ANRIZ Pulp & Paper

E-Line Energy Saving Forming Fabrics

21.-22.11.2012



www.andritz.com

We accept the challenge!

- Energy Consumption
- Development Focus
- E-Line
- Case Study
- Benefits



Share on energy consumption

Energy Consumption





Share on energy consumption at forming

Energy Consumption

70-80 % of power consumption





Drive load as a cause of friction and vacuum

Energy consumption





- Energy Consumption
- Development Focus
- E-Line
- Case Study
- Benefits



Development Focus

Main application

- Paper production at high energy cost

Paper machines

- Fourdrinier, Hybrid-Former and Gap-Former

Operational targets

- Decrease of energy consumption
- Speed increase, but max drive load is reached



- Energy Consumption
- Development Focus
- E-Line
- Case Study
- Benefits



Innovative yarn technology E-Line

A new yarn technology providing

- decrease of power consumption
 - by reduced coefficient of friction
- standard wear resistance
 - by harmonized polymer specifications



New polymer combining only advantages of standard yarns E-Line





Drive load decrease – Friction coefficient E-Line

E-Line has comparable energy saving like PET



Drive load at different yarn materials based on PA / PET



Life time expectation - Abrasion E-Line

E-Line has equal life time expectation as PA / PET mix



Life time with yarn materials compared to PA / PET



- Energy Consumption
- Development Focus
- E-Line
- Case Study
- Benefits



Application
1. Case study

PM Type: Width: Speed: Grades: Grammage: Position: Fabric:	2 ply Fourdrinier 5.45 m 700 m/min Cardboard, Testliner 120-210 gr/sqm Bottom fabric Standard SSB	



Energy saving on Testliner

1. Case study

E-Line saves 36% energy compared to std. SSB



36%

Energy savings with E-line vs. mill's standard SSB

E-Line = 160,000 EUR annual savings



Energy saving on Cardboard

1. Case study

E-Line saves 45% energy compared to std. SSB



45%

Energy savings with E-line vs. mill's standard SSB

E-Line = 220,000 EUR annual savings





РМ Туре:	Hybridformer: BelBond + 2nd Headbox	
Width:	5.42 m	
Speed:	700 m/min	
Grades:	Corrugated Medium, Liner, White Top Liner	
Grammage:	125-240 gr/sqm	
Position:	Bottom fabric	
Fabric:	Standard SSB	
Furnish:	100% Waste	





Drive load with E-Line

2. Case study

Power consumption [kW]





Trial PET/PA and E-Line

2. Case study

Customer focus: Limitation:

Maximum production output Close to maximum drive load

1. PA/PET SSB

PM setup

- Consistency increase
- Vacuum decrease

Undesirable effects:

- Decrease on paper quality
- High chemicals (mainly starch) demand
- Worse runability

2. E-Line SSB

PM setup

- Normal Consistency
- Maximum vacuum

Added Value:

- Good paper quality
- Less chemicals (mainly starch) demand
- Good runability
- Drive load decrease of 150 kW





E-Line saves 15-20% energy compared to std. SSB



Energy savings with E-line vs. standard SSB

E-Line = 112,500 EUR annual savings



DITP 39th Int. Symposium, Bled - E-Line 11.2012

- Energy Consumption
- Development Focus
- E-Line
- Case Study
- Benefits



Benefits



E-Line products offer

- Reduction of energy cost
- Improved paper machine runability
- Increase of total paper production
- No readjustment of paper machine operation
- Unchanged easy handling of fabric



Legal Disclaimer

All data, information, statements, photographs and graphic illustrations contained in this presentation are without any obligation to the publisher and raise no liabilities to Andritz AG or any affiliated companies, nor shall the contents in this presentation form part of any sales contracts, which may be concluded between Andritz Group companies and purchasers of equipment and/or systems referred to herein.

© Andritz AG 2008. All rights reserved. No part of this copyrighted work may be reproduced, modified or distributed in any form or by any means, or stored in any database or retrieval system, without the prior written permission of Andritz AG or its affiliates. Any such unauthorized use for any purpose is a violation of the relevant copyright laws.

