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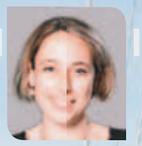

Éric Thoreux, Corporate Senior Vice President, Strategic Marketing Department and Readers Division, Essilor International.

Sonsoles Llopis Garcia, Brand Communication Manager, Marketing Department, Essilor International.

Clotilde Haro, Competitive Research Manager, Strategic Marketing Department, Essilor International.

Éric

Léonie

France

Aurore

VAGABOND

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A POLAR ADVENTURE for Essilor lenses

APPROVED BY WEARERS IS THE GUARANTEE OF EVERY PAIR OF ESSILOR LENSES. BUT HOW DO THEY COPE IN EXTREME CONDITIONS? FROM DECEMBER 2012, A UNIQUE FAMILY WILL BE PUTTING ESSILOR LENSES TO THE ULTIMATE TEST IN DAILY LIFE IN THE ARCTIC.

At the most northernly inhabited part of the earth, Éric Brossier, a French geophysicist and scientific explorer, has anchored Vagabond – a 15m long boat equipped to support researchers like glaciologists, geologist and oceanographers. His mission: to further scientific understanding of the evolution of arctic conditions and their impact on the global environment. Since August 2011, Éric and his family, France Pinczon du Sel and their two children, Léonie and Aurore (6 and 3 years old), have made their home in the icy Canadian Arctic onboard a boat that doubles as an operational base camp for visiting scientists. Through a new partnership with Essilor, Éric will take on an additional challenge in 2013 – to help Essilor evaluate the performance of its lenses in extreme light and weather conditions through a unique live testing of eyewear. ■■■

An environment like no other

The collaboration between Éric Brossier and Essilor began with a chance meeting with Hubert Sagnières, Chairman and Chief Executive Officer of Essilor International, in the Arctic. Says Éric Brossier, "*As a trained engineer, I'm interested in how technology helps us better understand our environment and in finding what advantages it can bring to our everyday life*". Discussions developed into the idea for an "Extreme Light Testing" for Essilor lenses. For the Group, the project offers a rare opportunity to further knowledge of the human and technical challenges of vision in extreme conditions.

Éric Brossier spends around two-thirds of his days taking measurements on weather, ice thickness, water salinity to share with researchers in Canada, France, US and Denmark and analysing data. Nevertheless, at the 76th parallel, conditions can be merciless – with daily winter temperatures as low as –50°. For nine months a year, he and his family live on their boat, immobilised in the ice, with just a team of huskies (and a rifle) to keep polar bears at bay. This year, their boat, *Vagabond*, is moored by Grise Fiord, an Inuit village of some 120 inhabitants, to enable the family to be part of a local community and for Léonie to attend school. In an environment like no other, having the right equipment is essential – for day-to-day safety and comfort. From gloves, thermal clothing, insulated boots to sungoggles – every detail is important, particularly protecting the eyes. Adds Éric, "*The conditions we live in really justify the need for high performance eyewear. In daily life at the North Pole, to see well is to stay safe*".

"The conditions we live in really justify the need for high performance eyewear.

Preparing for the adventure

The brand communication team in the Strategic Marketing Department has been working with Éric and his family since October 2012. Sonsoles Llopis Garcia, Brand Communications Manager at the Strategic Marketing Department comments: "*This 'Extreme Light Testing' is an adventure for both sides – to explore how to see the world better in a completely different living environment. It will help Essilor evaluate the performance of our lenses, and equip Éric, France, Leonie*

POLAR CONDITIONS AND THE IMPACT ON VISION

Following thirteen years spent living in the extreme north, Éric shares his observations.

"During the arctic winter of almost complete darkness (October – February) the pupils of the eye are dilated. In this extreme cold, continual blinking is needed to prevent eyes from freezing up, especially when very low temperatures cause watery eyes. The combination of cold, wind and breathing can fog up glasses or goggles when operating a snowmobile – clouding or distorting vision ahead and making driving conditions more difficult. The contrast of temperatures from inside the boat to outside constantly causes glasses to steam up. As light returns to the region from February onwards, our eyes are constantly adapting to the changing luminosity. During the polar summer of 24 hour daylight, the brightness of the sun is magnified by its reflection on the snow – and UV intensity can be up to 20 times higher. Sunglasses are essential protection to prevent damage from significant exposure to UV.

In daily life at the North Pole, to see well is to stay safe.

SOME CHARACTERISTICS OF THE EQUIPMENT

Why...

TINTED LENSES?
... for clarity of vision and reduction of bright light and glare.

POLARIZED LENSES?
... to filter light reflection from snow and ice.

FRONT AND BACK LENS PROTECTION?
... against cumulative exposure to UV rays.

ANTI-FATIGUE LENSES?
... to relax adjustment of the eyes, especially for indoor near vision tasks.

ANTI-SMUDGE AND ANTI-FOG TREATMENT?
... to reduce the need for cleaning, especially when moving from warm to very cold conditions and vice-versa.

WRAPAROUND FITTING?
... for maximum protection of the eyes.

and Aurore with the best adapted eyewear for every situation of their day-to-day life".
During the family's annual trip to France in November-December, Essilor carried out detailed eye testing to select the most appropriate eyewear for both indoor and outdoor conditions according to their individual prescription needs. A specialist sports Eye-Care Professional helped mount Essilor lenses into a range of adapted frames – from standard, wraparound to a sports sunwear mask. Éric and France will test a total of 12 different pairs of lenses, and Léonie and Aurore sunwear designed to protect them from the intense luminosity of the polar summer.

Sending replacement eyewear can take over a month to reach *Vagabond*.

Creating a unique testing protocol

Essilor typically tests its lenses in a number of different ways – from large-scale comparative studies, to sensorial analysis and adaptation testing in either laboratory conditions or everyday life situations. But the unique conditions of the "Extreme Light Testing" project meant developing a new approach. Clotilde Haro, Competitive Research Manager, explains : "*With only two testers – Éric and France – we decided to focus on qualitative feedback, comparing the visual experience of different types of eyewear. From February to June, Éric and France will share their feedback via a 'log book' of observations – on adapting to the lenses to their visual experience in different situations/tasks, for example working insight on the computer or checking exterior equipment in sub-zero temperatures. They'll also fill out detailed questionnaires covering criteria such as transparency, reflective protection, facility of cleaning, near/far vision comfort, contrast sensitivity. We're particularly interested in comparing their experience between the different eyewear options to see the perceived benefit of certain types of lenses*".

A learning experience for Essilor

The project is not without its particular challenges – both technical and human. It's the first time that Essilor lenses will be tested at such extremes of temperature. They will need to be highly resistant as sending replacement eyewear can take over a month to reach *Vagabond*. (When the family travel back "home" from France, it's five separate flights over three days, depending if weather conditions allow the final plane to land safely in the Arctic). To send regular feedback to Essilor, Éric and France connect by satellite phone from the boat and during visits with friends at the nearby Grise Fiord village. Adds Clotilde: "*We've had to devise the testing protocol based on discussions, photos and videos of their daily activities without really knowing at firsthand the environment and observing their wearing habits*".
The "Extreme Light Testing" project will reach its first milestone at the end of June, when Essilor will analyse feedback from Éric and his family. Explains Sonsoles : "*The results may help to confirm certain hypotheses we have on the technical performance of our lenses. They will also further our understanding of extreme light conditions and contribute to evolutions in our range. Above all, the project is an adventure for our internal teams – to follow and share in the experiences of Éric, France, Léonie and Aurore*".
"*It's only the beginning of the story. Essilor is constantly innovating, so we have many new solutions to offer in future years*", concludes Éric Thoreux, Corporate Senior Vice President, Strategic Marketing. Indeed, Essilor announced at the end of February a breakthrough discovery with Crizal Prevencia – the first preventive lenses for selective protection from harmful blue light and UV rays. To be continued... ●

Follow online the Brossier family's polar experience:
– on Éric Brossier's Website
http://www.vagabond.fr
– on Essilor's Website
http://www.essilor-extremetesting.com
– on We Connect
https://sites.google.com/a/essilor.com/we-connect/