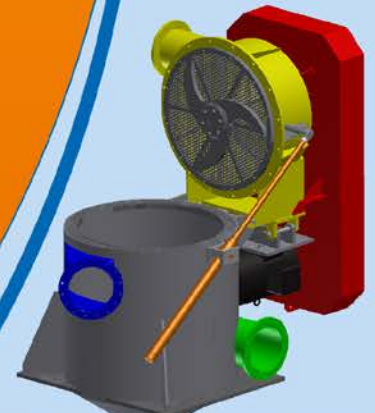
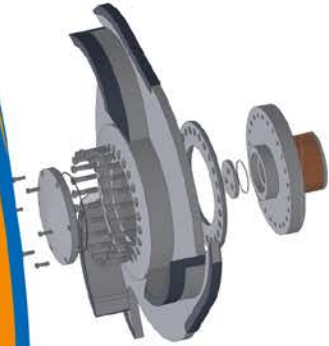


GREBIEN QUALIFIBER GMBH

Recycling Technology Since 1999

SIMPLE AND EFFICIENT





“FROM TRADITION TO THE FUTURE”

MEDNARODNO SREČANJE
SLOVENSKEGA PAPIRNIŠTVA



INTERNATIONAL MEETING
OF SLOVENE PAPER INDUSTRY

2 0 1 4

19-20 NOVEMBER
GRAND HOTEL TOPLICE
BLED, SLOVENIA

18TH DAN SLOVENSKEGA PAPIRNIŠTVA
18TH DAY OF SLOVENE PAPER INDUSTRY

41ST MEDNARODNI LETNI SIMPOZIJ DTP
41ST INTERNATIONAL ANNUAL SYMPOSIUM DTP



爲之謂者帛縑用其簡竹以編多契書古自
 用意造乃倫人於便不並重簡而貴縑紙
 奏年元興元紙爲以網魚布簾及頭麻樹
 下天故焉用從不莫是自能其善帝之上
 紙侯蔡稱咸

Chinese Tsai Lun
 105 according to
 Christian calendar



May - 2010

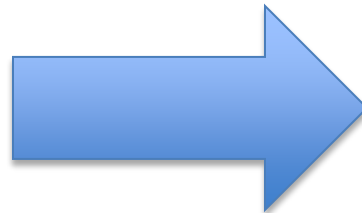
Hainan Jinhai Pulper & Paper Co., Ltd.

Biggest paper machine in the world

Wire width: 11.800 mm

Max. speed: 1.700 m/min

Max. capacity:



4.500 mtpd



Annual paper production (2012):

- World-wide 400.000.000 mt
- Europe 92.000.000 mt
- Germany 22.600.000 mt (ca. 50% packing paper)
 - Made from recycled fibre 16.500.000 mt
 - Made from pulp 4.500.000 mt
 - Made from wood 1.200.000 mt



**“Preparation of strong
contaminated
recycled paper –
simple and efficient”**

Recycling fibers:



- Max. 3 % Content of „non-fiber“ material = Theorie

“recycling fiber” in reality...



“recycling fiber” in reality...



“recycling fiber” in reality...



“recycling fiber” in reality...



“recycling fiber” in reality...



“recycling fiber” in reality...



“recycling fiber” in reality...



Result's in reality...



Result's in reality...



Result's in reality...



Result's in reality...



Result's in reality...



Result's in reality...



Result's in reality...



Result's in reality...



Result's in reality...



Result's in reality...



Result's in reality...



Result's in reality...





Why we WANT to use „contaminated“ recycled fiber´s?

- Flexibility in purchase of raw material
- Cost reasons
- Integrated power plant



**How we CAN use
„contaminated“
recycled fiber´s?**

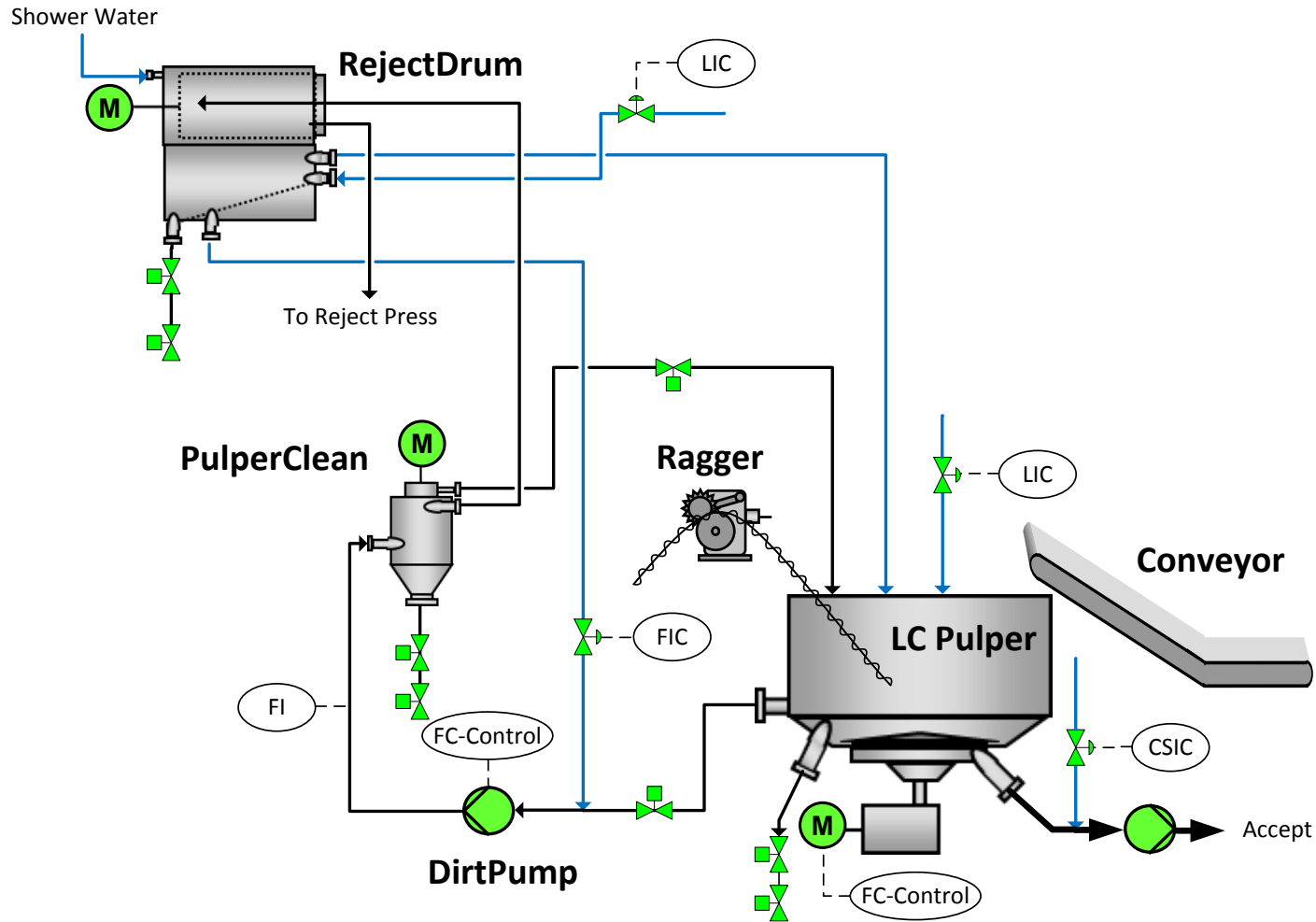
Option 1:



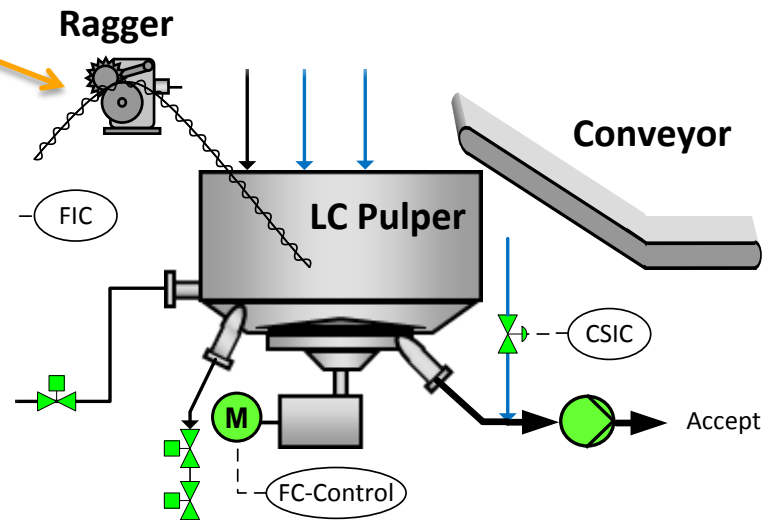
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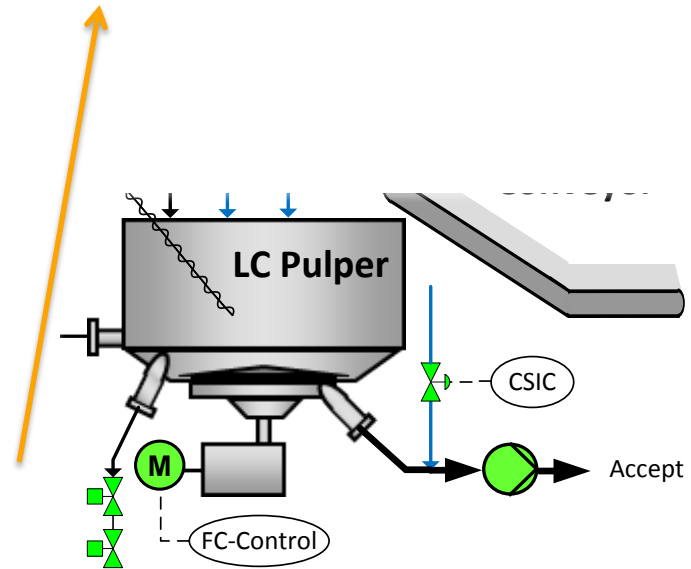
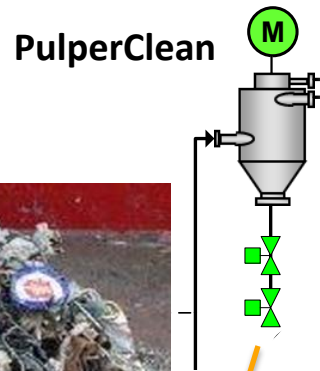
use a modern system



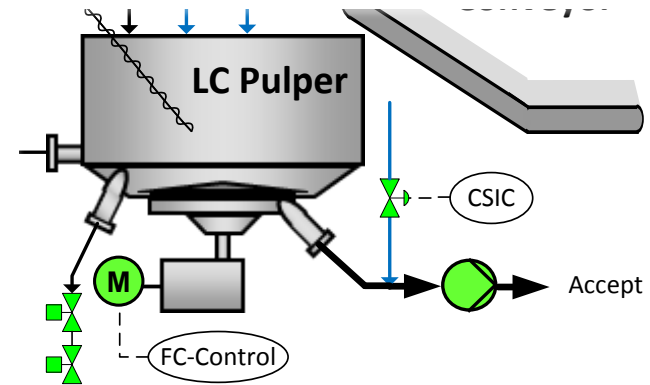
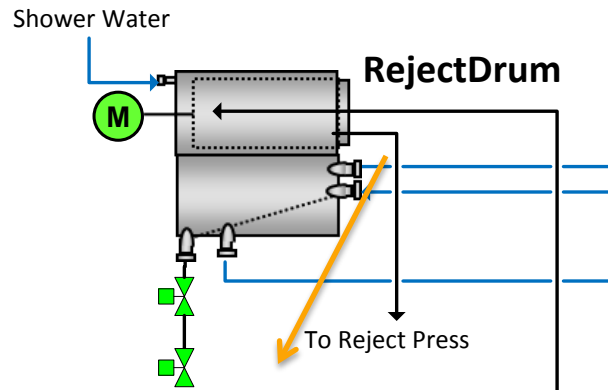
Pulper and Pulper Cleaning:



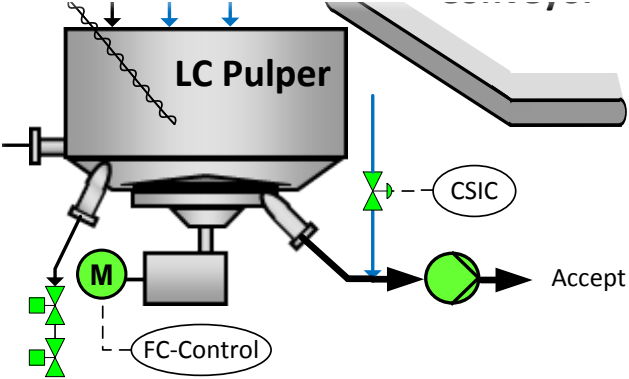
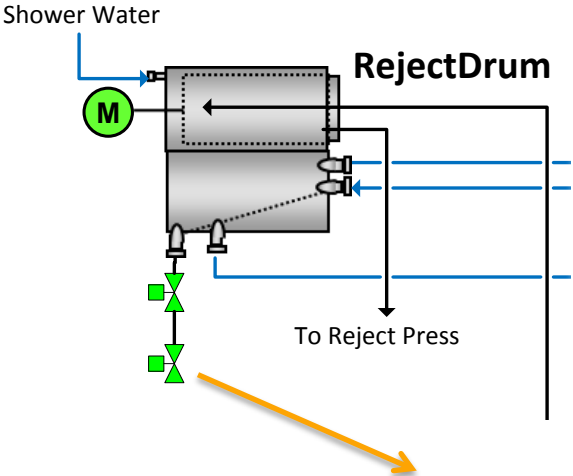
Pulper and Pulper Cleaning:



Pulper and Pulper Cleaning:



Pulper and Pulper Cleaning:





How we SHALL use „contaminated“ recycled fiber´s?

- Use a high availability Pulping system
- Power consumption of Pulping group < 15 kWh/mt
- Flake content in accept < 8% (Summerville 0,15 mm)
- Fiberloss < 10% of useable fibers

Qualifiber LC-Pulper Typ 65K:



- ✓ Flexible in capacity
- ✓ Need $\sim 6 \text{ kW/m}^3$
- ✓ Consistency 4 – 6%

Qualifiber LC-Pulper Typ 65K:



- ✓ Flexible in capacity
- ✓ Need $\sim 6 \text{ kW/m}^3$
- ✓ Consistency 4 – 6%

Equipment for Pulper Cleaning System:

Qualifiber Dirtpumpe Type H





Equipment for Pulper Cleaning System:

Qualifiber
Pulperclean - V



Equipment for Pulper Cleaning System:

Qualifiber Pulperclean - V



Equipment for Pulper Cleaning System:

Qualifiber Rejectdrum - T



Equipment for Pulper Cleaning System: Qualifiber Rejectdrum - T



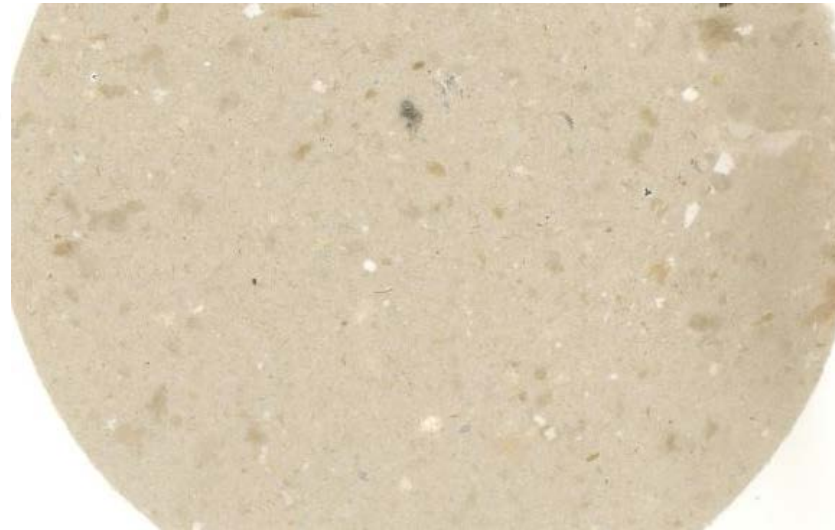
Result in Turkey...



Raw material



Reject Pulping <10% fiber



Accept Pulper <8% flakes

Use max. 15 kWh/mt

Result's in reality...



Good result's in reality...

...is always TEAMWORK



“FROM TRADITION



...TO THE **FUTURE**"



Bild: Voith Paper



Only „TODAY“ can help us:



- ...to produce paper - using as less resources as possible
- ...to understand – what quality is necessary and what is „nice to have“
- ...to find the right arguments why it is better to use paper and board than other materials
- ...to find new ideas how we can be better today than yesterday...



GREBIEN QUALIFIBER GMBH

People are doing things well and efficient, if it makes them happy....

SIMPLE AND EFFICIENT

