Patrick Wack (left), owner of 5/7 Etiquette, next to the Codimag Aniflo Viva 420 intermittent offset press

Anilox offset first

French converter 5/7 Etiquette is the first commercial user of Codimag's Aniflo anilox inking system for offset plates. **Andy Thomas** reports on the company's experience with this innovative technology

When Codimag unveiled its 'Aniflo' offset system (see *L&L* issue 4, Aug-Sept 2007), using an anilox roll to ink the plate, it created widespread interest in the labels industry. The question in many minds was whether it could be made to work as a commercial process on a narrow web, waterless, intermittent press.

The answer to that question has been provided by 5/7 Etiquette, based near Avignon in Provence, France, which has bought the first Viva 420 Aniflo production machine.

The principle of anilox (or 'short') inking for offset plates is not new. Heidelberg has implemented the technology, which it calls Anicolor, on its water-offset Speedmasters and KBA has its own waterless system. This, however, was the first implementation on a narrowweb machine.

5/7 Etiquette – a history

The decision to buy the Aniflo Viva 420 was made by Patrick Wack, managing director and owner of 5/7 Etiquette.

Wack has a long history in the labels industry. Before buying 5/7 Etiquette back in 1995, he had worked for a French pre-press division of the UK-based Wace Group, specializing in color retouching and separation.

'I knew some subsidiaries of Wace which worked in self-adhesive labels and thought this was an area where a small company could operate,' recalls Wack.

5/7 itself was founded 40 years ago, and when Wack took over, the company was specialized in labeling fresh produce – and particularly the melons which flourish in this beautiful part of the world. 'Since then I've changed everything,' says Wack.

“On our Viva 420 offset press we can print multiple jobs on one plate, and there is less than 100 meters of waste when starting a new four color job’

Wack was particularly attracted to 5/7 because of its Barco-equipped pre-press department – unusual for such a small company. ‘It was necessary for them because of the very short timescales involved in fresh food production. I moved the focus from reactivity to pre-press quality and added value.’

Today 5/7 has diversified into high value food, spirits and healthcare markets – and of course into wine.

‘Wine continues to move to pressure-sensitive labels, and over half of French wine labels are now PS,’ explains Wack. ‘Often the same customer asks for PS for the front label and wet glue for the back. Wine represents around 30 percent of our business, but is highly cyclical, so we don’t want that to increase that too much.’

Interestingly, most wine labels are printed flexo, and not offset. ‘Since we started using CDI digital flexo plates very precise text reproduction is no longer a problem,’ explains Wack.

In 2001, 5/7 Etiquette moved to a purpose-built factory, which projected a better image to customers and allowed the development of a more efficient workflow.

5/7 had historically been a Gallus letterpress house. The company made the move into UV flexo with two Gidue 370 Combat UV flexo presses. It also ran two Codimag Viva 340 intermittent presses, one letterpress and one waterless offset, and two SMAG silkscreen presses.

The ‘Aniflo’ Viva 420 replaces the Codimag letterpress. ‘These are good machines but to have such a mixture of processes is too complicated,’ notes Patrick Wack. ‘We will concentrate on high quality UV flexo – our next press will probably be a servo-controlled press – and offset.’

Wack is not yet considering digital. ‘We have a digital workflow, but digital presses are expensive and difficult to manage. On our Viva 420 offset press we can print multiple jobs on one plate, and there is less than 100 meters of waste when starting a new four color job. The short inking system makes it much quicker to manage the ink chain. All of this helps us compete with digital.’

The Aniflo project

‘We started discussing the Aniflo project with Codimag one year ago,’ recalls Patrick Wack. ‘In July we were among the first to see the new machine. The mix of offset and using an anilox to distribute the ink interested us very much. The speed of the machine was in the flexo range, giving us the possibility to produce quickly and in high quantities and to produce short runs with a low cost pre-press.’

Aniflo uses four cylinders of equal size. An anilox roller delivers a constant ink film to a form rubber roller, which transfers ink to the plate and from the plate to the blanket

5/7’s Codimag Viva 420 is an intermittent 5-color offset press with hot foil, embossing and a flexo varnish unit. It runs at up to 60 meters/minute, with speed depending on the repeat length. Print width is 420 mm (16 1/2in), and repeat length is variable between 8-17in (200-432mm).

The Aniflo technology replaces the offset inking train with four cylinders of equal size. An anilox roller delivers a constant ink film to a form rubber roller, which transfers ink to the plate and from the plate to the blanket.

‘We did not have the any fear of testing something new,’ says Wack. ‘I could not see how it would not work. Our production manager, who has worked with Heidelberg machines, had the opinion that waterless machines were low quality – now his opinion has changed.’

5/7 Etiquette is working closely with Codimag on standardizing the ink, anilox and blanket specifications for the Aniflo process, building on 5/7’s flexo experience.

‘We are more than half way to the point of controlling these variables,’ says Patrick Wack. ‘We have found that temperature control is the most important way to change the ink distribution on the blanket. This is very important, because it means we can adjust the inking without changing the anilox. We can then store these temperature profiles in the press memory for repeat jobs.

The less we have to change the temperature the better.'

Wack says that changing between light (7gsm), medium (9gsm) and dark (12 gsm) PMS colors represents the biggest challenge. 'Currently it is easier to do jobs with PMS colors with flexo, where they are managed by anilox selection alone. On the Aniflo you need to change the anilox and adjust the temperature. We are looking for a standard temperature for each job and for each type of ink and substrate.'

Temperature can be adjusted at two points in the Aniflo chain: at the anilox, which is slow to have an effect, and at the blanket, using an infra-red temperature control system. It takes 2-4 minutes to decrease the roll temperature from 50 to 25 deg C.

Perhaps the biggest challenge for a 'conventional' offset operator using Aniflo is a loss of control over individual inking zones. But for Patrick Wack, that is a positive benefit. 'I was looking for a loss of control over the inking zones! I want technology to manage inking, not luck. I want this company to have a high level of repeatable quality and not that every press operator brings his own 'craft' to this machine. It is the file which needs to be good and any problems should be solved in pre-press, and not on the machine.'

Flexo vs offset

Using both flexo and offset presses, there is no 'preferred' route for a particular label job at 5/7 Etiquette. 'Each system has its own advantages,' notes Patrick Wack.

'Offset has a lower pre-press cost than flexo. The plates are cheaper and take less time to make and software file preparation is easier – for example around trapping. You don't need to clean and store offset plates like flexo plates, because it is cheap and fast to produce new ones when you have a repeat job.'

On the other hand, flexo is preferred for clear-on-clear work, for metallic inks and where PMS colors are required. 'Vignettes might push you towards offset, but with Esko's Samba hybrid screens you can get very good flexo vignettes– it's just harder work than doing it in offset.'

Color management is key to the whole operation. 'We use Esko's Kaleidoscope ink management software and Gretag measurement systems together with ICC profiles for each press,' explains Wack. 'We want to achieve the same result for a job printed flexo or offset, with the same smooth workflow for the file.'

Patrick Wack is pushing customers to use 4-color process where possible. 'The less we have to use PMS colors the better. When we quote a job, our Gretag system looks at the press ICC profile and shows us whether we can replace PMS colors with process colors at a delta value that the customer will accept. This is where offset is certainly cheaper than flexo - where a 6-color flexo job can be printed out of four process colors.'

Concludes Wack: 'You can reach the highest quality in flexo today, but it's easier in offset. Also offset is the choice for uncoated papers. Gear marking is also an issue if you are running jobs on flexo presses without servos.'

Talking about quality issues, Wack notes that the Aniflo system has eliminated 'ghosting', since there is a direct 1:1 relationship between the inking cylinders, the plate and blanket cylinders.

Managing information

The Aniflo Viva 420 sits at the heart of an efficient digital workflow based around an MIS (management information system) supplied by Belgium company CERM. 'We have implemented JDF links to our Esko Graphics management software,' says Patrick Wack. 'In the next months we will be working with Codimag on how JDF can link the press memory into our MIS, so we can improve set-up times for repeat jobs.'

Wack's ambitions for JDF extend to linking the measurement systems on the press into the MIS. 'Information on downtime, machine speed and so on is measured twice now – once on the machine, then again on the MIS. When the press is directly connected to the MIS, we can automatically measure the real cost of a job in terms of machine time, materials and inks cost. Our aim is to improve the accuracy of our estimating system – particularly for repeat orders.'

Wack even wants to include information on wastage rates in customer quotations. 'Also, knowing how much material is left over allows us to run just the right amount on a repeat order.'

The MIS links together all parts of the business, and allows the press operators on the Viva 420 complete control over their own workflow. A console linked via the CERM database server displays all the jobs scheduled for that machine. The monitor shows a green light against a job (again via JDF from the Esko Backstage server) when the customer file is ready to go to the CTP unit. The printer controls the order in which the plates are made, allowing him to group jobs which use the same color sequence, for example, or a similar sequence of converting units.

'He can do this with the time saved from not having to adjust the Aniflo machine,' says Patrick Wack. 'That's time better spent managing his own work in the most efficient manner.' ■

Learning experience

Commenting on his experience installing and running the press at 5/7, Codimag's Aniflo project manager Philippe Piant says: 'Patrick is someone willing to push the limits of quality, and running PMS colors is where 5/7 has pushed us most. You do not have to adjust temperature on 4-color jobs, but when using PMS colors you have to make some adjustments. This information can then be saved for when you run the job again.'

Philippe Piant and his team have been working with 5/7 on anilox selection when running, for example, gold inks, finding the best combination of inks and anilox to get the best out of the press.

One major modification has been the introduction of a blanket on a steel base, which makes it easier to mount.