THE TEXTILE FASHION RENAISSANCE IN PORTUGAL

David Forrester Zamith assesses the growth of computer-to-screen in the textile market

David Forrester Zamith, CEO of RdL

Facts and figures representing the Portuguese Textile & Clothing Association organisation demonstrate that Portugal today is one of the most important textile players in Europe. This goes against the reports of a 'near death' announcement with the European liberalisation of commerce imports from Asia, with the wager on technology, business-to-business, business-to-consumer, innovation, differentiation, own brands and the words 'made in Portugal' adding value for textiles as well as shoes.

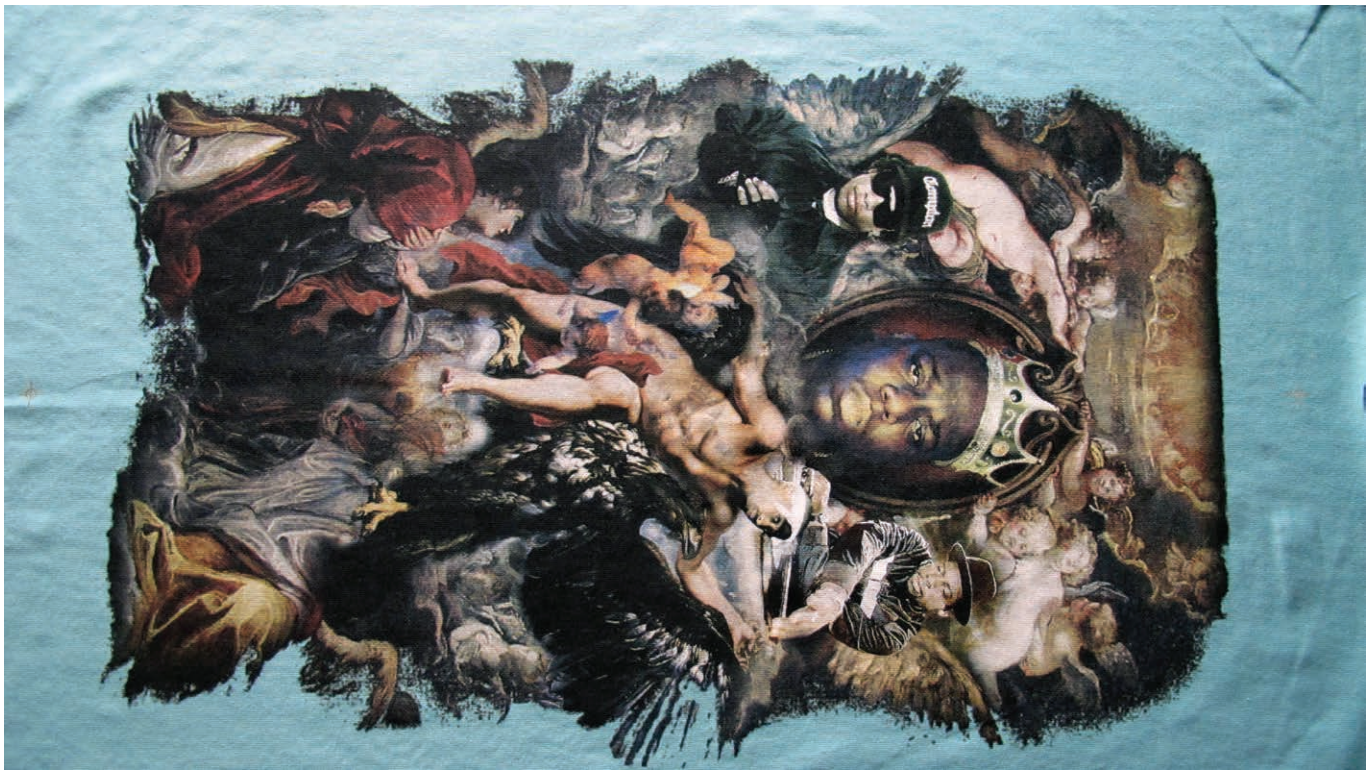
Now proved is the importance that the textile and clothing industry still has within the Portuguese economy, providing around 11% of the GVA (Gross Value Added), 19% of the employment in the manufacturing industry and around 10% of the country's total exports. ATP is anchored in CITEVE, one of the best textile labs in the world and Oekotex certifier, the CENTI nanotechnology technical centre, Modotex textile training centres and UM-University of Minho for textiles, it includes machine manufacturers such as S Roque, a world-wide leading screen-printing business with T-shirt and fashion multi-colour carousel and ovals, with up to 16 colour printing lines. Today, Portugal has a real textile chain structure.

AN IMPORTANT AND MODERN STRUCTURE

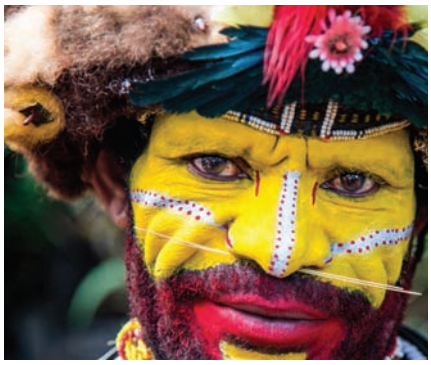
Portugal has around 5,000 companies with 100,000 people working in all sub-sectors of the textile and clothing industry; a relatively small segment is dedicated to textile printing, home and fashion, from large format flat and rotary machines to T-shirt printing mainly for fashion. Some of these are vertical units, but the majority are small and medium companies, including family businesses, all well-known for their flexibility, quick response, expertise, innovation and equipped with modern technologies. Production revenues are €5,968 million while exports represent €4,283 million.

TEXTILE FASHION PRINTING AND T-SHIRTS

Important market brands today are opting for a trend of an average of ten colours, using more water based inks than plastisol, under REACH European norms and new quality exigencies like RSL (Restrictive Substances List). As a result there is a new focus that covers ecology, durability, design, touch,



Direct printing onto textile with computer-to-screen technology



Quaglia's Virus High Definition water based inks printed direct

Computer-to-screen textile transfer

washing, resistance and functionality.

Our experience recommends, that for fast, perfect and full implementation of CtS (computer-to-screen) technology, the support of a stencil-making and printing technology cluster is recommendable. Based on that, we would like to emphasise some of the important points shared and implemented by Ruy de Lacerda in the Portuguese market in 2014 with those cluster companies. Specific reference should be made to these specialists:

ColorGATE has developed a RIP software solution dedicated to CtS technology, on a learning curve from offset to digital printing technologies, with the advantages of its Super Cell Raster. This generates high accuracy of angles into a structured and guided format to work with PS8 Pro-CTS software. It also automates tone value correction including calibration and correct dot linearisation in a modern and friendly interface. Important ink savings can be achieved by using this new design that has been adapted to a CtS technology RIP.

Sefar – textile printing applications are one of the most technologically demanding due to numbers of colours, image register, reproducibility and substrate surface complexities. On a trend for more four-colour printing processes and photo-realistic images, assisted by using finer meshes and new water based nano inks, it is recommended to use

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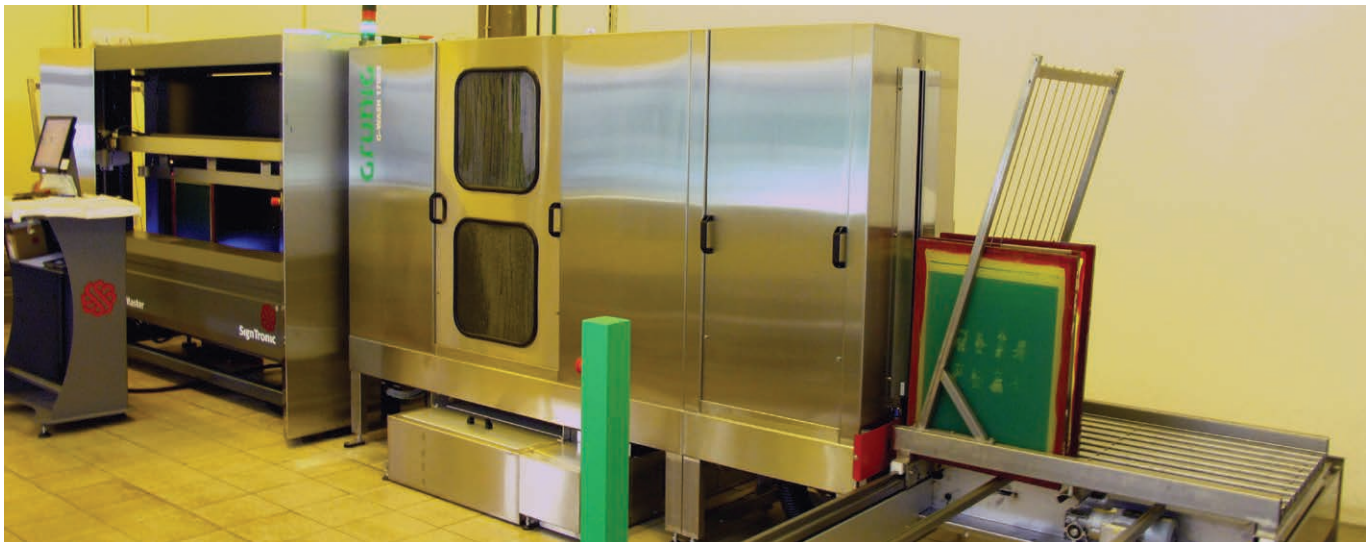


Part of an STM-TEX fully automatic CtS industrial flowchart

high tenacity mesh like Sefar PME, with higher dimensional stability and durability.

KIWO – leading on R&D and CtS screen emulsion innovation with a set of standard chemistry, this UHP digital direct light exposing technology allows constant quality with fast exposing with 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 – these are high definition water based inks, with innovative solutions for four-colour process plus colour effects using 150 meshes. Higher dot lineatures result in considerable ink savings by reducing the ink deposit with consequent energy savings, showing a new textile fashion market trend. Quaglia Virus High Definition water based inks print direct with 150 mesh and 101.6 dpi.

HIGH END CTS TECHNOLOGY

SignTronic's STM CtS technology is designed for digital direct light exposing stencil making. Textile fashion printing that is piece by piece, not confectioned T-Shirts or garments, uses high definition CtS technology which needs an understanding in favour of a completely new industrial flowchart concept. Analogue film to digital filmless is a jump from 8 to 80 into a different technological league. As such, it's absolutely recommended to look on existing pre-press conditions, invest in a f ull normalisation from image handling/dot linearisation and calibration plus analyses/ stencil frame sizes. Additionally there is the stability for automatic stretching and automatic coating standardisation. Acclimatisation with correct temperature and humidity, dust free local to meshes and chemicals is also important to the CtS investment, which is a modular future concept or a 100% fully automatic concept.

At the recent 24th Screen Printing Technical Seminar, organised by RdL, there was a round table with four customers using STM-TEX 100% in full automation as CtS technology. This accommodated stencil loading, CtS exposing, developing, drying and stencil unloading, with all these points being shared openly with everyone present. This proved the high reliability of reproducibility with SignTronic AG STM technology such as fast response, cost efficiency and the turning of the production processes' bottleneck from stencil making to the imaging department. Also mentioned were the higher standards of reproducibility, fast and correct hardening and an alert to the importance of analysing the real stencil costs (analogue and digital) versus ROI (return on investment).

The 24th Screen Printing Technical Seminar hosted by RdL

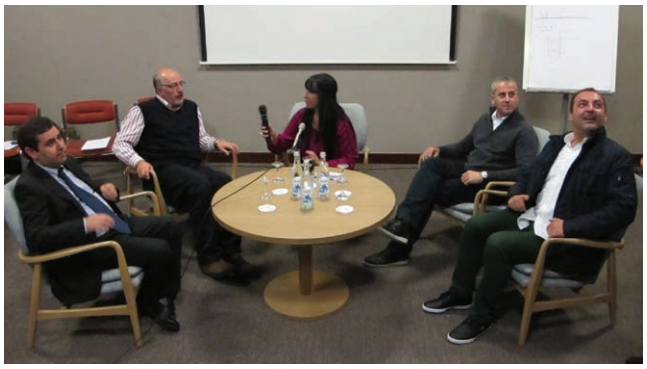
ACCEPTING A NEW DIMENSION

The more standardisation on existing analogue pre-press, the easier the acceptance to a new dimension on digital stencil technology where there is no film, no film development, no montage, no film dimensional stability, no vacuum frame, no archive, no stencil retouching, etc. This can only bring plus points, with better image reproduction, tone value density from three to 98%, higher real resolution of 1270dpi, no retouches, and emulsion completely hardened – a 'technological must' to avoid surprises on stencil stability during printing or extra costs on handling and chemicals in washing steps. It is important to analyse that, with image handling (real graphic image knowledge), it's essential to bring to STM-TEX the higher quality that this CtS system likes to standardise and constantly reproduce.

From our local experience we can say that, from a considered high investment, the proven reality confirms what has been said before, and that is a great positive surprise on ROI with a new dimension of plus points. These are difficult to count as benefits for a final clean printing quality concept that was impossible to achieve beforehand or even today with digital printing. As said, it's a must to evaluate the real stencil costs with analogue stencil making.

PORTUGUESE INSTALLATIONS

During 2014 several new pre-press systems have been implemented in Portugal for the textile segment, from ink-jet film plotters to vertical manual handling wax ink-jet CtS and horizontal manual feeding ink-jet CtS. Five SignTronic 100% fully automatic STM-TEX systems have been installed in the country, three being for the textile fashion segment for direct printing onto textiles of up to 16 colours, one for textile transfers and the fifth for porcelain decoration decals. Additionally there was the first fully automatic STM-TEX installation on ceramic decals in 2012 and two more modular STM



STM-TEX users share their experiences of computer-to-screen

concepts installed in 2009, one for wide-format point-of-sale and point-of-purchase and the other for the world's largest STM dedicated to textile flags with an imaging size of 6,800 x 2,400mm.

CtS technology is a must for keeping screen-printing alive. We have assisted recently with some decisions about whether to stop using it or to change to digital printing. Those that retained screen-printing and invested in pre-press automation (CtS) are able today to follow market trends and exigencies with a clear wave to have in-house different printing technologies from system suppliers, in order to satisfy the customer. This is a logical trend for graphic arts printing to handle offset, digital and screen plus finishing, as for industrial and functional printing. Additionally, this report focuses on textile fashion alongside screen and digital as well as transfers or embroidery.

Today we can confirm that the production processes bottleneck has moved from the stencil-making to the imaging department.

Final quality, functionality, fast logistics and cost efficiency will all determine which in-house printing technology will be chosen to target market requirements or, even, where more than one technology to be used in tandem. This is based on optimising consumption, increasing productivity and reducing waste, with better energy use to environmental impact.

INVESTING CORRECTLY

With the correct investment in screen-printing pre-press, CtS and automation of screen-printing technology, highlighted is a renaissance on textile fashion in Portugal. This is anchored on a new industrial cluster for textile fashion and sports, clothes, shoes, jewellery and leather, all of which show that screen printing technology is alive and kicking!

Europe is looking for a new re-alignment on a new global world business set-up, filled with opportunities that these Portuguese industrial examples, mainly based on family businesses, are already aiming for. Using the most valuable technologies in-house has proven to be successful for leading European entrepreneurs that are betting on exports, either directly or indirectly, with differentiating quality, flexibility, fast response and cost efficiency.

On 20 December 2013, The United Nations (UN) General Assembly 68th Session proclaimed 2015 as the International Year of Light and Light-based Technologies (IYL 2015). SignTronic's STM CtS (computer-to-screen) with digital direct exposing stencil making is leading the way with Swiss light technology enhancing screen-printing high quality reproducibility.

RdL has been servicing the Portuguese textile industry for 65 years. ■

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