



RETURN IT, DON'T BURN IT

RECYCLING OF PAPER MACHINE CLOTHING FOR A CARBON
NEUTRAL MATERIAL CYCLE

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ANDRITZ

TEAMWORK MAKES THE DREAM WORK!



Interdisciplinary cooperation to provide a brand-new customer service

ANDRITZ



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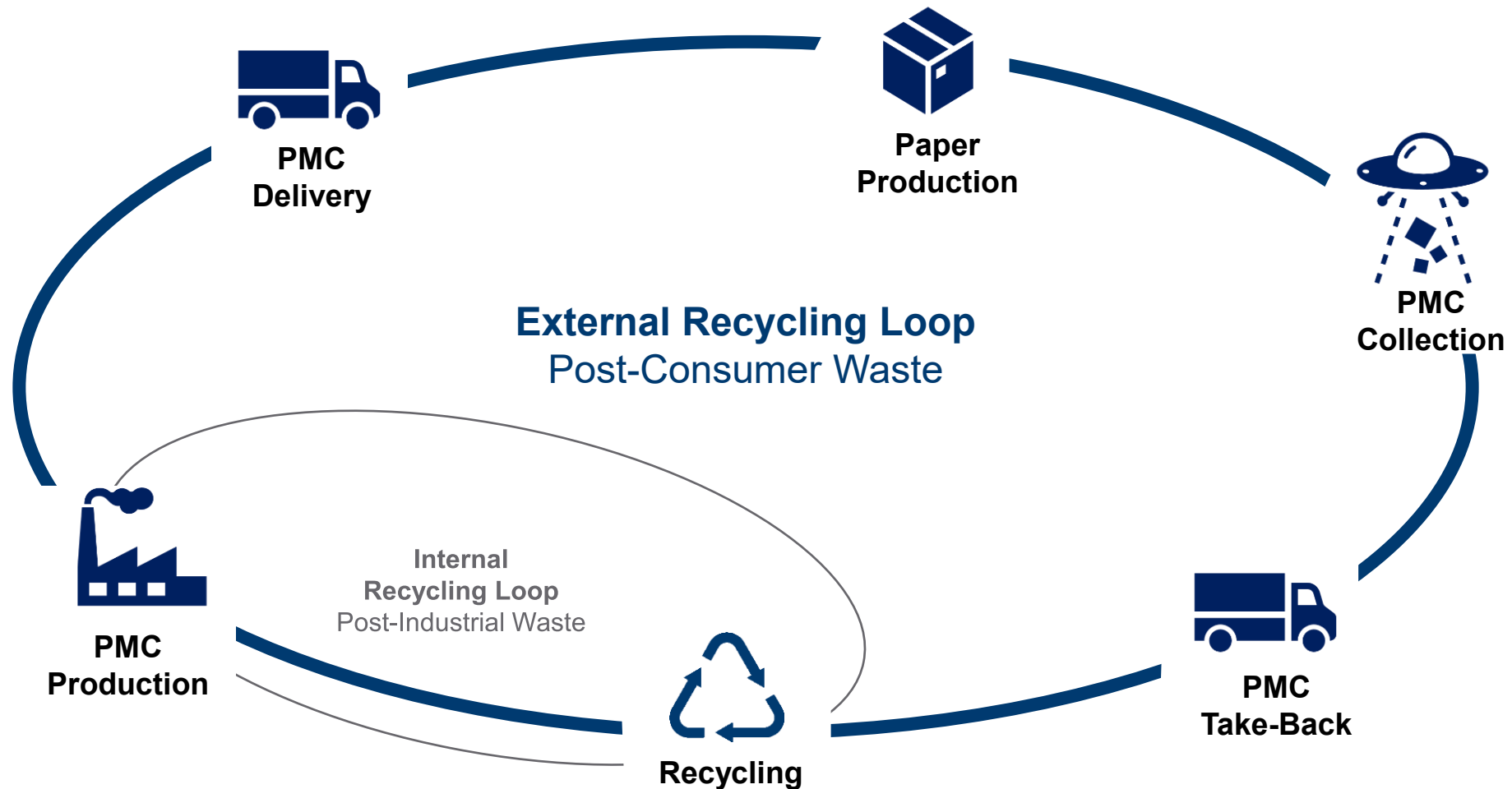
**holy
poly**



Niklas Bäumer

Project Manager PMC Recycling Program
HolyPoly GmbH

SUSTAINABILITY IMPACT BY TACKLING POST-CONSUMER WASTE



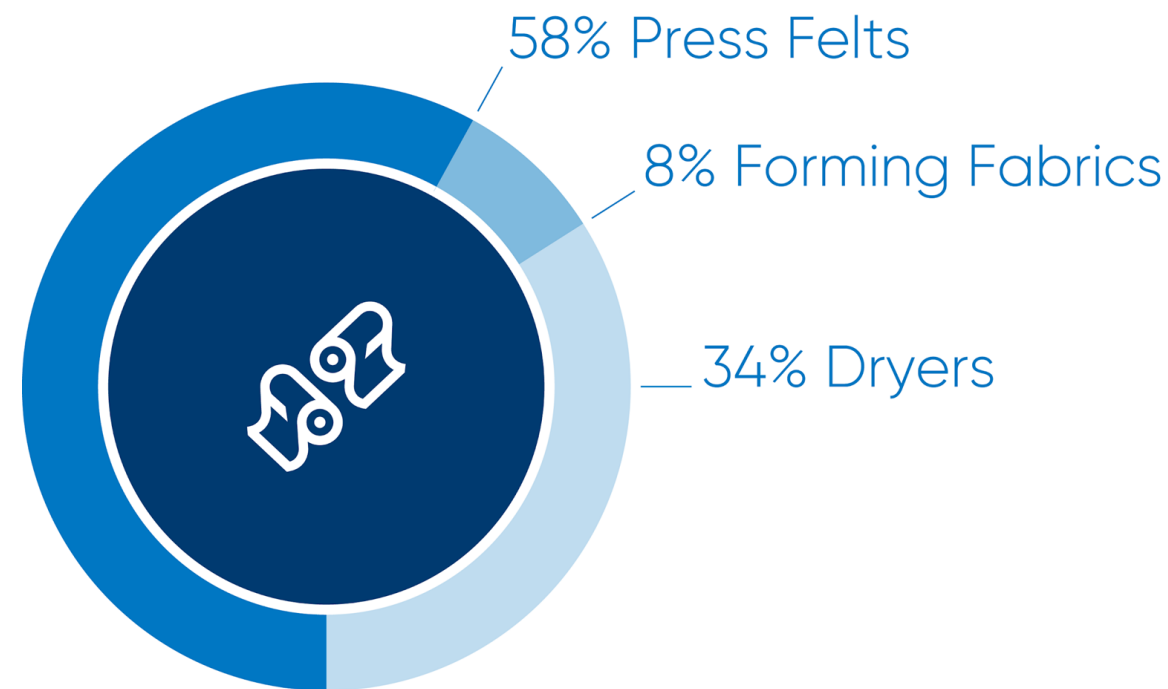


PMC RECYCLING PROGRAM

UNLOCK UNUSED CIRCULAR POTENTIAL OF POST-CONSUMER WASTE STREAM



7.000t

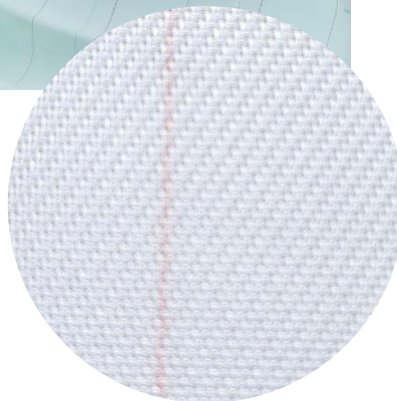


It is estimated that the annual consumption of clothing material on paper machines throughout Europe is substantial. The majority of it is incinerated. The utilisation of these 7,000 tons as raw material is a potential avenue for exploration.

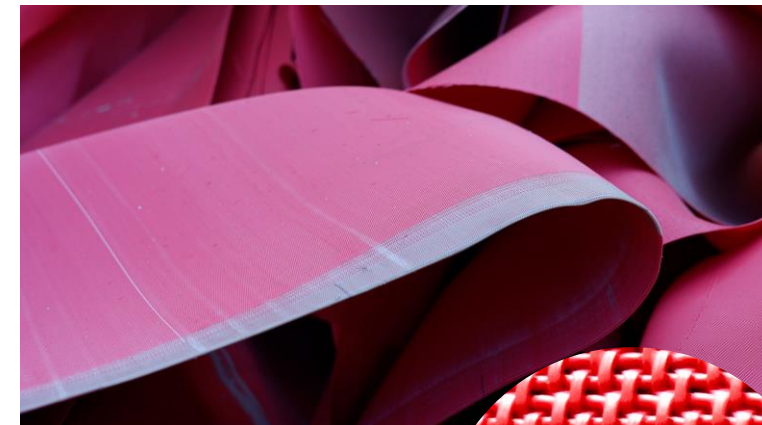
EACH TYPE OF PAPER MACHINE CLOTHING POSES A UNIQUE RECYCLING CHALLENGE



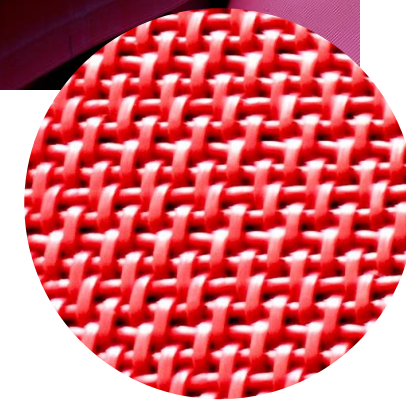
Forming Fabrics
PA6 & PET



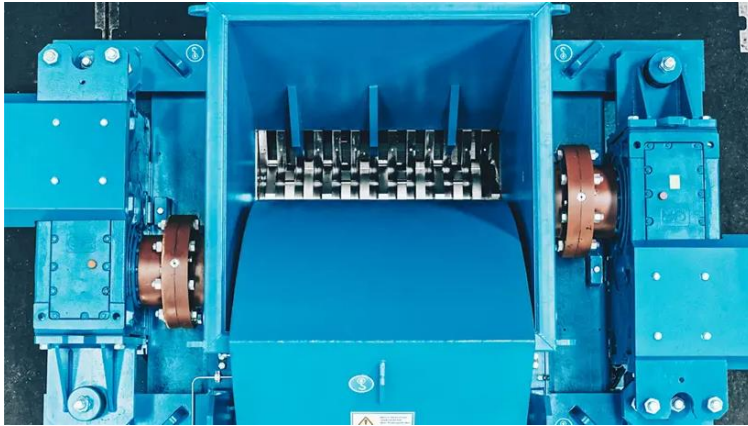
Press Felts
**PA6 together with
PA6.6. and PA6.10**



Dryer Fabrics
PET & PPS



THREE FUNDAMENTALS TO SOLVE THE PROBLEM OF RECYCLING PAPER MACHINE CLOTHING



Recycling of used Forming Fabrics and Press Felts

Technical feasibility checked and already successfully tested.

Take-Back Program and Logistics

Successful partnership with several Paper Mills in EMEA Region

Compliance

Application for authorization to collect and transport used clothing according to national legal regulations (EMEA)

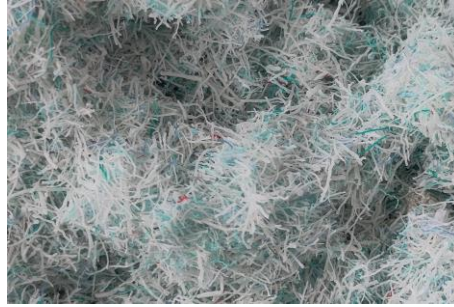
THE ART OF RECYCLING FORMING FABRICS AND PRESS FELTS



**Pre-cutting /
Shredding**



**Fine cut or
Grinding**



**Cleaning /
Separation**



Cleaning



Regranulation



OUR ULTIMATE GOAL IS TO RELIABLY PROVIDE CLOSED-LOOP MATERIALS FOR CIRCULAR PRODUCTS



1. Replace virgin materials in new products
2. Provide a steady and reliable material stream
3. Guarantee material properties and quality



FACING THE END-OF-LIFE REALITY OF PAPER MACHINE CLOTHING



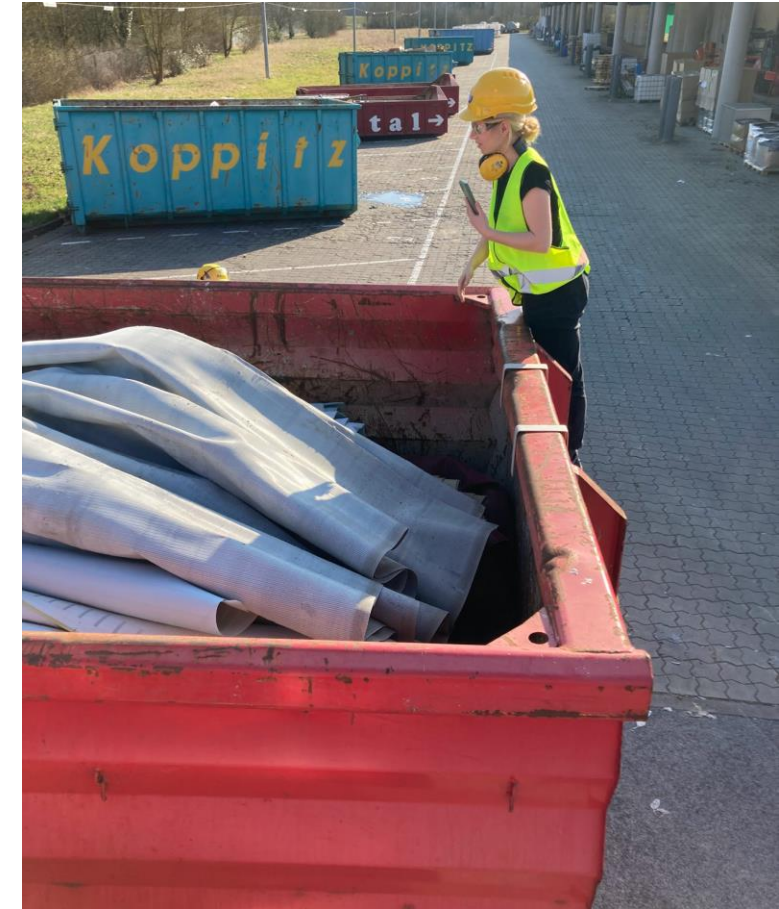
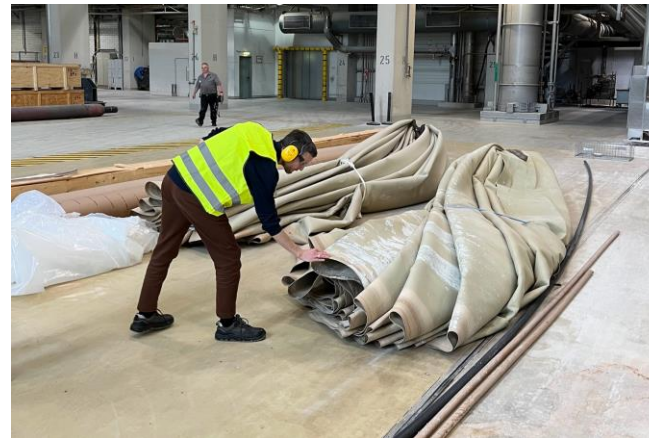
- No Packaging Standard
- Several Manual Treatments
- Hard to move without machine or crane
- Ends up as general waste



THE CENTRAL FOCUS OF THE RECYCLING PROGRAM IS TO INTEGRATE SEAMLESSLY INTO THE PAPER MILL'S EXISTING OPERATIONS



- User Research to understand the process of disposing old PMCs
- Integrate take-back in existing disposal process
- Individual onboardings



WE'RE TAKING IT ALL BACK | FORMING FABRICS AND PRESS FELTS FROM ALL BRANDS



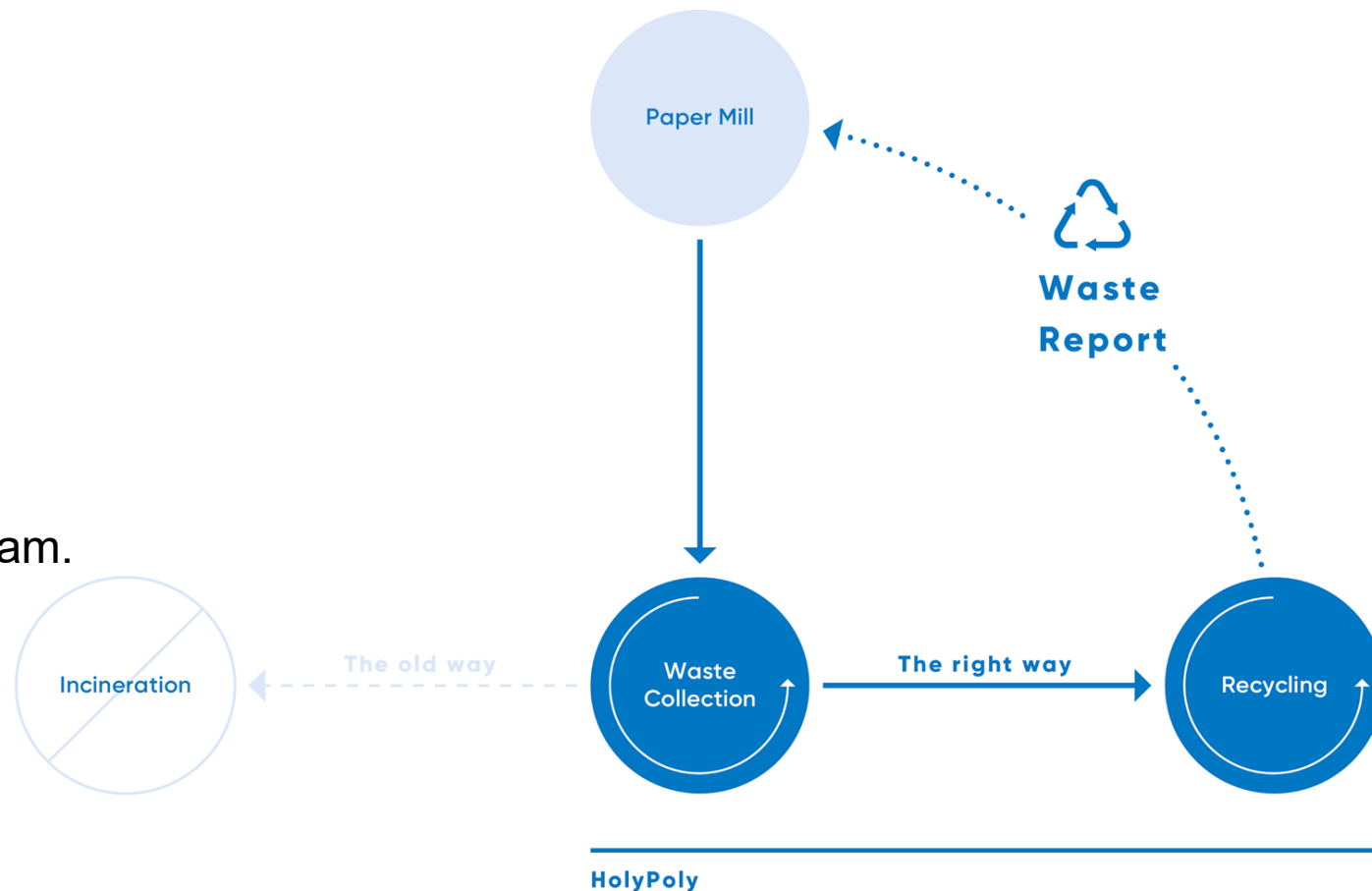
- Not limited to products from ANDRITZ
- Recycling for products from all manufactures
- Starting with Forming Fabrics and Press Felts (about 70% of the waste)
- Dryers shall be included in the future



LEGALLY SOUND FROM COLLECTION TO RECYCLING TO REPORTING BACK TO THE PAPER MILL



- It's about compliance
- It's about transporting waste
- It's about EWCs
- **holy poly** is a certified waste handler and is your partner for the recycling program.



A NETWORK OF PROFESSIONAL PARTNERS IS KEY TO SUCCESSFUL RECYCLING



From the initial container close to the paper machine to the final recyclate used as a replacement for virgin plastics, all processes are constantly being improved to increase efficiency and reduce the CO₂ footprint.



JOIN THE PROGRAM AND BENEFIT IN MORE THAN ONE WAY



**Reduce your non-recycled
residual waste output!**



Reduce CO₂-emissions by
avoiding incineration



Promote the use of recycled
materials in new products



End of waste documentation
and legal waste reporting



Partner with ANDRITZ for a
sustainable future



RETURN IT DON'T BURN IT

Reducing paper mill carbon emissions by recycling used paper machine clothing.

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