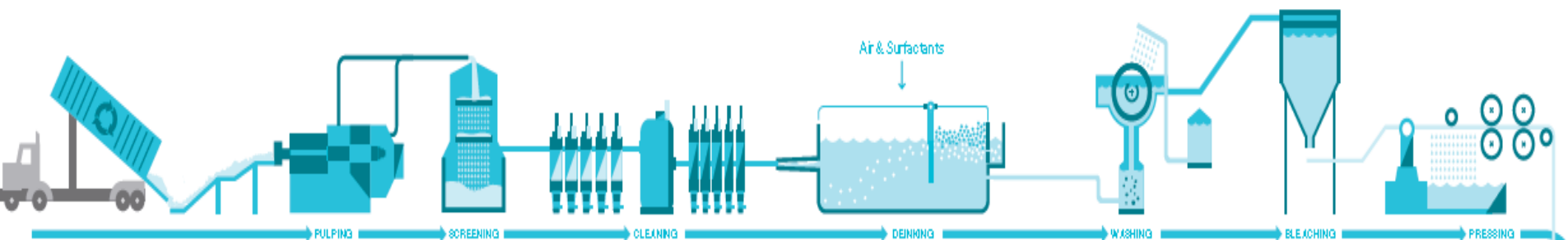


Process of Paper Recycling





Re-pulping

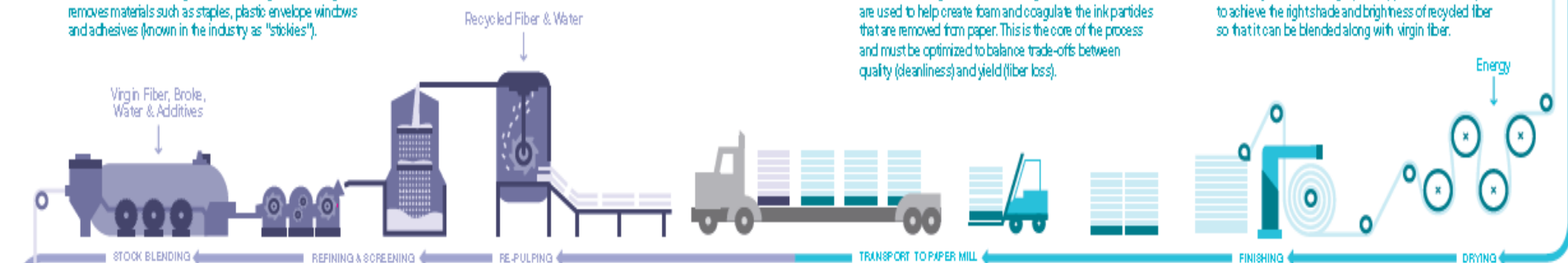
The recycling process starts by re-pulping scrap paper—essentially putting the paper in a giant blender to break down sheets with water and agitation. Screening and cleaning removes materials such as staples, plastic envelope windows and adhesives (known in the industry as “stickies”).

Deinking

Cleanliness is critical for using recycled fiber in graphic applications. Ink is removed in a flotation process where air is bubbled through the stock in a large vessel. Surfactants are used to help create foam and coagulate the ink particles that are removed from paper. This is the core of the process and must be optimized to balance trade-offs between quality (cleanliness) and yield (fiber loss).

Bleaching

In North America, all deinked pulp is processed chlorine free (PCF) using chemicals such as hydrogen peroxide and sodium hydrosulfite. For graphics applications it is important to achieve the right shade and brightness of recycled fiber so that it can be blended along with virgin fiber.

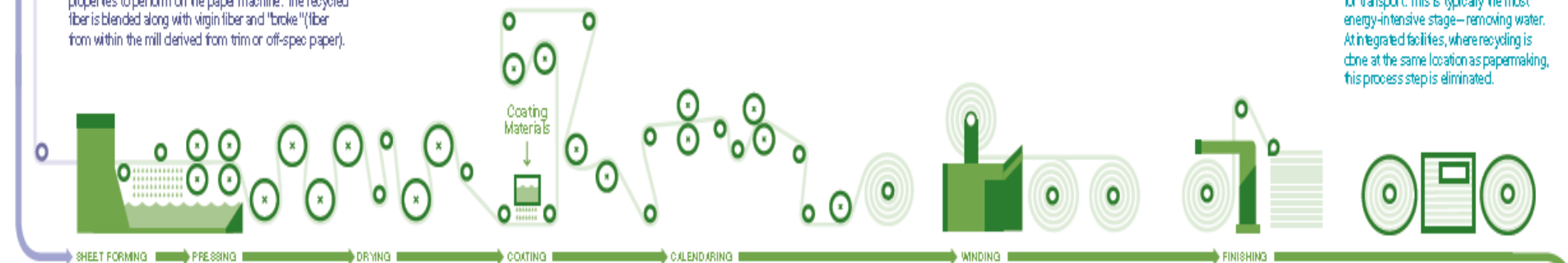


Stock Preparation

Once recycled fiber is transported to a mill, it is re-pulped, screened and refined to make sure that it has the right properties to perform on the paper machine. The recycled fiber is blended along with virgin fiber and “broke” (fiber from within the mill derived from trim or off-spec paper).

Drying

Once the paper has been fully processed, it must be dried and packaged into bales for transport. This is typically the most energy-intensive stage—removing water. At integrated facilities, where recycling is done at the same location as papermaking, this process step is eliminated.



Papermaking

Paper machines and printing presses operate at high speed under tension. Because recycled fiber is not as strong as virgin fiber, it can be a challenge to maintain desired properties using recycled content. Broken fibers can contribute “fines” in the process which may add to basis weight but do not offer physical strength.

Coating

Coatings provide papers with the desired surface properties for high performance printing. Any contamination that makes it through cleaning can cause problems in papermaking, especially in the coating process, where debris can lead to scratches or simply show up as dirt specks. This is a stark contrast to other uses of recycled fiber (such as paperboard for cereal).

Finishing and Shipping

Rolls of paper are cut to size or further processed into sheets prior to distribution. All of SFPNA's papers made for sheeted presses (McDoy, Opus, Flo and Galerie Art) are manufactured with 10% post consumer recycled fiber and we offer up to 30 percent for some brands. Somerset, Opus and Flo web grades can be made with 10%.

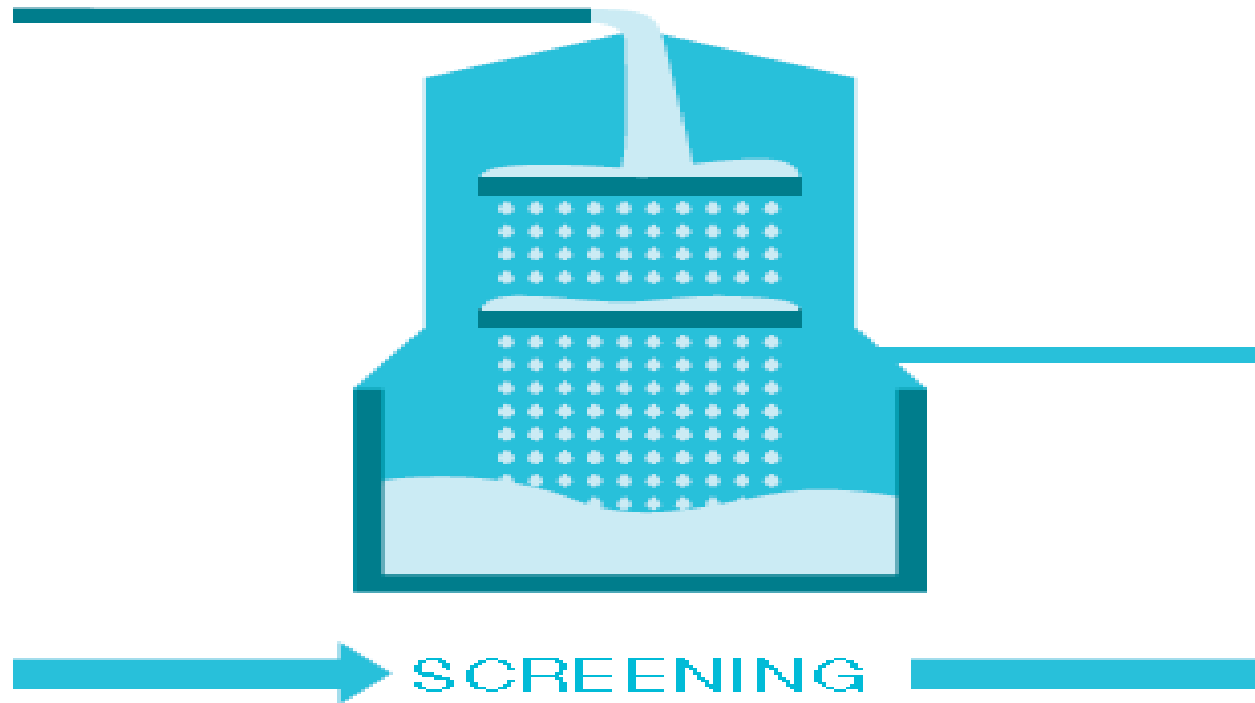
Please Recycle

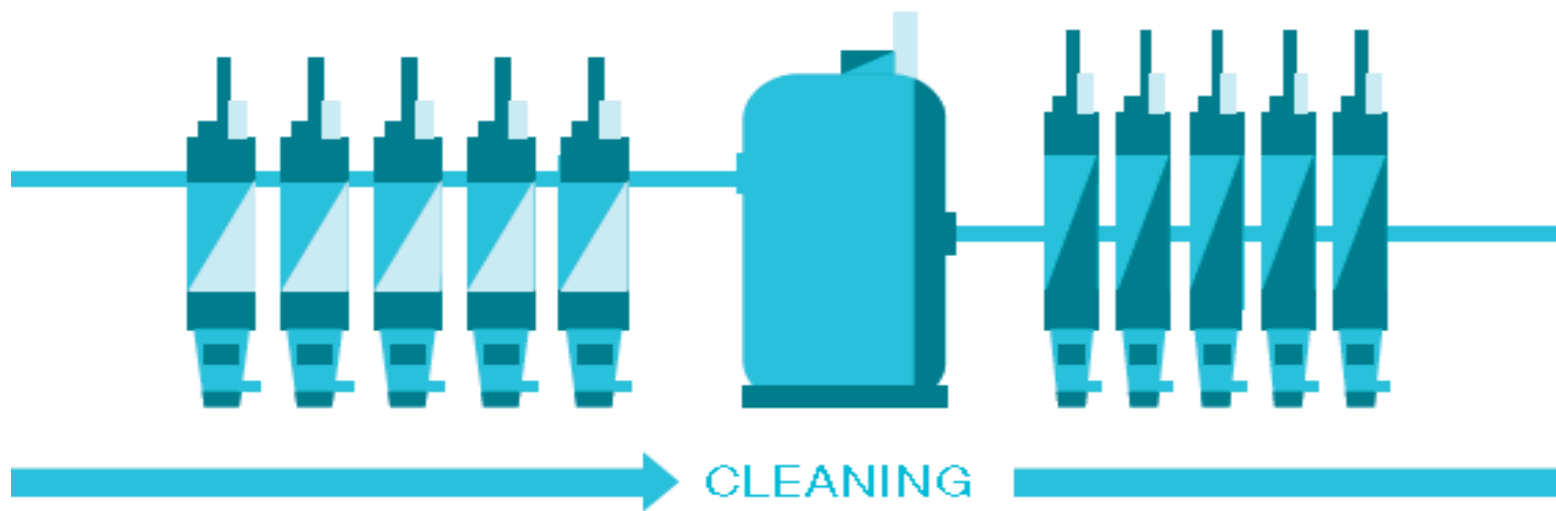
In 2011, paper recovery for recycling reached an all time high of 68.8 percent. This is significantly higher than glass, metals or plastics—but we can still do better. People are more apt to engage in a behavior when prompted, so we always encourage the use of “please recycle” logos and claims on printed material.

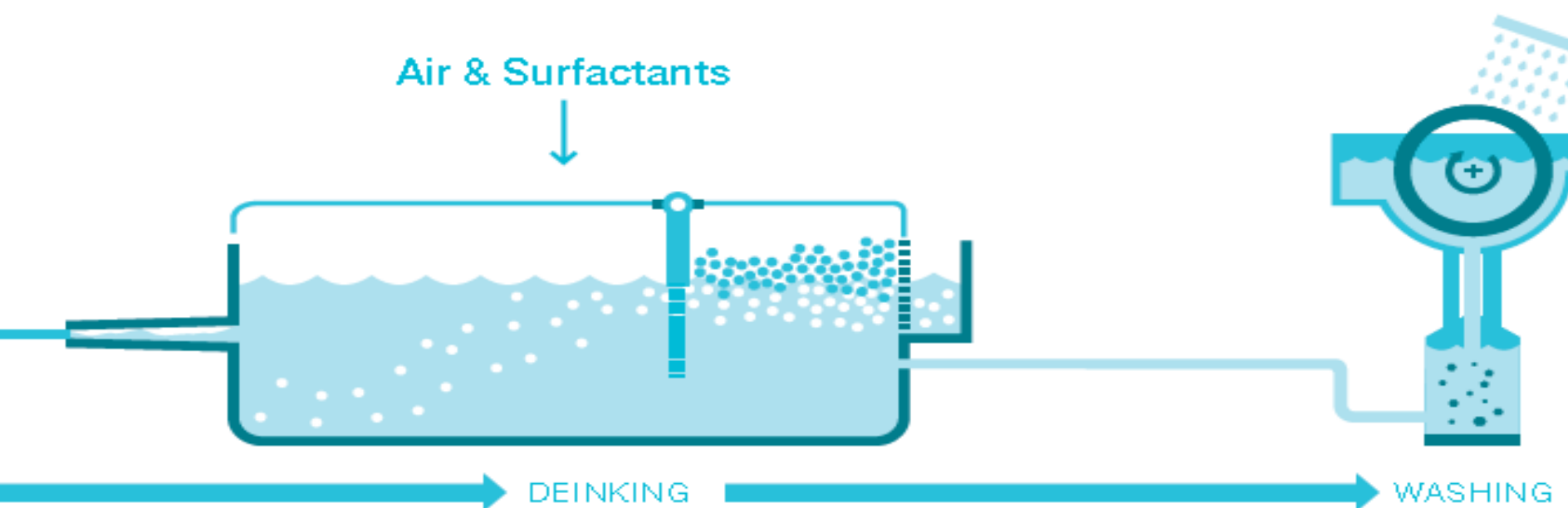


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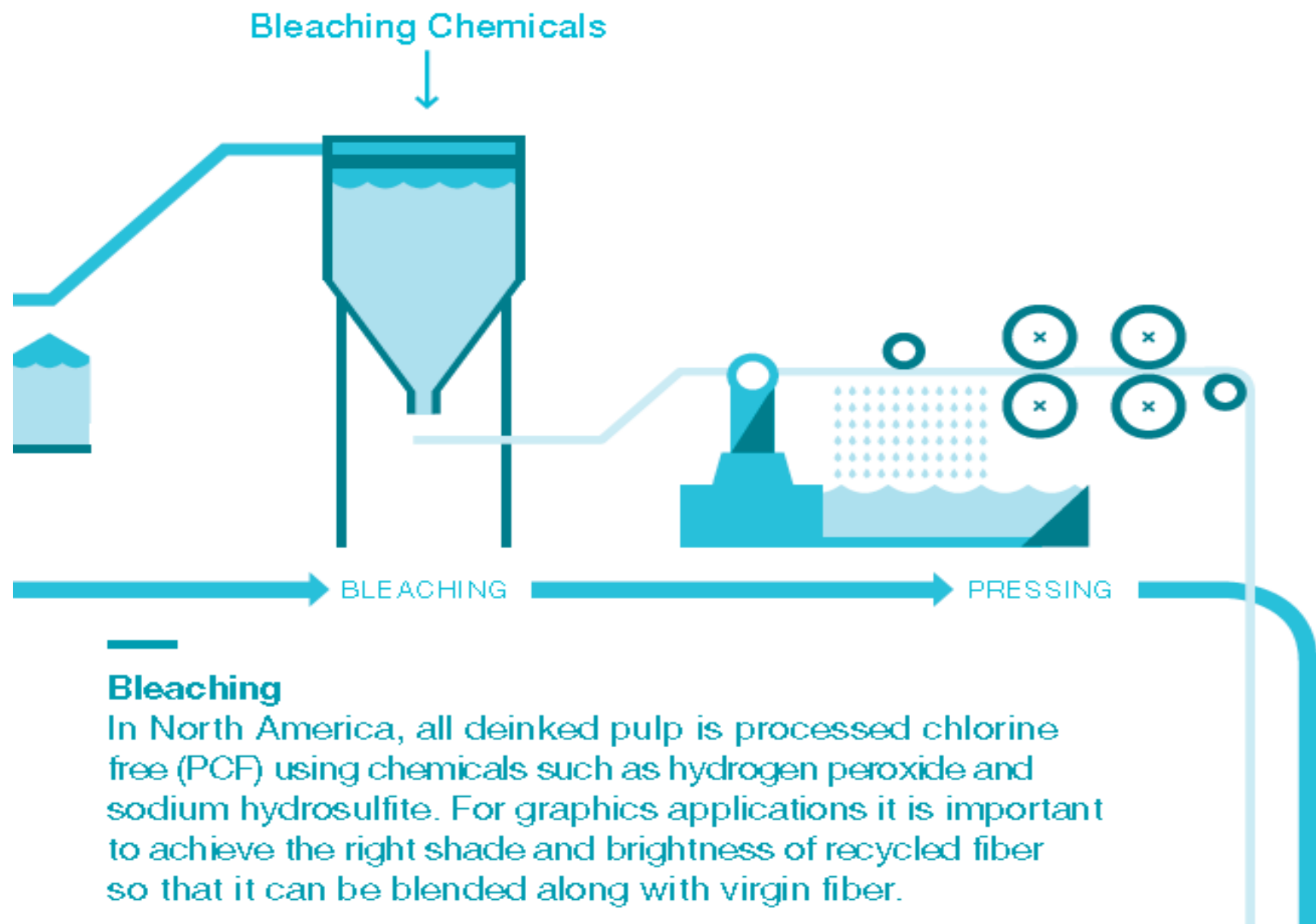


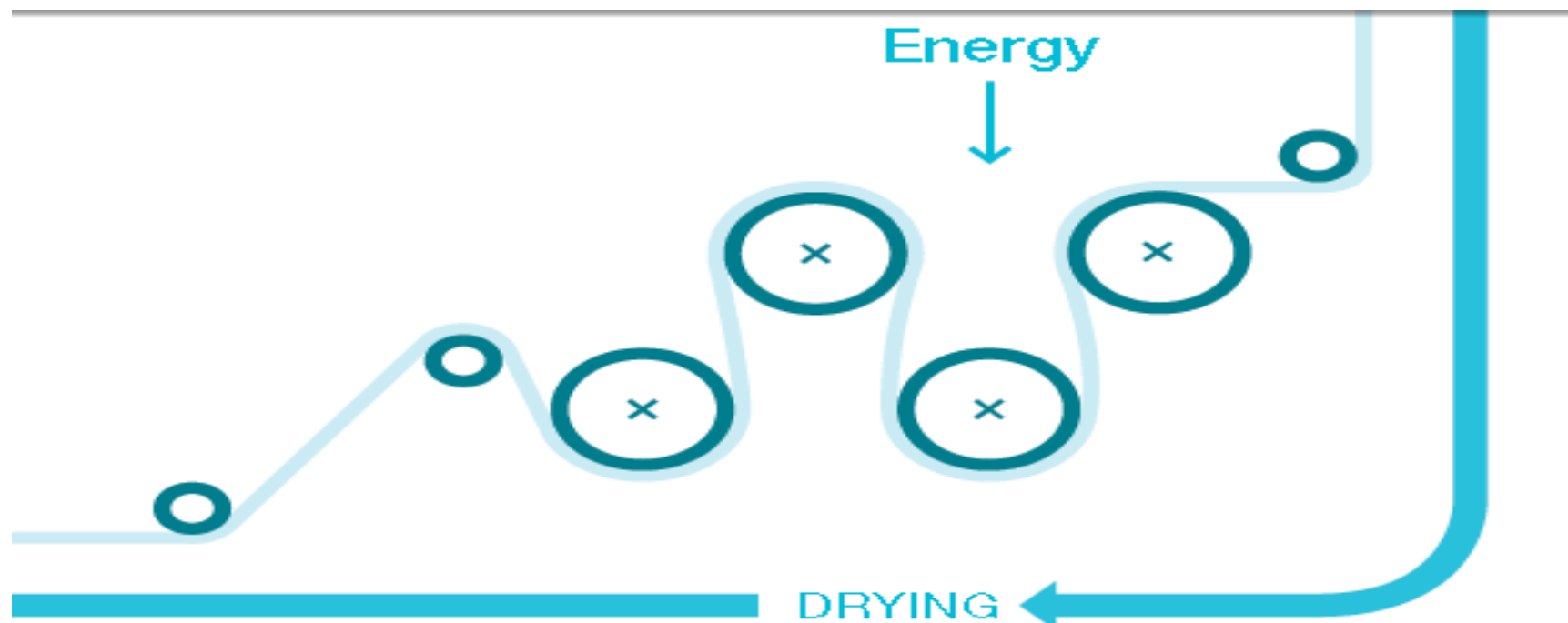


Deinking

Cleanliness is critical for using recycled fiber in graphic applications. Ink is removed in a floatation process where air is bubbled through the stock in a large vessel. Surfactants are used to help create foam and coagulate the ink particles that are removed from paper. This is the core of the process and must be optimized to balance trade-offs between quality (cleanliness) and yield (fiber loss).

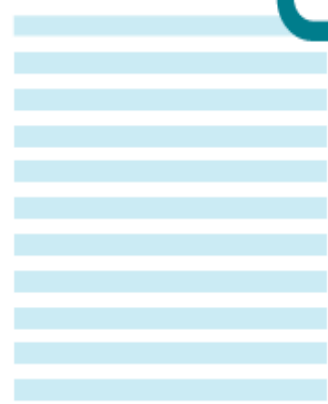






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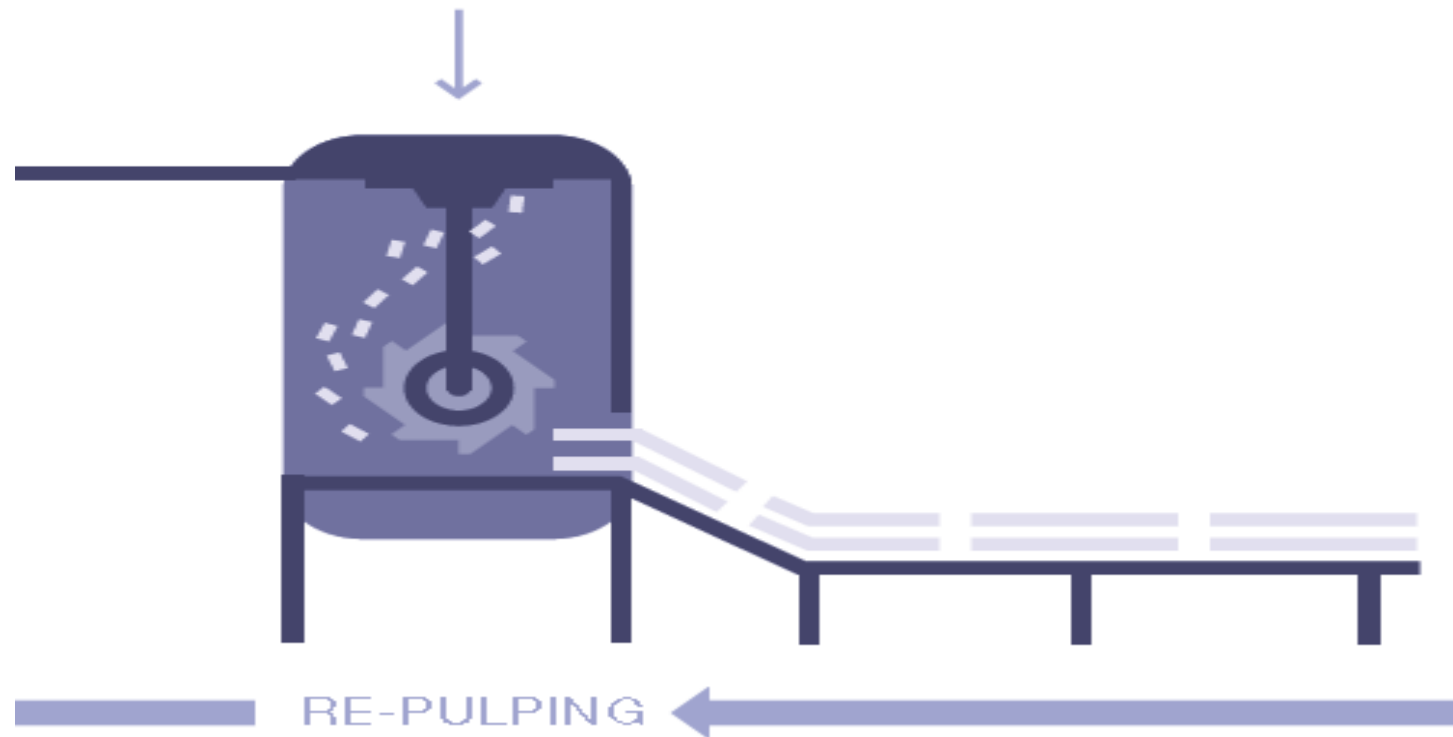


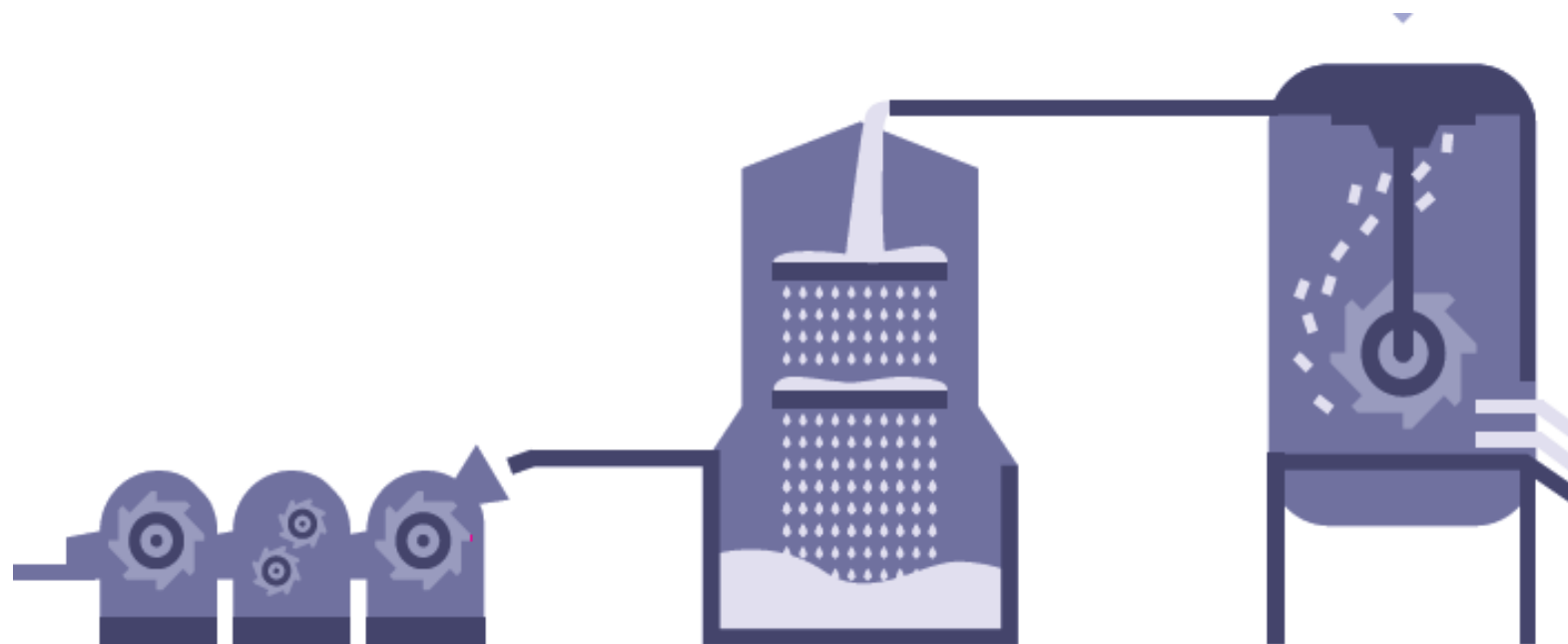
FINISHING ←



TRANSPORT TO PAPER MILL

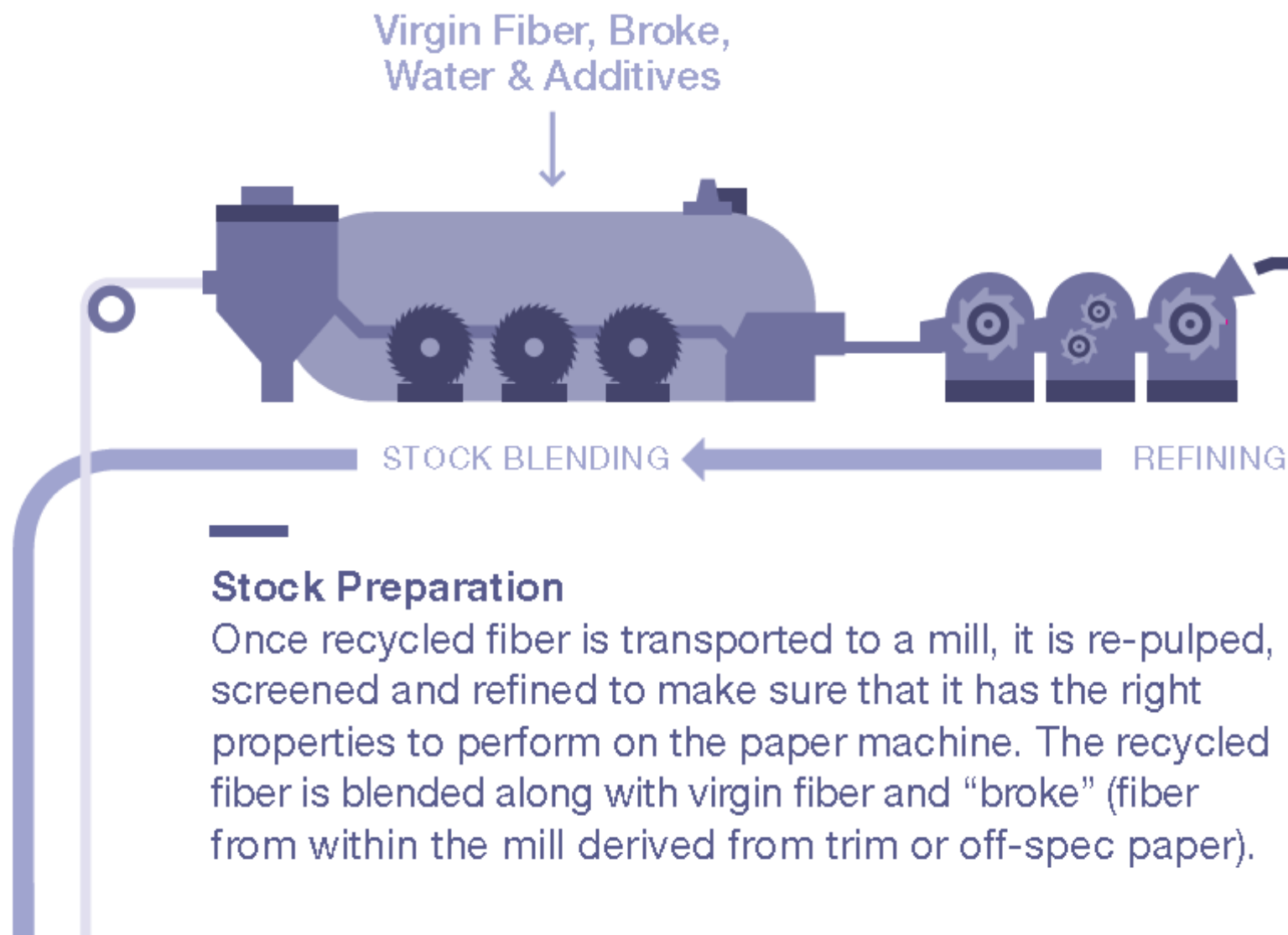
Recycled Fiber & Water

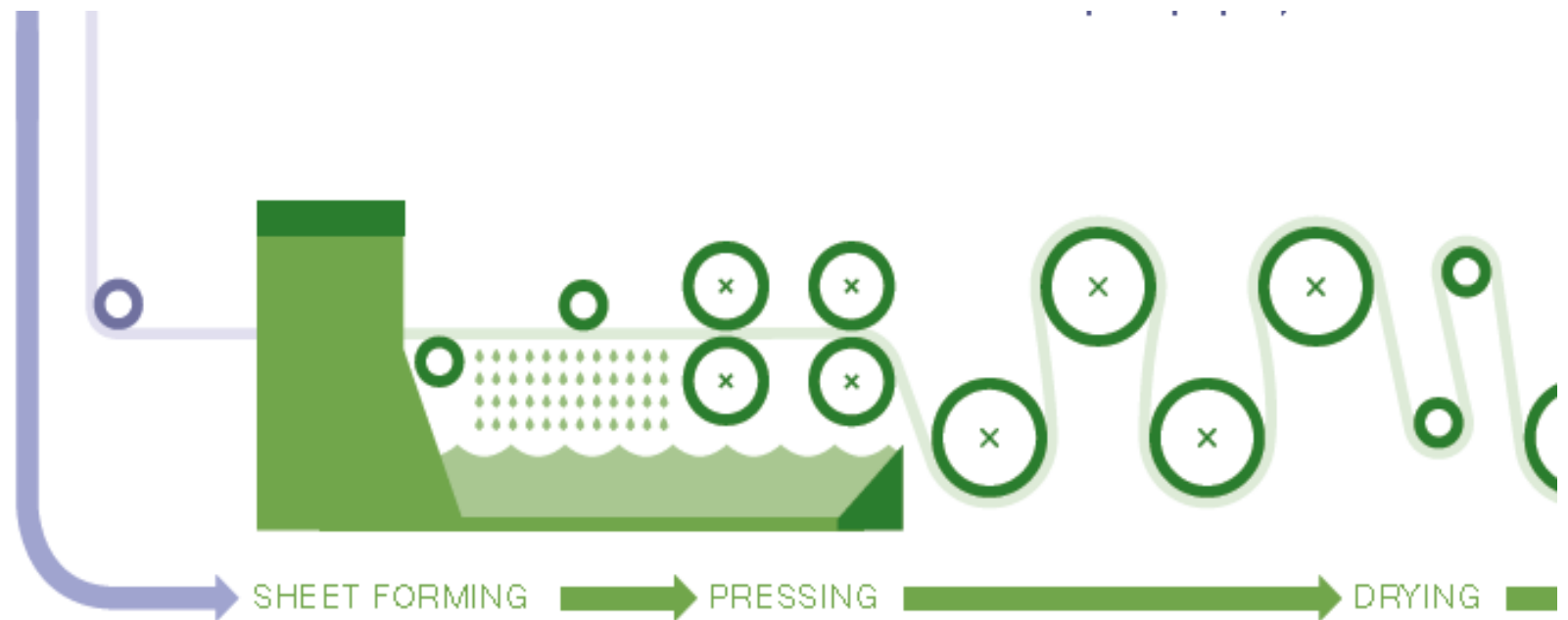




REFINING & SCREENING

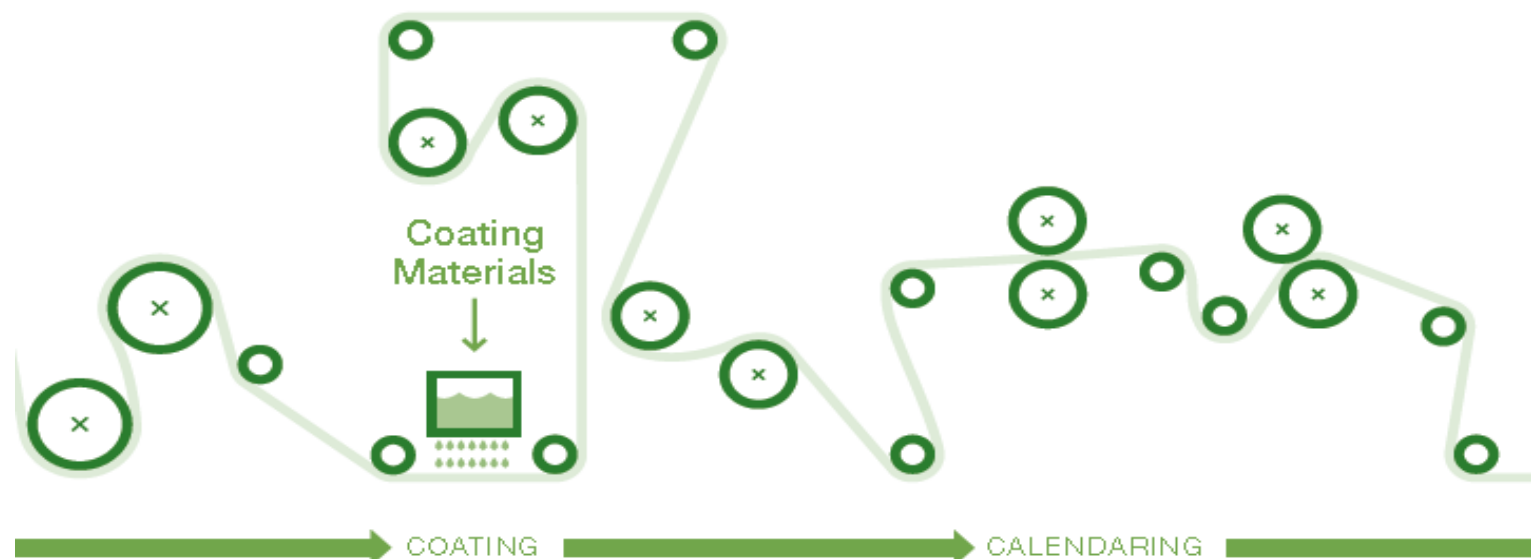
RE-PULPING





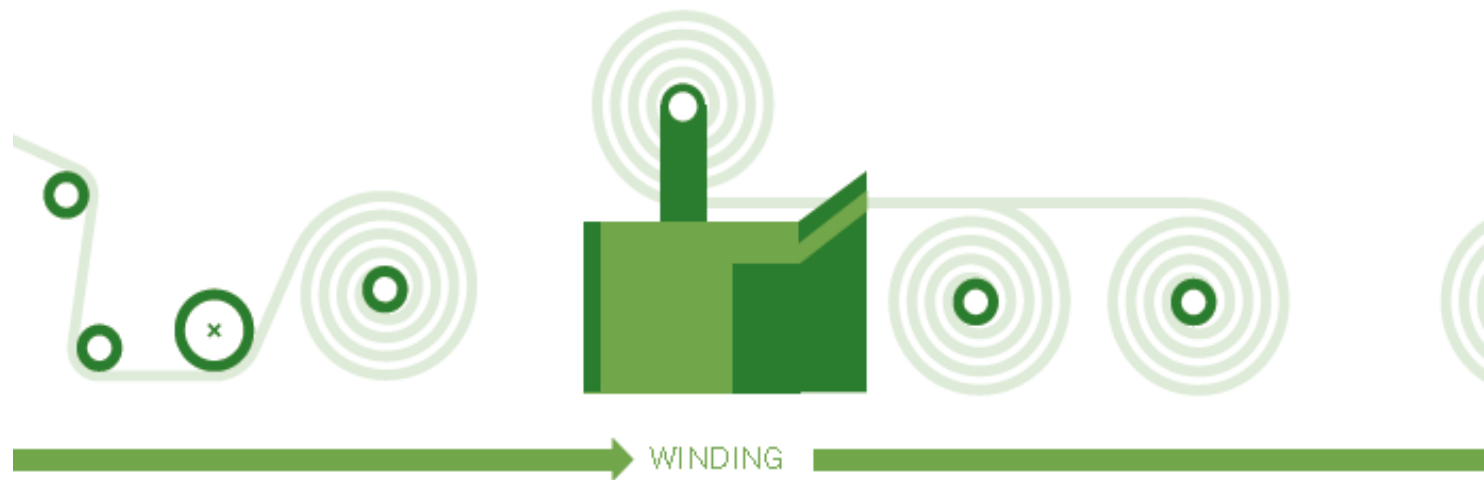
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Finishing and Shipping

Rolls of paper are cut to size or further processed into sheets prior to distribution. All of SFPNA's papers made for sheetfed presses (McCoy, Opus, Flo and Galerie Art) are manufactured with 10% post consumer recycled fiber and we offer up to 30 percent for some brands. Somerset, Opus and Flo web grades can be made with 10% recycled fiber content upon request.



FINISHING

Please Recycle

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Thank you for listening

Nirmeen Al-
janazreh



Hedaya AL-
hudairis

