

NOSES TO THE WIND FOR UNOBSTRUCTED NOZZLES

The printing house at newspaper publisher Zeitungsverlag Krause, in the North German town of Stade, recently retrofitted the Litho Spray World spray dampening systems of its coldset web press with BALDWIN's Constant C technology. After eleven months in operation, all doubts have been dispelled: this altogether moderate investment was well worth the money in several respects.

In the course of its last few miles, the River Elbe links the Hamburg conurbation to the North Sea. Stade is situated at the halfway point. Zeitungsverlag Krause GmbH & Co. KG, a newspaper publisher with its own printing center, resides on the outskirts of this small town in Northern Germany. The company prints dailies and freesheets for the local town and region on a 32-page KBA Journal Express web press. This coldset web press was installed in two stages, with the result that both brush and spray dampening systems are used. In February 2006, Krause's BALDWIN Litho Spray World spray dampening systems were retrofitted with BALDWIN Constant C technology. In the old days prior to upgrading the system, around ten press stops a week due to clogged nozzles were the rule. Since the advent of Constant C, the newspaper press has not been forced to stand still for a single minute due to problems with the dampening systems. The upshot is a remarkable increase in productivity.

The benefits are most evident in the details: in the KBA press the BALDWIN Litho Spray World spray bars dampening systems are fitted with eight nozzles – two for every plate on the cylinder. The distributors overlap slightly at the edges, so that the first roller in each dampening system receives an absolutely constant supply of fountain solution.

In the absence of any special precautions, there is always a risk of clogging due to ink mist or debris building up on press. Partially or completely obstructed nozzles alter the spray pattern and thus impact the entire fountain solution supply. Pressroom difficulties and uncontrollable variations in the final presswork quality are the outcome. BALDWIN's Constant C technology gets to the root of these problems. It eliminates clogging by creating an air curtain that permanently surrounds the nozzle tips. Pollutants, debris, and ink mist are effectively kept out of the way of the nozzles. In addition, all nozzles at Krause are given a good "blow-through" at the end of the production process. This stops any remaining fountain solution from drying out inside, so that additional residues never get a chance to settle in the fine tips.

Incrementally upgraded

When Manfred Kriett, head of the printing department, discusses the different upgrade stages and dampening technologies, he is speaking from experience. The KBA Journal Express commissioned back in 1991 was initially a single-floor press with two Y printing units. These units were – and still are – equipped with brush dampening systems. The expansion of the press line with a four-high tower in 2002 coincided with the migration of the Y printing units to a three-high tower for 4/2-color printing. The four-high tower was ordered with BALDWIN Litho Spray World spray dampening systems from the outset.

“We always endeavor to keep our noses to the wind of any technological developments and we were confident that the new spray dampening systems would benefit us enormously,” says Manfred Kriett commenting on the original investment decision. “We were unwilling to go for brushes again because the BALDWIN concept lets us meter the fountain solution much more finely and transfer it to the dampening rollers and the plates more evenly. Brush dampening systems also entail a higher risk of contamination owing to the open water fountains, which provide a fertile breeding ground for undesirable microorganisms of all kinds.” Kriett urged his company’s management to invest in a technology that facilitates professional fine-tuning in addition to simply speeding up on-press development and reducing makeready waste. “The fact that every nozzle can be individually adjusted to permit optimum control of the fountain solution supply is a real stroke of genius. After the press has been running for a while, the heat from the gearbox radiates from the drive end toward the cylinder, for instance. The fountain evaporates asymmetrically as a result, leading to a deterioration in print quality. This used to leave us with huge amounts of waste, whereas now the water supply via the nozzles to the affected zone is simply increased. These optimization potentials were a clear argument in favor of spray dampening systems and BALDWIN was our preferred supplier on account of the mature technology.”

According to Manfred Kriett, there is also no reason why the Y units should continue to dampen with brushes for ever more. “As soon as they become worn to the extent that they need replacing, we will have no hesitation in purchasing spray dampening systems in their stead.” Compared to the brush method, spray dampening cuts the Krause printing center’s waste rate on equivalent printing units by a good 20%. On-press development with a precisely metered quantity of fountain solution at just the right temperature is faster and the optimal ink/water balance is achieved in next to no time.

Small nozzles, big difference

Manfred Kriett explains why his company elected to upgrade the Litho Spray World spray bars with Constant C in February 2006: “Pressroom performance regularly suffered because of clogged nozzles in the spray dampening system and we suspected that the fountain solution additive was the cause. If we refrained from making full use of the web and produced without dummy plates, milky deposits were visible on the cylinder. We guessed it was they that were creating such hard times for our nozzles. After experimenting with different additives that failed to provide any clear indication, our attention was drawn to Constant C by our BALDWIN consultant. Suddenly, all our headaches were gone.”

“Ever since we fitted our Litho Spray World spray bars with Constant C, the dampening system has worked perfectly. In addition to a significant reduction in downtimes, we have also noticed a measurable improvement in print quality. Previously, whenever one of the nozzles clogged during production printing, we noticed major variations in the fountain solution supply, causing the ink to smear,” Kriett continues. “Constant C affords us effective protection against uneven quality. Not only has the makeready waste that invariably accompanies a stoppage been eradicated, we also incur no labor costs for cleaning the nozzles. Although the spray bars are easily accessible, that always used to be considered a tiresome chore and production was inevitably lost.

High on impact, low on maintenance

The Krause web press is equipped with a total of eight BALDWIN Litho Spray World spray bars, with a ninth bar in reserve. It took the fitter one working day to retrofit Constant C and another to complete the fine adjustments and program the parameters on the control desk. That an upgrade of this kind must be carried out without interrupting production goes without saying, according to Manfred Kriett. “We print at least five newspapers daily as well as two weekly freesheets and we can’t afford to have the press shut down for long.”

A new interface had to be implemented in a collaborative venture by BALDWIN and EAE, the electronic equipment manufacturer, to facilitate seamless communication between the nozzles on the spray bars and the press control desk. It was integrated without a hitch parallel to the installation of the Constant C system.

The saving generated by the tremendously extended maintenance cycles alone has assured the Krause printing center a phenomenal return on its investment. In the pre-Constant C era, the spray bars had to be removed and cleaned at least once a fortnight. Today, this time consuming job is only undertaken every four weeks at the most and the press operator combines it with cleaning the complete press – not because it is absolutely essential but

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simply to avoid taking any risk. The rugged design of the Litho Spray World's all-stainless steel spray bars and the use of highly solvent-resistant sealing materials for all valves and connections additionally enhances the system's reliability and lifetime.