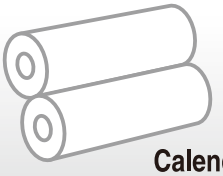
FUJIFILM

PRESCALE

Pressure Measurement Film

# PRESCALE Application Examples [No.1]

## Measured Object



Calender Rolls

## Uses

- Roll design
- Maintenance during roll exchange

## Benefits

- Higher operating rate
- Lower cost
- Fewer defects

## Industry

**Paper**

## Applications

**Adjustment of calender roll pressure balance**

## Challenges

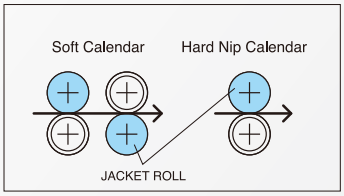
Calender rolls generally apply pressure using left and right cylinders. If the left-right pressure balance is poor, drift and quality problems occur. Also, nip rolls generally have crowns, change shape when nipping, and are designed to provide uniform nip pressure across the width. If the crown level and roll hardness are not appropriate for the pressure, defects and the rubber roll life can be reduced.

## Measure-ment

**Used Product: Prescale (Low Pressure LW, Super Low Pressure LLW)**

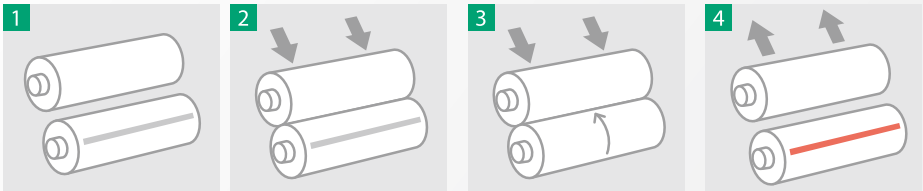
### 1 Left-right pressure balance

Prescale is passed between the calender rolls.
The uniformity of the resulting Prescale color density is used to evaluate whether the pressure balance is appropriate.




### 2 Crown configuration

Insert Prescale between the calender rolls to confirm whether the Prescale color density width is constant.




1. Attach Prescale to the calender roll.
2. Nip at the prescribed pressure.
3. Rotate the roll and pass the portion with the Prescale attached through the nip section only once.
4. Stop the rotation and release the nip.

## Results (images)

Whether the cylindricity and horizontal parallelness of calender rolls are in accordance with the design and whether the pressure is optimally adjusted can be evaluated under application of the actual pressure.
If the quality is not uniform, Prescale can be used to classify the factor of the problem, pressure distribution deviation, temperature distribution deviation or prior process stages.

### ● Poor

### ● Good

## Benefits of Prescale

### ● Time savings

For roll exchange, etc., approximately half a day can be saved.

### ● Material savings

The occurrence of material loss (several hundred meters of paper loss, etc.) can be prevented when defects occur.

### ● Quality improvement

Defects can be prevented and yield can be increased.

**Without using Prescale**

When calender rolls are exchanged, the paper produced after startup is hecked. If there are defects, the old rolls are immediately reinstalled and production started. A new unit is ordered from the calender manufacturer. However, **the cause is not identified in this case.**

**Using Prescale**

When calender rolls are exchanged, Prescale is used to check pressure. If it is confirmed that there are no problems, production can be started. If there are quality problems, causes can be quickly and easily identified.

*Note that the specifications and performance data described in this catalog are subject to change without notice, for the purpose of improvement. Since images are used for illustration purposes they may differ slightly from the actual product.

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