

More than Resource Saving, improving Productivity
and Operation Efficiency

不仅是资源节约，更是优化产出和提升运营效益

Water And Energy Saving Idea 节能降耗运营新思路



Moganshan Seminar 莫干山交流会

April 23, 2015

马修宝 / David.ma@asiapapertech.com

& Gilles Boulianne



<< Under The
Dome >>

<< 穹顶之下 >>



<< Fading Dragon

>>

<< 消逝的龙脉 >>



Rice 水稻



Potato 马铃薯



Total
tons of water
per year only
wire cleaning
in China

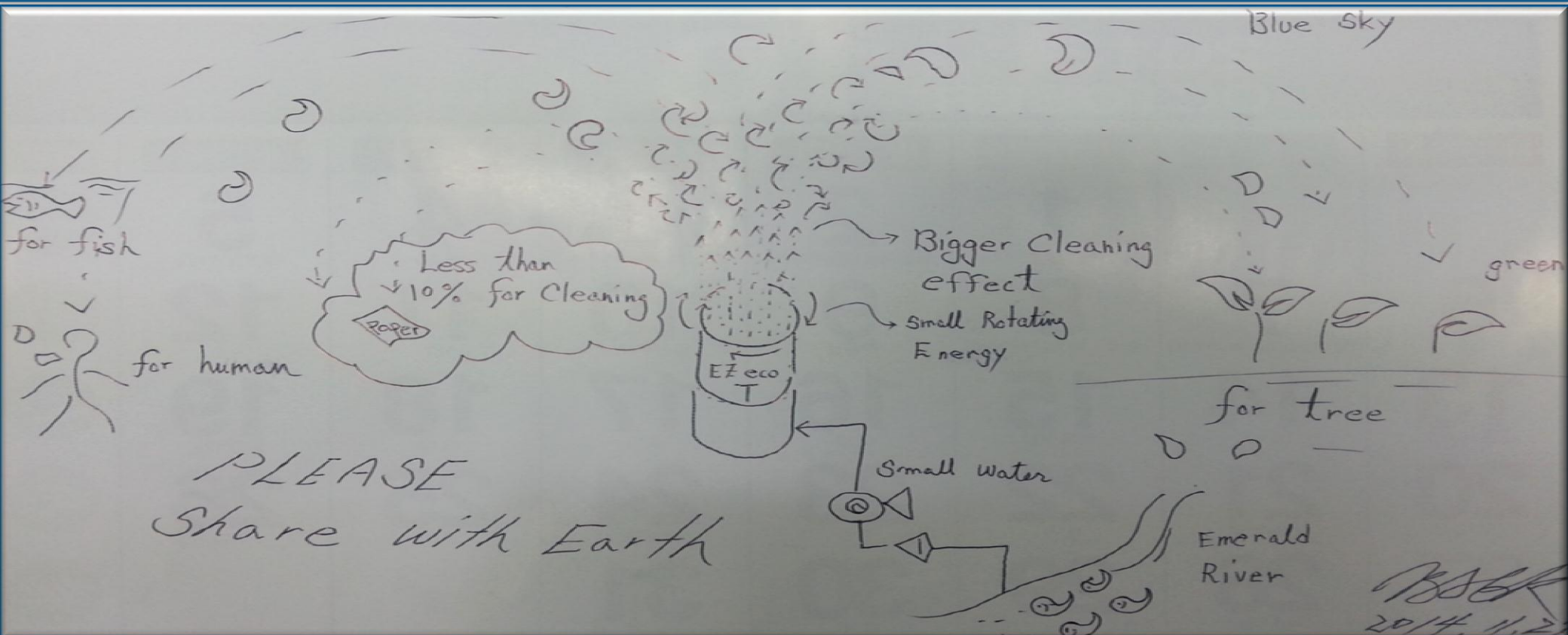
300

million

每年仅清洗
成型网耗水

3亿吨

The Solution...



Replacement of HP Oscillating Shower

取代传统的高压摆动喷淋

High pressure Osc. 传统高压喷淋

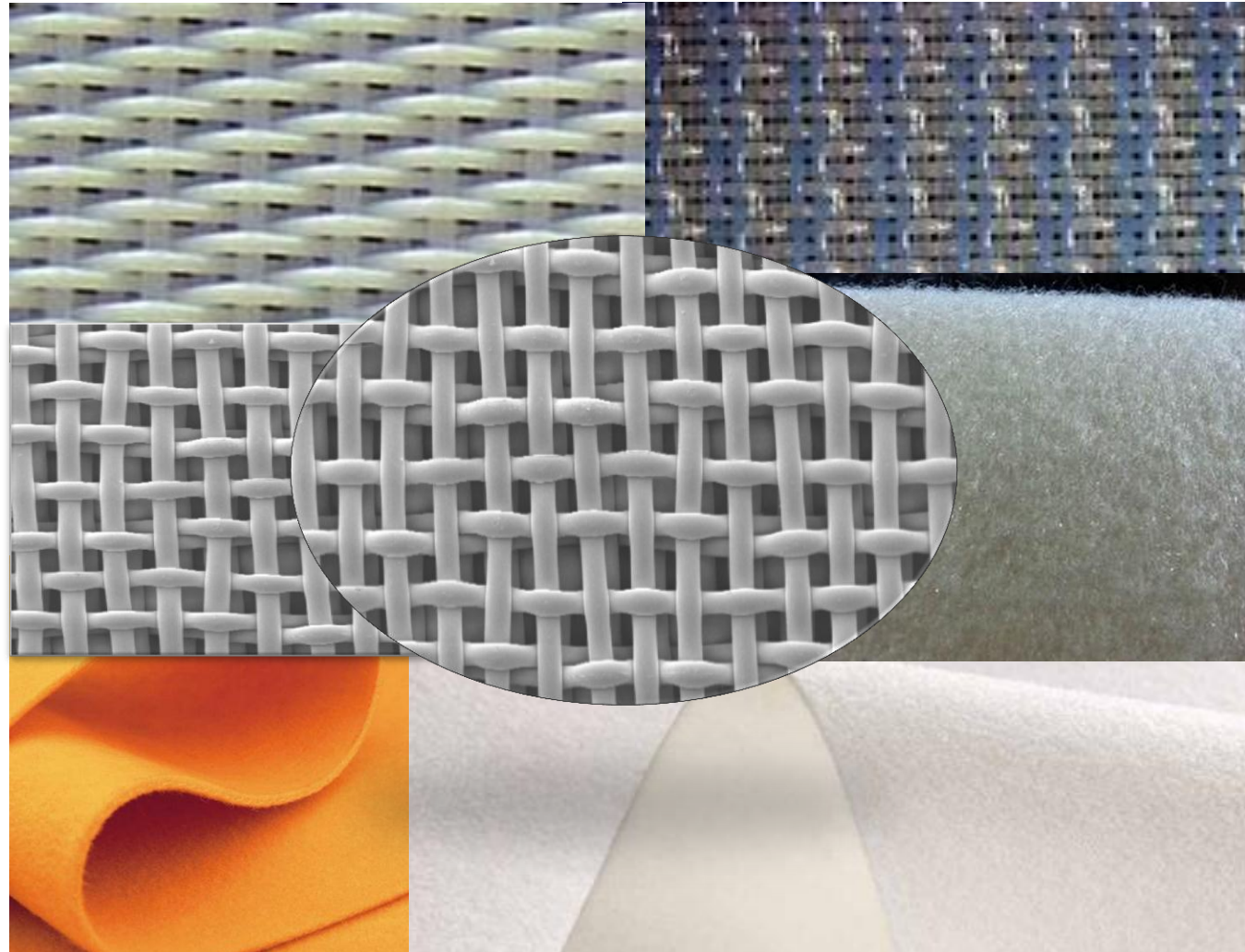


EZ eco T Rotating Head EZ eco T 旋转清洗头



Proved Forming and Press Cleaner

成熟的网子和毛布高压清洗器



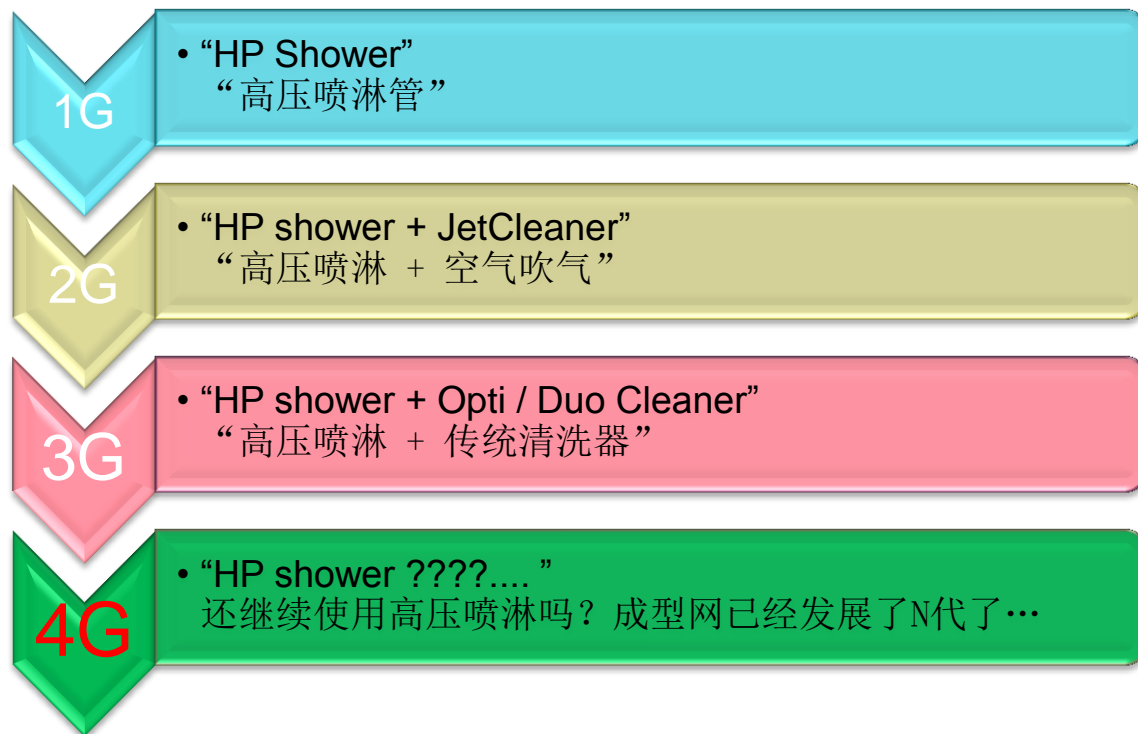
- From the old single layer forming fabrics to the latest SSB triple layers forming wires; From the far woven felt to today modern casted felt.

从传统的单层网到目前流行的SSB三层网；从传统的纺织毛毯到现在的浇注皮带。

- More layers, most difficult to clean. 织物层数越多，越难清洗。
- Proved field success. 经过反复验证的成熟产品。

Is There Any Cleaning Evolution for Wire?

网子清洗方法有过根本性的变革吗？



It's time to
change

是时候
改变了！



Motor Driven Rotating Head

独立高速旋转电机驱动清洗头



**High Energy Impact
Scrubbing Effect
Cleans deeply**

高能冲洗、旋转剪切、清洗更深入

- Variable speed motor 0.34 kW 变频电机
- Rotation 300 – 1,500 rpm 转速
- 32 sapphire nozzles 0.2mm 32个0.2mm喷嘴
- Easy head removal < 30 sec 快换设计
- 120mm cleaning width vs 60mm 清洗头直径达110mm

GUARANTEED 担保

No Damage To Wire 不会损伤成型网



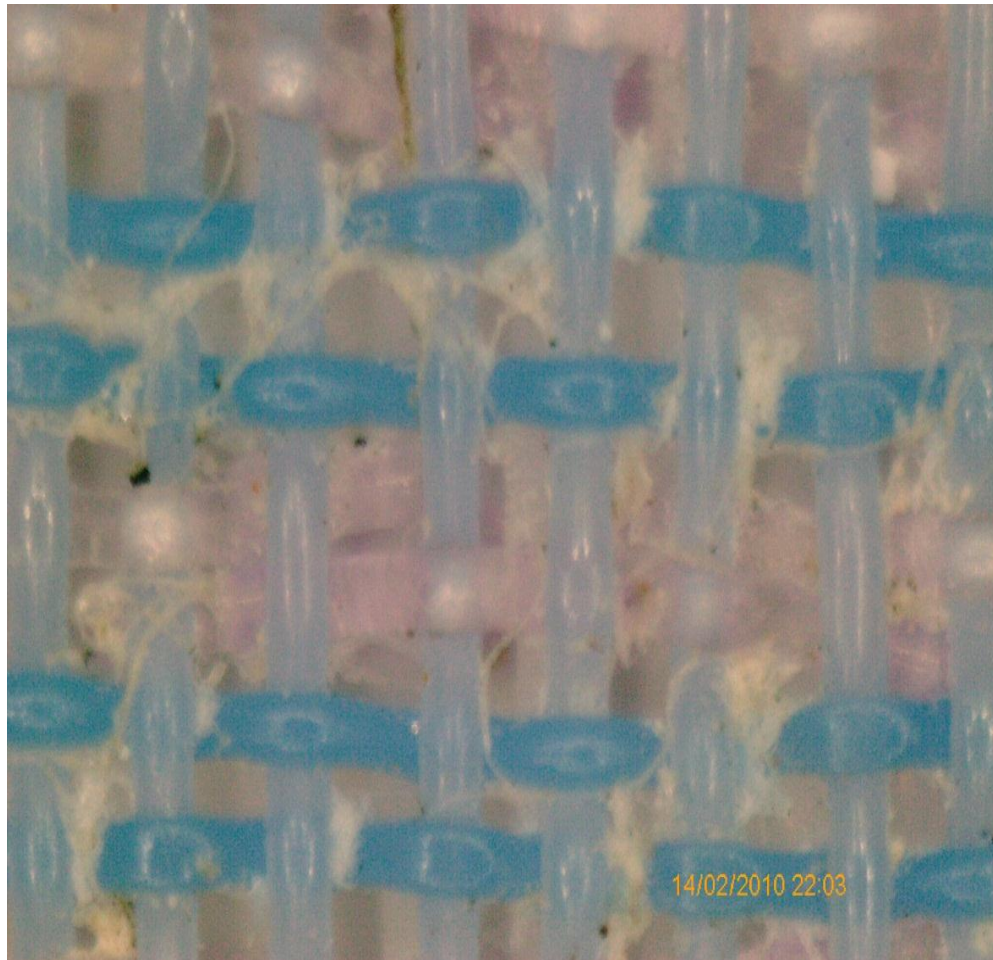
Infinite
and
Beyond
比想象更远

**Rotation Makes
Difference**
旋转让您与众不同！

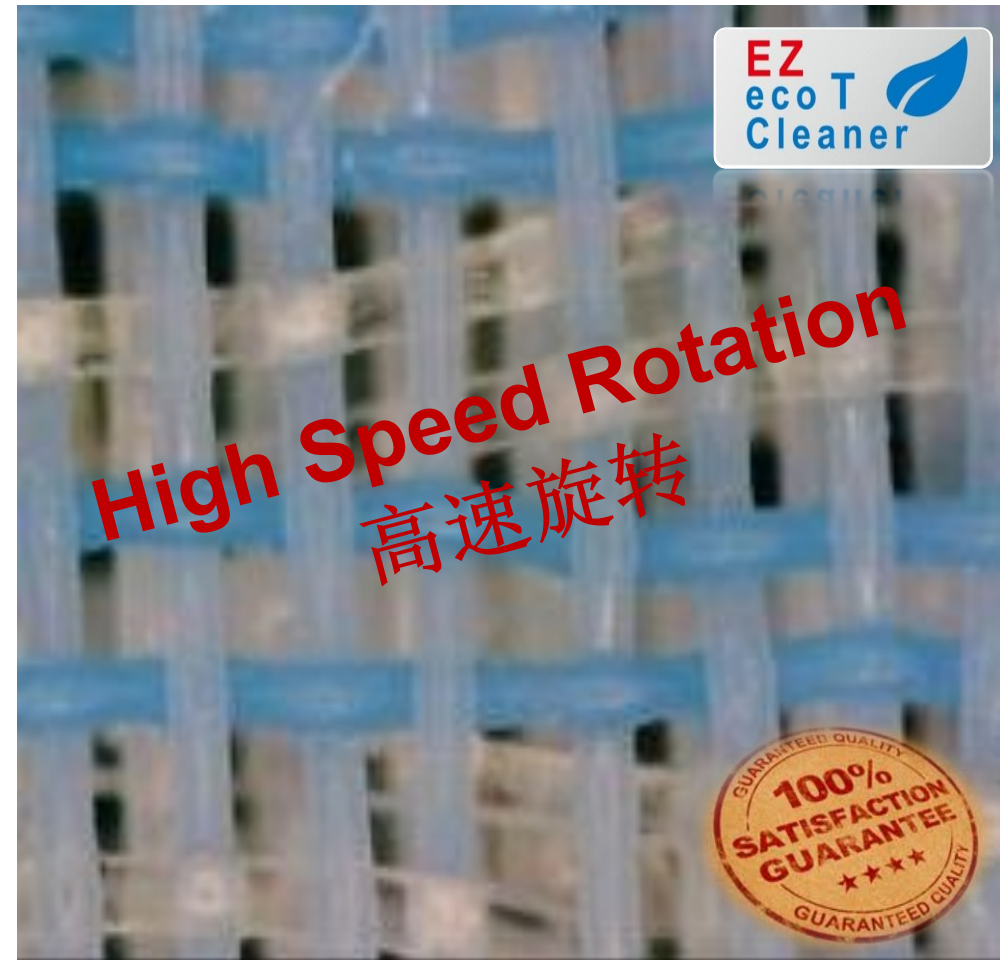
Rotating Performance

高速旋转清洗实战效果

Traditional HP Shower ...



EZ eco T Cleaner Rotating Cleaner



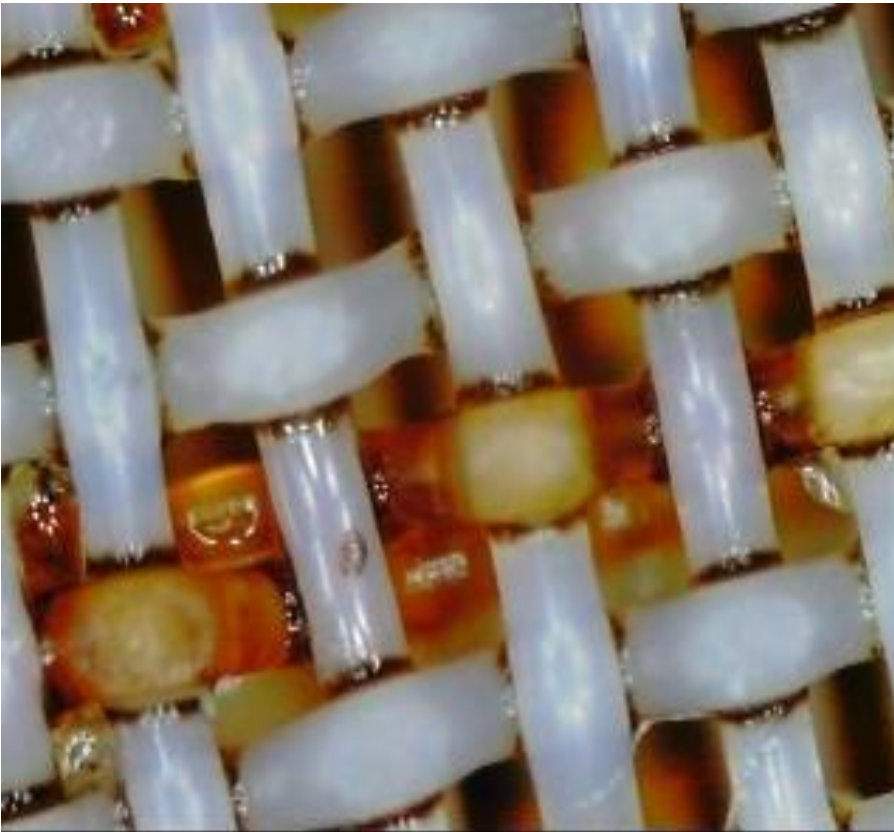
Rotation = High Cleaning Performance

高速旋转是高效清洗的至关重要关键

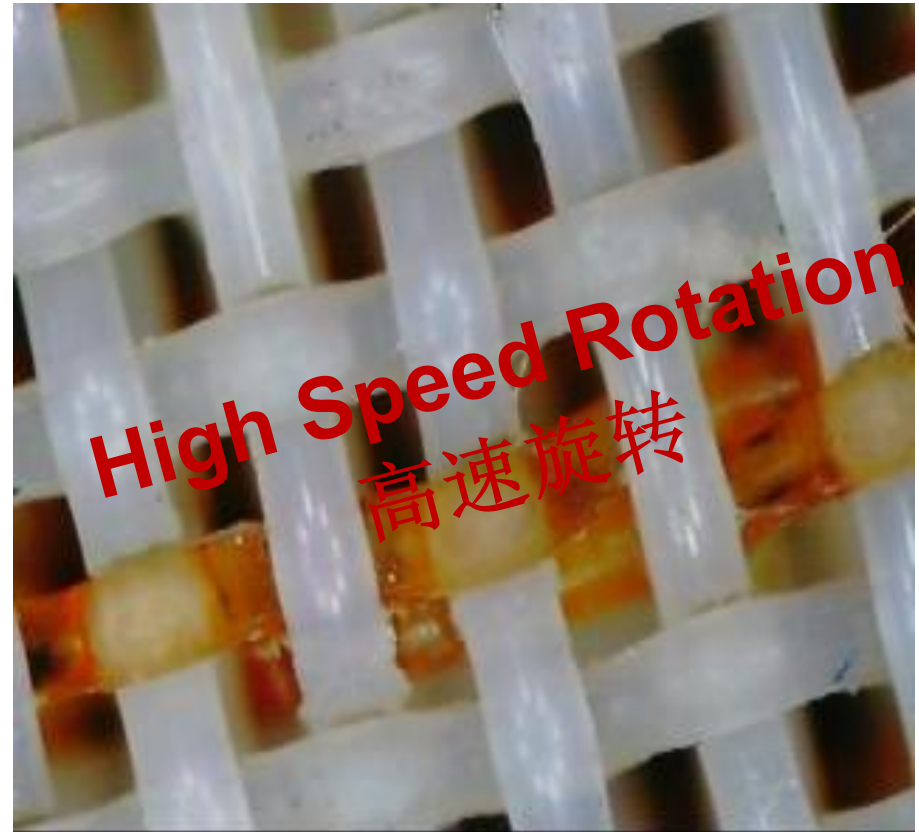


Rotation Cleaning effect

Rotation Makes Difference 旋转让您与众不同！



Non-Rotating 不旋转



Rotating 旋转

Water Savings 节水

Save water, save life 水是生命之源



HP Oscillating Shower 传统高压喷淋

Shower Location	Qty	Water Press. bar	Wire Width mm	Nozzle Spacing mm	# of Nozzle	Dia. of Nozzles mm	Flow per Nozzle l/min	Total Shower Flow l/m	Total Shower Flow m ³ /hr	Total Flow m ³ /day	Total Flow m ³ /year
Top Wire	1	30	8,100	74	109	1	2.6	285	17	410	143,436
Bottom Wire	1	30	8,150	74	110	1	2.6	286	17	412	144,321
Total Water Consumpt for 2 HP showers in m ³ /yr											287,757

EZ eco T Cleaner 新一代的高压旋转清洗 less is more

Shower Location	Qty	Water Press. bar	Wire Width mm	No. of Shower Heads	# of Nozzle	Dia. of Nozzles mm	Flow per Nozzle l/min	Total Shower Head Flow l/m	Total Eco Cleaner Flow m ³ /hr	Total Flow m ³ /day	Total Flow m ³ /year
Top Wire	1	150		2	32	0.2	0.25	8	1.0	23	8,064
Bottom Wire	1	150		2	32	0.2	0.25	8	1.0	23	8,064
Total Water Consumption for 2 EZ eco T Cleaner in m ³ /yr											16,128

Water Saving in 1st year of Operation 运营第一年节水

271,629 m³/yr

of Olympic Swimming pool the water could fill

109

High Speed Rotation
高速旋转

ALL ABOUT WATER ...

全部关于水的行动...





High Speed Rotation
高速旋转

NO MORE MIST ON TOP FORMER
顶网无任何水雾

Power Savings 节能

Less carbide footprint & NOx 减少排放



Power Savings

HP Oscillating shower 传统高压喷淋

EZ eco T Cleaner 韩国大成新一代高压清洗

Power Savings

=====

\$

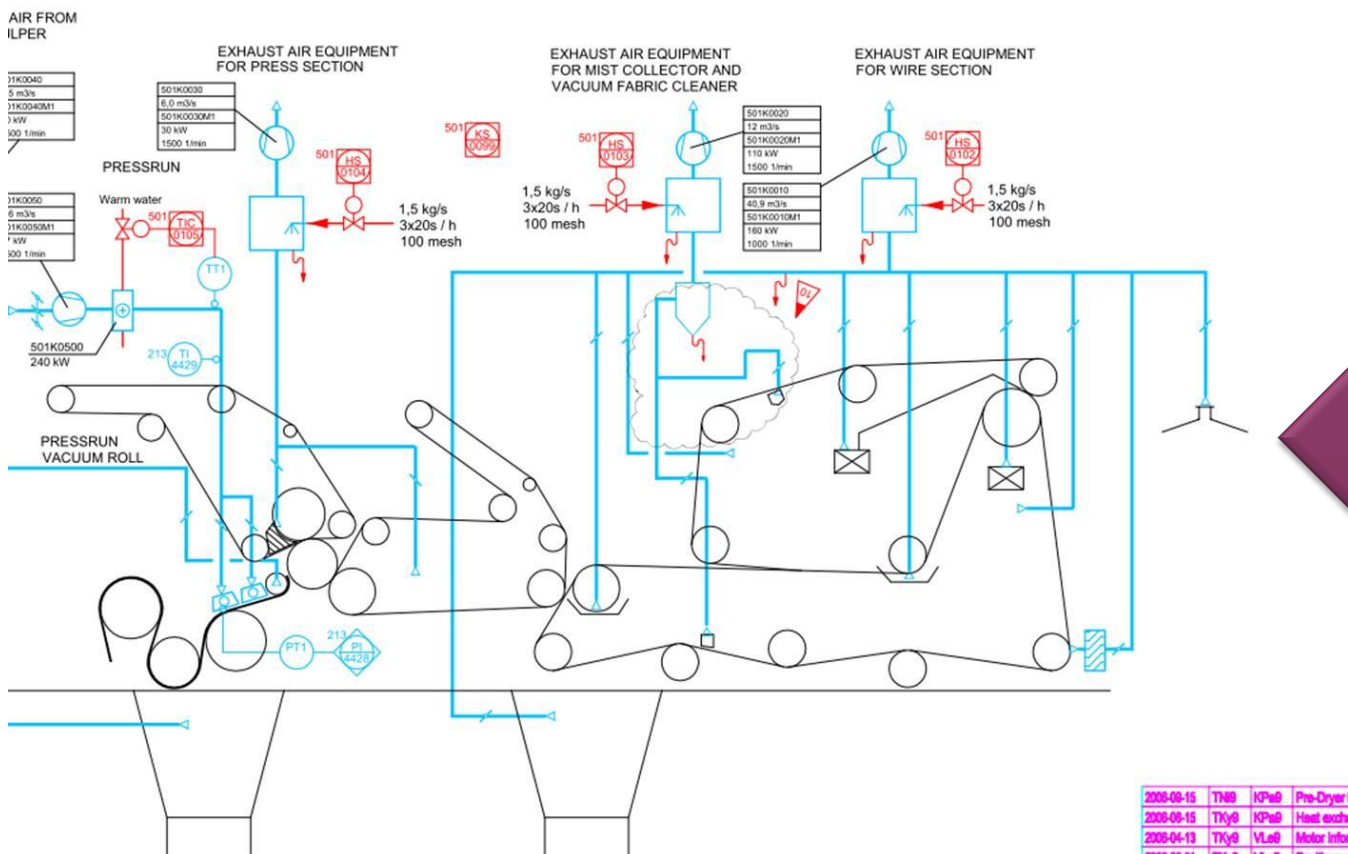
150 kW

20 kW

130 kW

Mist Removal Process

典型的水雾收集系统



**No more mist
why you use
exhaust ?**

如果没有水雾产生，为什么还要用水雾收集器呢？

**Huge power
saving!! 巨大能源节约!!**

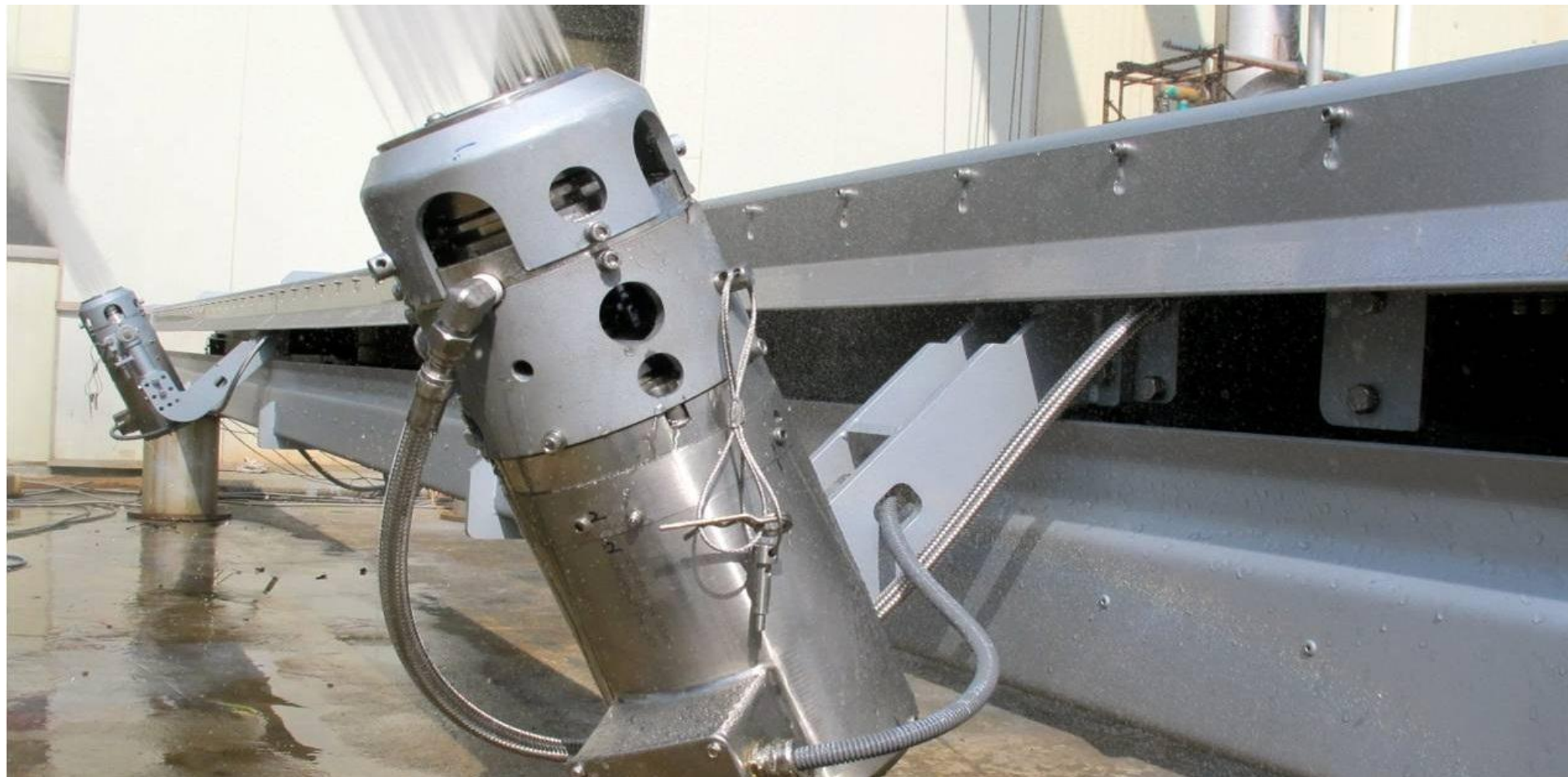
~110kw+160kw

Reference Mist Removal Process

2008-08-15	TN09	KPa09	Pre-Dryer h
2008-08-15	TKy0	KPa09	Heat exch
2008-04-13	TKy0	VLa0	Motor Infor
2008-03-01	TKy0	VLa0	Positions of
2008-08-12	JH09	VLa0	For approve
2008-08-30	TKy0	VLa0	For Informa
DATE	NAME	CHK	

FAT 厂内测试

Double Rotating Heads Available 双清洗头应用于世界最现代纸机



EZ eco T Cleaner

OUR GUARANTEE 我们担保

1/ 80 – 90% reduction in fresh water consumption from HP showers

减少现有高压喷淋水消耗 (80%-90%)

2/ Will not need any other forming wire cleaning system 不需要其它任何清洗

- eliminate HP oscillating showers 拆掉现有高压喷淋系统
- eliminate mist removal boxes 拆掉现有水雾收集装置

3/ Increase high wire cleaning performance 显著提高网子的清洁性

- less sheet defects 减少纸病
- less sheet breaks 减少断纸

High Speed Rotation
高速旋转

4/ Wire lifetime - Same or better (no wire damage) 网子寿命不受影响 – 同样或更高

5/ Better CD profiles due to more uniform CD cleaning 脱水更均匀，型线更好

6/ To increase your total operation profit 明显增加纸机的整体运营效益

enjoy the cleaning !
清洁运行，尽情享受！



More paper, Less energy, At lower cost
低能耗，低成本，高产出



GO GREEN



High Speed Rotation
高速旋转