

Textile Fashion Renaissance in Portugal

Screen Printing (CtS) Digital Stencil Making

The Portuguese Textile market: Facts & Figures:

APT – Is the Portuguese Textile & Clothing Association organization representing today the Portuguese Textile Industry that after a near “*death announced*” with European liberalization of Textile Commerce Imports from Asia had the ability to retrain, bet on technology, B2B, B2C, innovation, differentiation, own brands and putting “*Made in Portugal*” as add value, for Textiles as well for Shoes! Portugal today is one of the most important Textile players in Europe! This proves the importance Textile and Clothing Industry still has in the Portuguese economy, providing around 11% of the GVA (Gross Value Added), 19% of the employment in the manufacturing industry with ca. 10% of the country total exports. ATP is anchored in CITEVE (one of the best Textile lab’s in the world & Oekotex certifier), CENTI (nanotechnology technical center), Modotex (Textile training centers), UM-University of Minho for Textiles up to machine manufactures like S. ROQUE, worldwide leading Screen Printing T-Shirt / Fashion multicolor carrousel and oval, up to 16 colors printing lines. Today Portugal has a real Textile Chain structure.



Direct Print on Textile (CtS)



T-Shirt Fashion 16 colors screen line



Textile Transfer (CtS)

The **Textile and Clothing Industry** is today an important and modern structure for the Portuguese economy.

It represents:

- **10%** of the Portuguese Total Exports;
- **19%** of the manufacturing Industry’s Employment;
- **8%** of the Manufacturing Industry’s Turnover;
- **8%** of the Manufacturing Industry’s Production.

Portugal has around 5.000 companies with 100.000 people working in all sub sectors of textile and clothing industry with a relative small segment dedicate to Textile Printing, Home and Fashion, from large format Flat, Rotary to T-Shirt printing (mainly Fashion); some of them are vertical units, but the majority are small and medium companies, **Family Businesses**, all well-known for their flexibility, quick response, expertise, innovation and equipped with modern technologies.

Production (million €): 5.968

Exports (million €): 4.283

Textile Fashion Printing (T-Shirt):

Going for a trend on average 10 colors by using more water based inks than plastisol, under REACH European norms and new quality exigencies like RSL (Restrictive Substances List) by important market brands with new focus on Ecology, Durability, Design, Touch, Washing, Resistances and Functionality.

Our experience recommends that for a fast, perfect and full implementation on **CTS (Computer-To-Screen) Technology** the support of a Stencil Making & Printing Technologic Cluster is recommendable. Based on that we would like to emphasize some of the important points shared and implemented by RdL in the Portuguese market in 2014 with those Cluster Companies, in reference to:

ColorGATE - developed one RIP software dedicated to CTS Technology, on a learning curve from Offset to Digital printing technologies, with great advantages on their Super Cell Raster with high accuracy of angles into a structured and guided way to work with PS8 Pro - CTS software, with automation on tone value correction

including calibration and correct dot linearization in a modern and friendly use. Important ink savings can be achieved by using this new design adapted to CTS technology RIP software.

SEFAR – Textile printing applications are one of the most technological due to number of colors, image register, reproducibility and substrate surface complexities. On a trend for more 4c printing process and photo realistic images, using finer meshes, new water based nano inks, it is absolutely recommendable to use high tenacity mesh like SEFAR PME, with higher dimensional stability and durability.

KIWO – Leading on R&D and CTS Screen Emulsions innovation with a set of standard chemistry for this UHP Digital Direct Light Exposing Technology allowing constancy of quality with fast exposing on perfect and repeatable hardening. Repeatable Emulsion Hardening on thin, thick or 3D coated is fundamental with its quality constancy mainly when confronted with full washing automation processes (developing or decoating).

QUAGLIA – High definition water based inks, with innovative solutions for 4c process + color effects using 150 meshes, higher dot lineaturas, with considerable ink savings by reduction on ink deposit and consequent energy savings on a new Textile Fashion market trend!



QUAGLIA – Virus High Definition water based inks direct print with mesh 150 and 101,6 dpi 's

SignTronic AG - STM CtS Technology - Digital Direct Light Exposing Stencil Making:

Textile Fashion Printing (piece by piece, not confectioned T-Shirt or garment) using High Definition CtS Technology (Computer-to-Screen - Digital Direct Light Exposing) needs an understanding in favor of a completely New Industrial Flowchart concept. Analogue Film to Digital “Filmless” is a jump from 8 to 80, into a different Technologic League, and so it’s absolutely recommendable to look on exiting prepress conditions, invest in a full Normalization (from image handling / dot linearization and calibration analyses / stencil frames sizes and stability to automatic stretching and automatic coating standardization / acclimatized (temperature and humidity) on dust free local to mesh / chemicals up to the CTS investment, being a Modular future concept or 100% Fully Automatic concept.

On the recent 24th Screen Printing Technical Seminar, an organization of our RdL company, a round table with four customers using STM-TEX 100 % in full automation CTS technology (stencil loading, CtS exposing, developing, drying and stencil unloading) with all this points been openly shared with everybody present proving the high reliability on reproducibility of SignTronic AG STM technology with fast response, cost efficient and turning the production processes bottleneck from Stencil Making to the Imaging Dept.!! Mentioned the higher standard of reproducibility, fast and correct hardening and an alert to the importance of analyzing the real stencil costs (analogue and digital) vs ROI (Return-Of-Investments).



RdL 24th Screen Printing Technical Seminar



STM-TEX CtS sharing experiences dialogue

The more standardization on the existing Analogue Prepress the easier acceptance to a new dimension on Digital Stencil Technology (*no film, no film development, no montage, no film dimensional stability, no vacuum frame, no archive, no stencil retouching, etc.*) that can only bring plus points, better image reproduction, tone value density from 3 to 98%, higher real resolution of 1270 dpi's, no retouches, emulsion completely hardened (*a "technologic must" to avoid surprises on stencil stability during printing or extra costs on handling and chemicals in washing steps*). Important to analyze that Image Handling (*real graphic image knowledge*) it's essential to bring to STM-TEX the higher quality that this CtS system likes to standardize and constantly reproduce.

From our local experience we can say that from a considered high investment, the proven reality confirmed what has been said before, a great positive surprise on ROI (Return-On-Investment) with a new dimension of plus points that are even difficult to count as benefits to a final clean printing quality concept impossible to achieve in beforehand or even today by Digital Printing.

*As said: it's a must to evaluate the **Real Stencil Costs** on the analogue stencil making!*

During 2014 several new prepress systems have been implemented in Portugal for Textile Segment, from new inkjet film plotter to vertical manual handling wax inkjet CTS or horizontal manual feeding inkjet CTS to SignTronic AG five (5) 100% fully automatic STM-TEX has been installed in the country being three STM-TEX for Textile Fashion Segment (on direct printing Textiles up to 16 colors), one on Textile Transfers and another system for Porcelain Decoration Decals, together with the first fully automatic STM-TEX installation on Ceramic Decals already since 2012 and two more modular STM concept since 2009, one for Large Format POP / POS and the other as the world largest STM dedicated to Textile Flags with an imaging size of 6800 x 2400 mm.



STM-TEX Fully Automatic CtS Industrial Flowchart's in 2014

CTS Technology are a must for keeping alive Screen Printing Technology; we have assisted in the near past with some decisions to stop using it or changing that technology to Digital Printing; those that kept Screen Printing and invested in the Prepress Automation (CTS) are able today to follow market trends and market exigencies with a clear wave to have In-House different printing technologies (*system suppliers*), in order to satisfy the customer, being a logic trend on **Graphic** Printing to handle Offset - Digital - Screen + Finishing as on **Industrial** or **Functional** as today our report focus on **Textile Fashion** to have side by side Screen & Digital as well Transfers or Embroidery.

Today we can confirm that production processes bottleneck moved from the Stencil Making Dpt. to Imaging Dpt.

Final Quality, Functionality, Fast Logistics and Cost Efficiency will determinate which In-House Printing Technology will be chosen to target market requirements, or, even more than one technology to be used together, based on optimizing consumptions, increasing productivity, reducing waste, with better energy use to the environmental impact.

With a correct investment on Screen Printing Prepress Dpt. with CTS & Automation Screen Printing Technology is highlighted in a **Renaissance on Textile Fashion** in Portugal anchored on a **New Industrial Cluster** (Textile Fashion & Sports, Clothes, Shoes, Jewelry and Leather Goods) will show that **Screen Printing Technology** is alive & kicking!

Europe is looking for a new re-alignment on a new global world business set up's with Full of Opportunities that those *Portuguese Industrial Examples*, mainly based on **Family Business** companies, are already aiming to have the *Most Valuable Technologies In-House* as proven to be **European Leading** entrepreneurs betting on Exports (*directly or indirectly*) with Differentiating Quality, Flexibility, Fast Response & Cost Efficiency!

RdL is servicing the Portuguese Textile Industry since 65 years!

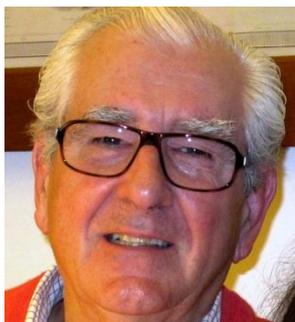
Viva a Serigrafia!



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