

RELIEF security screens

an innovative approach to security screens



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Security Screens

the fundamentals of intaglio printing

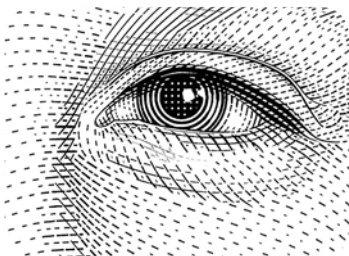
The use of fraud resistant security screens for banknote designs is becoming more and more important. With the three dimensional RELIEF security screens, new opportunities are provided to counteract on forgeries and to increase security.

RELIEF Security Screens

an innovative approach to printed security

Today, intaglio screens are made by modulating the thickness of lines or design elements to represent an object printed in intaglio.

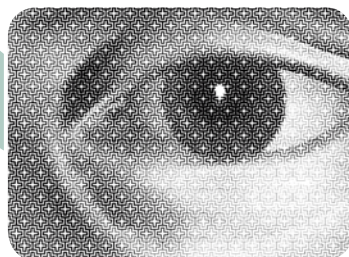
While cell screens are based on linear cells, RELIEF security screens also uses the shape of the cell to better represent an object. This innovative approach makes it possible to modulate the shape of each RELIEF screen to fit perfectly on the surface of the object to be represented.



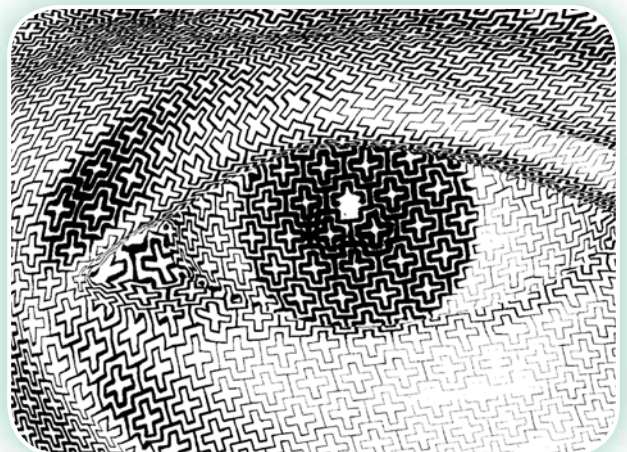
Light & dark areas (= depth, lighting, etc) are represented by the distance between the lines and by modulating the thickness of the lines



Modulation of line screens: the thicknesses of the lines are modulated



Modulation of cell screens: the design object within each cell is modulated



Modulation of RELIEF security screens: the shape of each individual cell is modulated, as well as the design element contained therein

New Dimensions in Printing

improvements in several areas

RELIEF security screens are applied in the origination process and open up new possibilities in a number of areas:

Security

The intricate pattern generated using RELIEF security screens are more complex and hence, more difficult to counterfeit than traditional linear security screens.

Design and Appearance

There are virtually no limits to the creation of design elements used in the RELIEF security screens. Geometric or fantasy patterns, logos, objects, animals or landmarks can be used and incorporated according to the customer's requirements.

Every design element results in a unique appearance of the banknote. The rendering capabilities of the software used to generate RELIEF security screens allow to simulate the appearance of the banknote using different design elements. Such simulations enable the issuing Authority to select their preferred design before printing the banknotes.

Plasticity

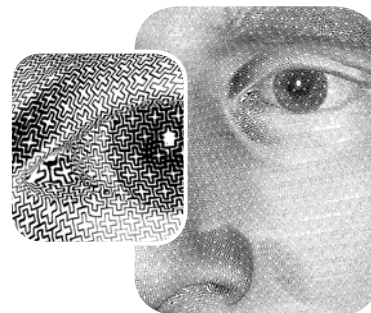
The rendering of the object is seemingly three-dimensional thanks to the modulation of the design element and the shape of the RELIEF cell. This approach allows to adapt each cell nicely to the surface of the object to be represented. RELIEF security screens also rely on the thickness of the design element to show light and dark areas. Both properties together result in a yet unknown life-like plasticity.

The combination of the above aspects opens up new design perspectives and enhances the value of intaglio printing.

Easy Implementation

no special hardware required

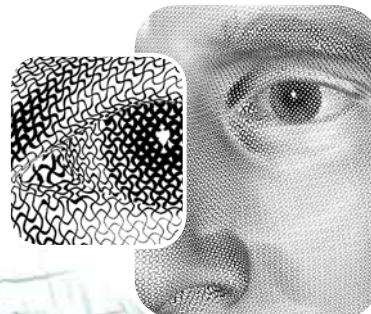
RELIEF security screens are created using software that is compatible with design and origination platforms used in the security printing industry. The files created can be used to make plates that are mounted on intaglio machines used for banknote printing.



RELIEF screens using a cross as a design element



RELIEF screens using a company logo as a design element



RELIEF screens using a fantasy design element



Astonishing plasticity: RELIEF security screens give a 3D-like appearance

Dietzingerstrasse 3
CH-8036 Zurich
Switzerland

Phone +41 (0)44 466 77 11
Fax +41 (0)44 466 79 01

www.ofs.ch

By choosing Orell Füssli Security Printing Ltd you benefit in numerous ways

Decades of experience and competence in printing banknotes

Comprehensive support and advice, from the first draft to delivery of the banknotes

Cutting-edge production technology and highly skilled personnel secure consistently high quality

A choice of paper or polymer substrate – we supply whichever you prefer

All banknotes produced by Orell Füssli Security Printing Ltd are printed in Switzerland

Very personalised customer care is our philosophy

Orell Füssli's history began in Zurich in 1519. The company first produced paper securities in 1827. In 1911, Orell Füssli began working with the Swiss National Bank on the design and production of banknotes. This marked the beginning of the company's long experience as a printer devoted to quality and security. Orell Füssli Security Printing Ltd is a member of the Orell Füssli Group, which is based in Zurich and listed on the SWX Swiss Exchange stock market.