



## Technical theme - paper machines

Francesco De Biasi, director ICONè S.r.l. (former GapCon tissue S.r.l.)

### TWM/1: What were your key technical developments during 2017?

GapCon tissue started-up a new, unique and patented concept of stand-alone shoe press application for tissue in Buenos Aires, Argentina, in the second quarter of 2017.

EconPRESS™ NExT (New Extended nip concept for Tissue) is the new tool for the tissue manufacturing. The main issues that our customers are facing are still energy and resources saving. GapCon has developed the new tissue machine line EconSOFT™ ERS (Energy and Resources Saving), featuring a high consistency headbox, Steel Yankee Dryer with enhanced stiffness and advanced tissue reel. The Papelera Samseng EconSOFT™ ERS machine has already reached the guaranteed production related to 20,5g/m<sup>2</sup> sheet, with 20% creping factor, reel trim 3,45 m and YD speed of 1.750 m/min.

The dryness of the sheet entering to the YD features more than 47% at 1,500 m/min and almost 46% at 1,750m/min, with operating shoe press linear load set on 200kN/m. The machine is equipped with the YD of dia. 12 foot (3,66m).

The customer confirmed that he is currently increasing the bulk between 8 – 10 % and decreasing the basis weight, with a consequent saving of fibres, getting the same mechanical properties and product quality.

### TWM/2: What changes have you seen in the global tissue market in terms of changes in demand, and what new challenges and opportunities has that presented for paper machine suppliers?

In the last year we have seen a relevant increase of entry level tissue machine demand (2,8m paper trim – 50/60 tpd average daily production), mainly coming from converters that are planning to produce by themselves their own tissue instead of buying jumbo rolls from the market.

This resulted in an important market opportunity in terms of potential selling but the business is price driven, so the challenge is to offer the best compromise between machinery price and overall quality.

### TWM/3: What new challenges do you face in terms of providing energy efficient machines for your customers? How are you dealing with this?

We are dealing with the supply of energy efficient machinery and also with the need to save fibre and fresh water as much as possible. Our answer to this is our EconSOFT™ ERS tissue line featuring several tools for energy and resources saving. However, machine is not the exclusive answer: a lean and smart process concept (stock preparation, approach flow, broke management and process water circuit) always results in money saving on operational costs.

As a global tissue line supplier, we design the right process according to real customer requirements.

Finally, there're some third part technologies (i. e. vacuum blowers instead of liquid ring pumps) that contribute as well to energy and water consumption decrease in the tissue industry.

### TWM/4: What geographical areas do you forecast to have the most tissue growth in 2018 and beyond and why are these areas seeing this?

The US market is currently one of the more interesting in terms of business opportunities. The market has still some margin of growth in terms of production but the average age of existing machines is quite elevated.

We see a big potential in rebuilds, looking at headbox replacement (high consistency headbox), forming section rebuilt (crescent former instead of fourdrinier), press section retrofit (i.e. EconPRESS™ NExT shoe press installation), drying section efficiency improvement (enhance heat recovery system in the hood air system, Cast Iron Yankee replacement with steel made cylinders), reel section performance increasing (full width automatic turn-up).

### TWM/5: How are new paper machine technologies in the market changing your R&D strategies? What key technical areas will you be looking into in 2018?

We are working to be an active player in the technological evolution of tissue making. The technical area we will look in 2018 is the web formation fibre saving along with process water use reduction, as well as tissue sheet final product quality improvement.

The focus will be still on energy and resources saving. We have more development ideas in pipeline.

### TWM/6: What overall trends in tissue machine manufacture will have the greatest impact on the production process in five years time?

Everybody knows that raw fibres and energy accounts for 70% - 75% of the cost of 1 ton of tissue paper. The trend of the next five years will be to produce premium tissue quality with reduced amount of fibre while increasing the overall energy efficiency of the whole tissue plant.

In addition to that, the trend is to introduce new products and grades in the market (i.e. structured tissue).

The GapCon latest tissue machine EconSOFT™ ERS design, featuring shoe press EconPRESS™ NExT, opens new relevant scenarios for the production of premium quality tissue paper.

- Marketing Department -