K-140 Pilot Line Overview

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Scope

K-140 integrated pulp feed, refining and fractionation, suspension homogenisation, wet ribbon formation, controlled draw, twist stabilisation, tension drying, automatic winding and an internal quality-control station.

Operating window

The line was operated as a process-characterisation pilot. Indicative recorded ranges were 4-14 kg/day throughput, 1.8-7.5 m/min line speed, 0.35-1.20 mm nominal diameter and 6-10% residual moisture.

Known constraints

Variability of conditioned feed, local ribbon weak points, break frequency at elevated draw, drying energy and winding tension drift remained the principal constraints.

Module	Function
PFU	Pulp feed and conditioned fibre dosing
RFU	Controlled refining and fractionation
HMX	Suspension homogenisation
RFM	Wet ribbon formation
WDC	Primary and secondary draw
TSU	Twist stabilisation
TDR	Tension drying
AWU	Automatic winding
QCS	Mechanical and moisture checks

Status

Assessment

K-140 was the most mature KRYSS configuration but remained a research pilot. The programme did not reach a commercial-production qualification stage.