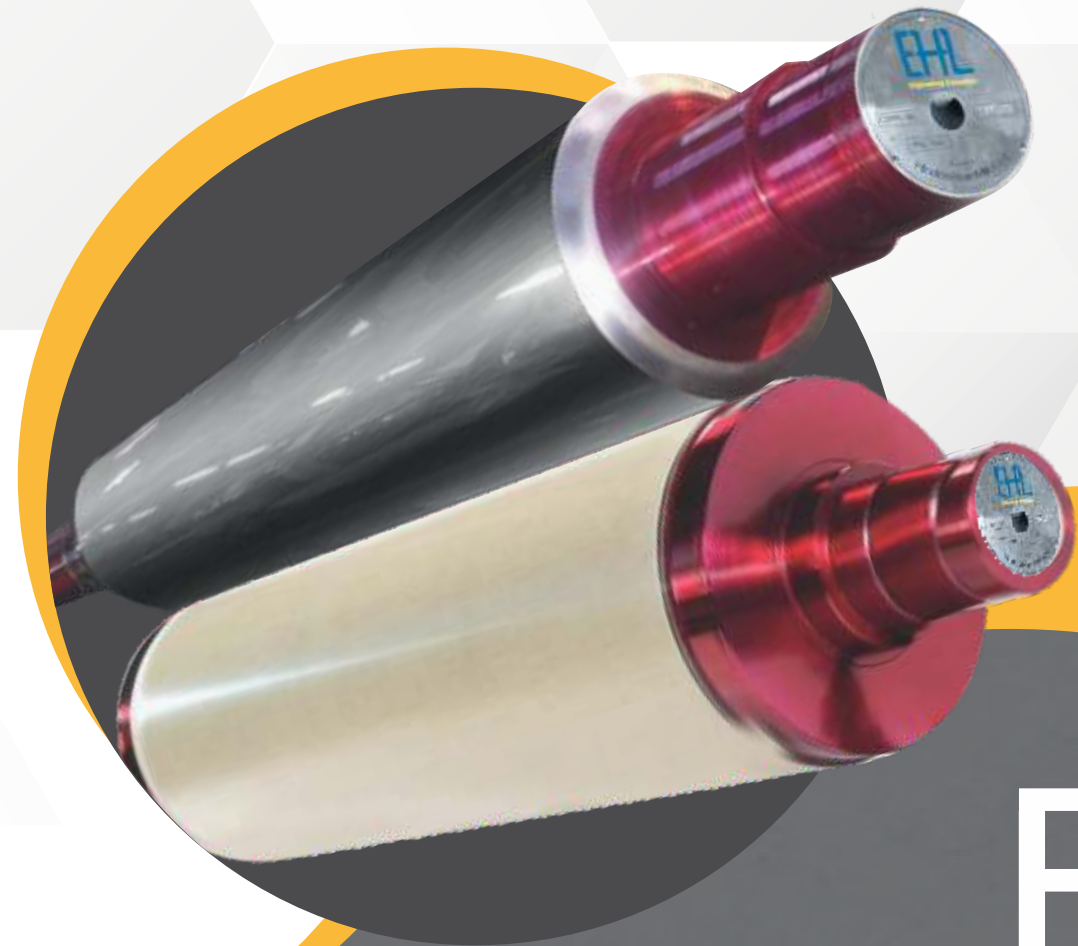




Eck Haubold & Laxmi®
A Unit Of Hindoostan Mills Ltd

Cotton Bowl Technology



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Elastic Calender Bowl for
Textile, Paper, Jute Industries

Superfine Bowl Filling

- (A) Cotton Bowl for Textile Calenders
CX Grade - The combination comprises of conditioned, carded, carefully laid, cop bottom superfine cotton material.
- (B) Cotton-Comber bowl for Super Calender (Paper industries)
CXI Grade - The combination comprises of conditioned, carded and carefully laidblend of superfine cotton and cop bottom material, homogeniously mixed. Cotton material is well built in lap/cake form under hydaulic pressure for filling. Seasoning of cotton cake under controlled temperature and humidity is a unique feature.

Selection of Raw Material

CX Grade combination is most suitable for processing textile fabric in Universal and Friction Calender and tinning finishing. CXI Grade combination is mainly used for processing coated paper in such Super calenders for its silky & glossy finish.



Construction

The heart of a Cotton Bowl is a steel core made of high quality medium carbon steel which can withstand minimum resistance to failure by fatigue. Steel shafts are thoroughly inspected for hidden cracks, weak spots, etc., and are made true prior to installation in hydraulic press. New end plates are manufactured out of forged steel thoroughly examined by ultrasonic crack detectors for any defects. The plates are turned on most modern machines under strict supervision.

Cotton to Calendar Bowl

Bowls are built around a strong steel core held vertically into the specially designed hydraulic press. Cotton laps/cakes punched at its centre are lowered from top which are axially compressed hydralically. Periodic filling and compression ensures the cotton mass to settle without air pockets. A bowl is finally locked at the top with the help of already turned and prepared steel end plates.

Textile Calender Roll



Smooth and Silky Surface Finishing

Finishing of refilled bowl is an important step in the bowl manufacturing. Bowls are turned initially with carbide tip tool and later with diamond tool. The silky and glossy finish is produced by specially designed finish machine.

Some hard facts of Cotton/Comber Bowls

Raw cotton C-XI Grade filled bowls are sometimes used in Paper mills with slow running calenders. These are much more elastic than paper bowls. Due to its resistance and excellent quality of glass finish, this is widely used in production of coating printing paper. Usually made at 78-80° shore D Hardness. Its resilience allows crease marks to be easily wiped out provided they are not too deep. These are limitations on speed and pressure maximum of 400m/min and 200kg/cm. Higher speed & pressure will result in burning and bursting.

Effect of Surface hardness on the attributes of elastic roll											
Cotton Bowl Application	Hardness Shored	Density	Nip width	Nip pressure	Resilience	Loading Capacity	Mark Removal	Hardness	Heat Development	Reduction in Bulk	Ease of Calendering
Super Calender	78° - 80°	↑ MORE	↓ LESS	↑ MORE	↓ LESS	↑ MORE	↓ LESS	↑ MORE	↓ LESS	↑ MORE	↓ LESS
Friction Textile Calender	76° - 78°										
Universal Textile Calender	72° - 76°	↓ LESS	↑ MORE	↓ LESS	↑ MORE	↓ LESS	↑ MORE	↓ LESS	↑ MORE	↓ LESS	↑ MORE