



New Bowl filling plant at Ambarnath



Inner View of Plant



## **ECK HAUBOLD & LAXMI**

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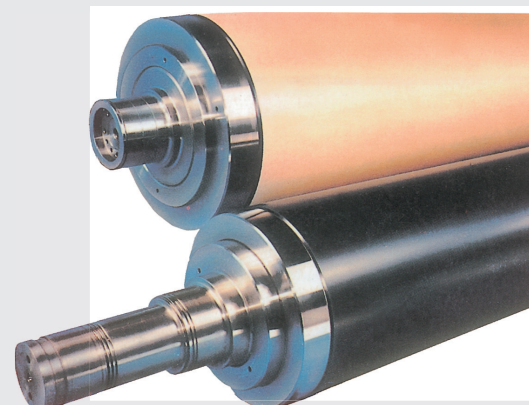
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# **ECK HAUBOLD & LAXMI**

CALENDER BOWL SPECIALISTS



**Elastic Calender Bowl  
for**

**Textile, Paper, Jute & Tinning Industry**

REFILLING AND MANUFACTURING

## **COMPLETE BOWL TECHNOLOGY**

In Technical Agreement with Voith Sulzer, Germany

# Cotton Calender Bowls for Textile, Paper, Jute & Tinning Industries



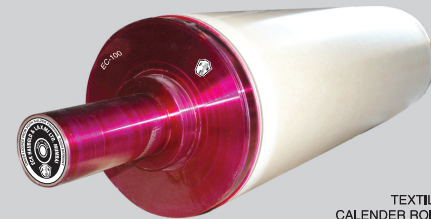
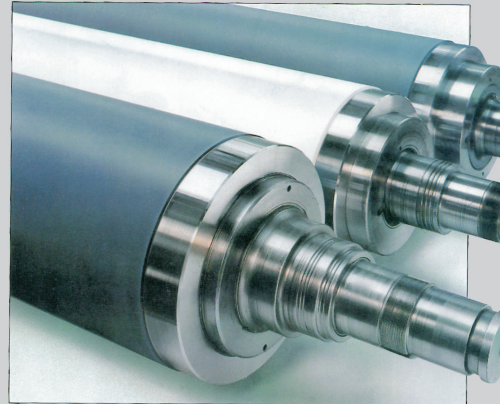
## Superfine Bowl Filling

(a) Cotton Bowl for Textile Calenders  
CX - Combination comprise of conditioned, carded carefully laid cop bottom superfine cotton material.

(b) Cotton-Comber bowl for super calender (Paper Industries)  
CXI - Combination comprise of conditioned, carded and carefully laid blend of superfine cotton and cop bottom material homogeneously mixed.

Cotton material is well built in lap/cake form under hydraulic pressure for filling.

Seasoning of cotton cake under controlled temperature and humidity is a unique feature.



TEXTILE  
CALENDER ROLL

## Smooth and Silky Surface Finishing

Finishing of refilled bowl is an important step in the bowl manufacture. Bowls are turned initially with carbide tip tool and later with diamond tool. The silky & glossy finish is produced by applying fine count emery paper.

## Some Hard Fact of Cotton Bowl

Raw cotton C-XI filled bowls are sometimes used in 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 coated 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 400 m/min. and 200 kg./cm. Higher speed & pressure will result in burning and busting.



Modern Hydraulic Press Capacity 2000 Tons/ Height 6 Mtrs.

## Selection of Raw Material

CX combination is most suitable for processing textile fabric in universal and friction calender & Tinning Finishing.

CXI combination is mainly used for processing coated paper in super calenders for its silky and glossy finish.

## Construction

The heart of a cotton bowl is steel core made of high quality medium carbon steel which can withstand maximum 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 detector for any defect.

The plates are turned on most modern machines under strict supervision.

## Cotton To Calender Bowl

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

Effect of surface hardness on the attributes of elastic roll

| Cotton Bowl Application    | Hardness Shore | Density | Nip Width | Nip Pressure | Resilience | Loading Capacity | Mark Removal | Hardness | Heat Development | Reduction in Bulk | Ease of Calendering | Heat Resistance |
|----------------------------|----------------|---------|-----------|--------------|------------|------------------|--------------|----------|------------------|-------------------|---------------------|-----------------|
| Super Calender             | 78° To 80°     | ↑       | ↓         | ↑            | ↑          | ↑                | ↓            | ↑        | ↓                | ↑                 | ↓                   | ↑               |
| Friction Textile Calender  | 76° To 78°     | ↓       | ↑         | ↓            | ↓          | ↓                | ↑            | ↓        | ↑                | ↓                 | ↑                   | ↓               |
| Universal Textile Calender | 72° To 76°     | ↓       | ↑         | ↓            | ↓          | ↓                | ↑            | ↓        | ↑                | ↓                 | ↑                   | ↓               |