

Abstract

For over a century, the Hatschek sieve-cylinder process has anchored fiber cement manufacturing. Woven metal mesh is routinely treated as a consumable specified by habit and replaced on failure.

This presentation reframes mesh as an engineered design variable that directly influences the four outcomes a line manager tracks: machine speed, sheet moisture content at the couch, surface finish of the sheet, and cost per kg of finished board.

Walking the inorganic-bonded composite line end-to-end, the session examines how weave geometry, permeability, and seam technology interact across the process touchpoints; from the forming cylinder and dewatering belts through to filtration screens and closed-loop white-water recovery.

The bilayer construction of a forming cylinder illustrates the logic: a fine face layer governs fiber retention and surface finish, while a coarse backing layer governs drainage and machine speed. Seam selection follows the same logic, driven by operating temperature, white-water corrosivity, and required flatness.

The session aims to throw light on aspects which are often not discussed as the product ‘works’, but the aim is to make it better.
