

Foreword

History and Outlook

At first sight it may look somewhat embarrassing to pretend that, after over a century since the introduction of printers blankets into the offset printing process and the substantial progress experienced by the printing industry during that period, major novelties related to blanket reaction to cyclic compression still exist, deserving further study.

When the opportunity presented itself, tyre manufacturers used their rubber compounding and processing expertise to extend their production range to printers blankets, which promised an attractive extra revenue.

Blanket design did experience a remarkable evolution, but research needs and costs kept on being pushed-up to what it was sensed to be a disproportionate high percentage of the blanket market volume.

One after the other, all the tyre factories spined-off blankets production from their core business before any of them had produced at least one blanket model based on a sufficiently comprehensive knowledge of blanket reaction to cyclic compression. Blanket industry has consistently been plagued with repeated turmoil, namely economic instability and a countless number of business ownership changes.

Actually, tyre manufacturers' venture into the blanket production left another lasting footprint, with singularly nasty effects for the long-term viability of this industry.

The retail price level originally established early in the XXth century by the powerful tyre industry considered blankets as premium priced consumables - not the specialty printing equipment components they are indeed - at a time the industry was obviously not prepared to benefit from the latest scientific findings.

The blanket's pricing, which prevailed almost untouched for a number of decades, did not afford sufficient room for the one time R&D investment, required to decode the process behind the seeming unpredictability of blanket reaction.

A number of production ventures carried to China by companies seeking lower labour costs, led ultimately to the proliferation of "low-cost blanket" competitors and a sharp decline of the blanket retail price, making it still harder to fund research.

A few exceptions made, the new production challenges posed as from the last years of the XXth Century by the ever increasing Industrial Health & Safety requirements were mostly addressed by blanket manufacturers with a strong commercial component.

Last decades have witnessed, together with a sharp reduction of the blanket manufacturing output, the advent of an unhealthy obsession to cut production costs, often pushed beyond the limits of rationality.

While it must be acknowledged the remarkable progress of the blanket industry, namely in dimensional stability, chemical resistance and printing life, a few features meant to overcome well known issues, successively included in new blanket Data Sheets, keep stubbornly being denied shopfloor confirmation, as it does not yet exist a sufficiently comprehensive master thread of thought covering all the aspects of new model development.

At present, even at the most reputed blanket manufacturers, the tremendous challenges posed to the designer by the eminently multi disciplinary character of printers blankets, are being faced with an unfairly short set of tools, namely solid general culture, sharp common sense and extensive chemistry processing know-how.

But questions unanswered by designers, such as “when a blanket suitable for high speed cold-set presses with satellite configuration will be available” are sooner or later answered by the market.



While no blankets have been available to prevent web driving motors from overloading at high printing speed, alternate means of news diffusion are stepping forward and the sophisticated offset web presses will soon no longer need to rush because printed daily volume is squeezing.

For those printers who have invested on probably the best available offset printing equipment, relying on the ability of the blanket industry to give a positive answer to the market needs, this is a most unfortunate situation, requiring urgent attention.

Also promising digital printing options, applying latest science findings into technological applications, do not discard the use of blankets as a part of the reproduction chain.

Although blankets are clearly a sensitive link in the printing process, they keep on being the preferred option to reproduce high information volumes.

Presently, substrate deformation is the source of register issues that current blanket technology can easily help to solve, but the current uncertainty level of blanket response does not provide a sufficiently solid starting point to encourage further development.

Better blankets, with more reliable performance, will no-doubt appear soon.

It does not make sense to keep on incorporating outdated blanket technology in the digital printing equipments of the future.

There is an obvious need for printers blankets to stop being a major limiting factor in the ability of offset to consistently deliver predictable printing results according to the ever increasing marketing requirements.

The study presented now will enable the designer to choose the levels of reproduction unpredictability and reactivity of new blanket models, while it assists the printer to opt between a good blanket and a complete bluff.

It is up to the graphic businessman to decide the amount of unpredictability (and profit) he is willing to gamble every time he prepares another printing run.