DESCRIPTION COATING LINE, ER-WE-PA

1 Common

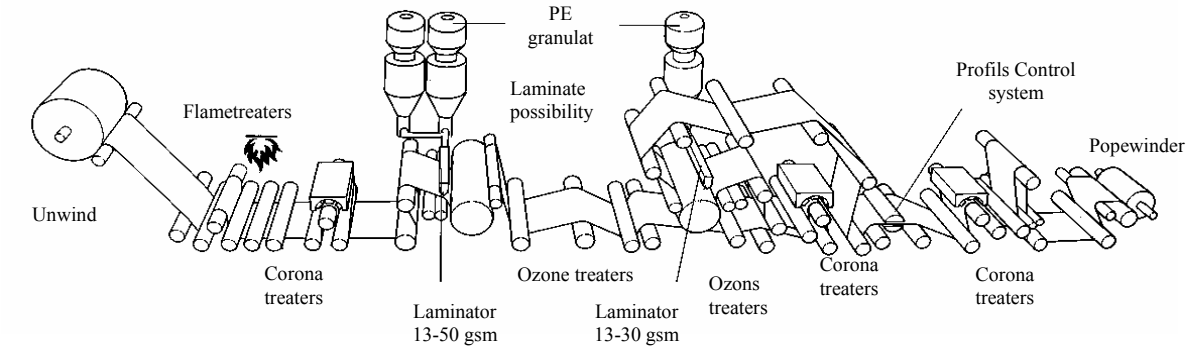
Coating line is planned for laminating and coating of paper and paper board. There are two unwinders which diameter is 1800 mm, which means that line is planned especially for laminating applications. Line has two laminators: 1st laminator can be used for lamination or coating and second laminator is used for coating. Winder is pope type winder, where paperboard cores are used.

Line is builded in two floors: unwinders, pre- and post treaters, laminators and pope winder is located in working floor. Quiding rolls of laminating unwinder, ozone generator, cooling water system including compressors and pumps, pressure air compressor and tank are located in basement floor.

2 Technical data

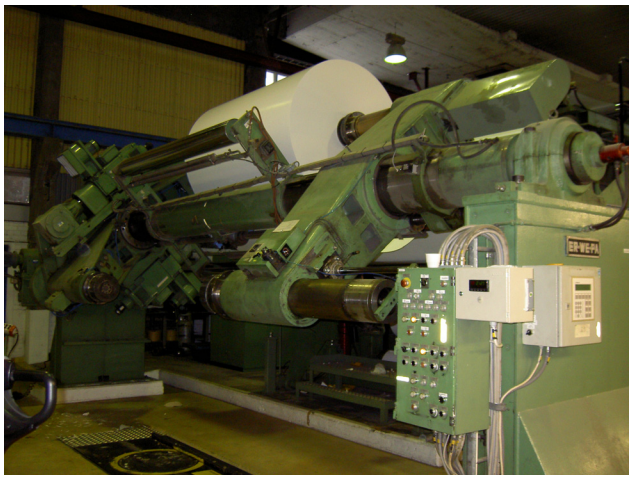
Start up year	1983
Web width	2240 mm
Max. speed	400 m/min
Max. unwind diameter	1800 mm
Number of unwinders	2 pcs
Number of laminators	2 pcs
Extruders	
- top side	1 x 4,5”
- bottom side	2 x 4,5”
Extruders output (LDPE)	
- top side	450 kg/h
- bottom side (tot.)	900 kg/h
Pre treaters	2 x flame treater
	2 x corona treater
	2 x ozone treater
Post treater	1 x corona treater
Defect detector	No

3 Condition of coating line



3.1 Unwinder

Line has two very similar unwinders. Unwinders are mounted on floor and they are opening both directions. Maximum width changing during running is 110 mm because of structure of unwinder. Max. opening of unwinders is 2530 mm. Only difference between unwinders is that second unwinder has updated system of spindle. Both unwinders are equipped with lift tables.



Flame treaters

Flame treaters are in very good condition. They are installed 2004 and supplied by Aerogen. Width of flame burner is 2,4 m.

Dies

There are installed automatical dies with internal deckling from company Cloeren in both laminators. Dies has been installed 1994. Maximum open width of die is 2400 mm and in rather good condition.

Corona treaters

Line has 3 corona treaters: 2 Sherman treaters for pretreater of web and one Vetaphone posttreater ton increase surface energy of PE surface. Sherman pretreaters are old and Vetaphone corona treater is only few years old (installed 2002) and it is in good condition. There is made even upgrading of generators.

Extruders

There are totally 3 times 4,5” extruders. Two extruders are installed in first extruder carriage for bottom side coating and one is installed in second extruder carriage for top side coating. Capacity of each extruder is 450 kg/h, which means that max. PE output in the bottom side is 900 kg/h and on the top side 450 kg/h.

Ozonator

There are ozonator and ozone pipes installed in coating lines to get better adhesion. One ozone generator's pipe is out of order and 11 are working. Normally it doesn't limit treating level. Otherwise ozone generator and piping looks to be in good condition. Mark og equipment is Ozonia.

Chill rolls

There are totally 5 pcs chill rolls. Three of them have matt surface and two of them have GLF (gloss low friction surface). Width of shell of chill rolls is 2400 mm and diameter all of them is 900 mm. Exact cooling width is not knovn, because drawing where structure could be seen are not available. Some shells of chill rools were from aluminium and some of them were made from steel. Supplier were ER-WE-PA, Corelink and one looks like Derichs chill roll (producer was not mentioned). Lastest mentioned chill roll has some welded stiffeners in one end of chill roll. Two of chill rolls had new surface.

Electical drives and motors

Coating line is equipped with Honeywell drive control system TDC

3000 and with ASEA motors. They looks to be original.

Over coating slitting knives

Line is equipped with self made over coating slitting knives after 1stand 2nd laminators. There is also suction system of over coating stripe. Piping and blower were installed on basement level.

Profile control system

Line is equipped with Measurex profile control system. It includes frame and IR sensors in both sides of web. System is builded up to measure polyethylene.

Plastic feeding system

Coating line has gravimetric plastic feeding system in all extruders.

Plastic conveying from silos to the extruders feed hoppers are planned for maximum output 450 kg/h. Conveying is made by vacuum. Choosing of plastic silo will happen so, that you have to move conveying pipe to the wanted silo manually.

Winder

Coating line has pope type winder with expanding shafts and paper board cores. There is automated shaft handling system which is used for taking shaft out from machine reel, inserting new core and putting shaft back to the pope winder.

Cooling water system

Coating line has closed cooling water circulation. It takes cooling water of compressor from river. System has three small compressors with heat changers installed basement and one quite new cooling compressor by York installed outside of production hall.