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IJsselland

IJSSELLAND SAFETY REGION MODERNISES ITS FIRE SUITS FOR THE FUTURE

How the Dutch fire brigade procured innovative custom garments to better protect its firefighters, thanks to smart collaboration with partners in the protective clothing value chain.

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SUMMARY

In 2019, the IJsselland Safety Region in the Netherlands set an ambitious goal to completely modernise the suits worn by their firefighters across 35 bases. In this case study, you'll learn how IJsselland set itself up for a successful garment selection process by reaching out to TenCate Protective Fabrics for objective advice early in the game. Not only did this collaboration result in the innovation of a brand-new product, but their new high-tech garment solution is now keeping hundreds of IJsselland firefighters safe *and* comfortable.





ABOUT IJSELLAND

The IJsselland fire brigades are a vital part of the IJsselland Safety Region in the Netherlands. IJsselland firefighters save people and animals from dangerous situations, fight fires and provide assistance in the event of accidents. They manage disaster response and monitor citizens' safety, together with other Dutch emergency services.



950
firefighters



35
bases throughout
the region



500,000
inhabitants in
the region



Picture: Marcel van Saltbommel



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LOOKING BEYOND THE CURRENT SOLUTION

When it was time to purchase new turnout clothing for all the fire brigades in the IJsselland Safety Region, technical manager Sander Brons knew one thing: he wasn't looking for a generic fire suit from a catalog. He wanted to provide the most suitable turnout gear for his firefighters' needs.

It was clear that IJsselland would need a unique solution custom-developed for their needs, but how would they get there? These were the 3 challenges they set out to solve:



COMFORT: Lighter and cooler

Since they tackle everything from road traffic accidents to animal rescues to structural fire interventions with a single unique set of gear, IJsselland Safety Region firefighters need multi-functional protection no matter the task at hand.

In addition to the high levels of protection necessary, they also wanted their new suits to be lightweight and comfortable; feel soft; and have excellent moisture absorption and sweat uptake.



DURABILITY: Tougher and longer-lasting

Durability is a top priority for firefighter gear, as frequent washing is required to remove any potential toxic residue or contamination after an intervention. The previous fire suits were showing wear and tear, as well as damage from UV exposure sustained over time.

The new turn out solution needed to be tougher and provide more resistance in high-traffic areas such as elbows and knees, while not sacrificing colour or performance to frequent laundering.



CORPORATE IDENTITY: Stronger image

As part of a recent national campaign for a more unified image, all Dutch fire brigades have a new visual style to adhere to in their garment design.

IJsselland's new fire suits needed to include more reflective high-visibility striping in a distinctive pattern, so their firefighters would be consistently recognisable on the scene of any emergency.



Technical Manager at IJsselland Safety Region



SETTING UP A SMOOTH SELECTION PROCESS

STARTING FROM SCRATCH

Determined to get expert advice on the latest fire suit technology before drafting a new garment tender for IJsselland Safety Region, Sander Brons organised a 2-day market consultation with a number of garment makers in mid-2019. TenCate Protective Fabrics was also invited to the table to share their in-depth expertise on the most fundamental component of any garment solution: the textiles.

ASKING THE RIGHT QUESTIONS

During the consultation, TenCate Protective Fabrics' ER Market Manager Antonio De León Torres came with a blank piece of paper rather than a set product pitch, listening closely as he asked the IJsselland team to answer the following questions:

- Which aspects of your current fire suit work well?
- Which aspects need improvement?
- What would your ideal fire suit look like?
- How can we harness textile innovations to serve your firefighters?



FINE-TUNING A CUSTOM SOLUTION

Taking IJsselland's detailed list of technical requirements and preferences that the new fire suit would need to tick off, Antonio De León Torres worked closely with TenCate Protective Fabrics' product development team to perfect a new product for IJsselland: Nomex® Advance® Truecolor®. This innovative double-weave fabric layered Nomex®, a smooth fibre with excellent thermal performance and colour fastness, over Kevlar®, an incredibly strong fibre — resulting in the perfect combination of thermal performance and comfort, in a durable yet lightweight outer shell.

COLLABORATING WITHIN THE VALUE CHAIN

Calling on their strong network within the protective workwear value chain, TenCate Protective Fabrics combined their offering in conjunction with multiple garment makers bidding on the IJsselland tender. UK & European garment maker Ballyclare International won the tender thanks to the superior performance, fit and feel their fire suit offered during IJsselland's wear trials. Going the extra mile, Ballyclare was present at these wear trials, allowing them to educate firefighters on how to adjust their garments' fit for improved safety. Ballyclare even organised COVID-19-proof fitting sessions for hundreds of firefighters in just a few weeks — no small feat!



The new turnout suit of IJsselland

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BECAUSE IJSSELLAND HAD THE INSIGHT TO REACH OUT TO US SO EARLY IN THEIR SELECTION PROCESS, WE WERE ABLE TO COLLABORATE WITH BALLYCLARE TO CREATE A HIGH-TECH CUSTOM FIRE SUIT THAT NOT ONLY SCORED HIGH ON TECHNICAL PERFORMANCE, BUT PERFECTLY MATCHED THEIR FIRE-FIGHTERS' NEEDS.

Antonio De León Torres

Emergency Response Market Manager at TenCate Protective Fabrics



A CUSTOM GARMENT THAT GOES ABOVE AND BEYOND

In early 2021, the first IJsselland Safety Region firefighters began to receive their new suits. Here's an inside peek into what makes these innovative garments so special:



Lightweight protection

Weighing a mere 200 g/m² with a very high performance-to-weight ratio, the fire suit's outer shell delivers market-leading protection.

As part of a lightweight assembly, the Nomex® Advance® Truecolor® fabric maximises IJsselland firefighters' freedom of movement on the job while lowering the risk of heat stress.

Elbows and knees are reinforced to withstand 1 million cycles of abrasion thanks to the use of TenCate Protective Fabrics' Arashield®, the most durable reinforcement solution on the market.

This makes the entire suit adaptable to any job, perfect for all of the diverse interventions the firefighters face.



High on comfort

The new fire suit provides tough protection, but is soft to the touch and smooth on the skin.

With the additional benefit of mechanical stretch, IJsselland firefighters can enjoy moving comfortably in a flexible, light garment. It keeps them dryer and cooler for longer, even in strenuous work environments.

For the best ergonomics, Ballyclare's garment design also takes all-day comfort into account.



Lasting looks

In addition to improved colour fastness, the Nomex® Advance® Truecolor® fabric has been specially engineered to withstand UV ray exposure.

This makes the new fire suits very durable: they hold up to frequent industrial washing, and can be stored in IJsselland firehouses without losing their protective power or distinctive looks.

Thanks to their longer life cycle, the durable suits are also more sustainable and provide a better return on investment for the IJsselland region.



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**GREAT INNOVATION STARTS
WITH GOOD LISTENING.
TENCATE PROTECTIVE FABRICS
TRULY PUT THIS INTO PRAC-
TICE BY TROUBLE-SHOOTING
FOR IJSSELLAND'S SPECIFIC
CHALLENGES. WE COULDN'T
BE HAPPIER THAT OUR NEW
SUITS PUT THE NEEDS OF OUR
FIREFIGHTERS FIRST.**

Sander Brons

Technical Manager at IJsselland Safety Region



CLOSER COLLABORATION FOR THE BEST RESULTS

These 3 defining characteristics set IJsselland Safety Region's successful partnership with TenCate Protective Fabrics and Ballyclare International apart:



FOCUSING ON THE WEARER

By prioritising the actual needs and preferences of real firefighters, TenCate Protective Fabrics and Ballyclare were able to create a fire suit that vastly improved the end user's experience of comfort. Comfortable PPE leads to better safety compliance, since firefighters are more likely to wear their gear correctly when it's lightweight and flexible, with excellent moisture management.



EXTENSIVE REAL-LIFE TESTING

You can't innovate a new solution without thoroughly evaluating it in high-risk environments that mimic real fire service interventions. It required extra care due to social distancing requirements during the COVID-19 pandemic, but IJsselland carried out two wear trials to give firefighters the chance to offer feedback on the new protective garments in action. Very valuable insights came out of these wear trials.



CHOOSING LONG-TERM VALUE

Taking the new fire suits' cost-value ratio into consideration played a big part in IJsselland's selection process. By providing data, TenCate Protective Fabrics was able to help the purchasing department understand that durable garments may be a bigger upfront investment, but they're much more economical in the long term.





Wear trial at IJsselland

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THE 'PERSONAL' ASPECT OF PERSONAL PROTECTIVE EQUIPMENT IS OFTEN UNDERESTIMATED, BUT NOT BY US OR OUR PARTNER TENCATE PROTECTIVE FABRICS! WE WORKED ON HUNDREDS OF TINY TECHNICAL DETAILS BEHIND THE SCENES TO PROVIDE IJSSELLAND WITH PERFECTLY FITTED, TAILOR-MADE FIRE SUITS — RANGING FROM SIZE XS TO 4XL, FOR BOTH MALE AND FEMALE FIREFIGHTERS.”

Karin Klein Hesselink
Head of Product and Certification at Ballyclare International

4 KEY TAKEAWAYS TO MAKE YOUR SELECTION PROCESS A WIN-WIN

What can you learn from IJsselland Safety Region's journey to custom fire suits? Here are 4 do's and don'ts to help you win in your own protective clothing selection process.

#1

DON'T COPY-PASTE YOUR PREVIOUS TENDER

Take the time to survey new technology that the market has to offer, rather than jumping on the first solution someone offers you, or simply renewing your previous solution. Your safety situation may have changed since your last tender, so find partners who are motivated to help you find an ideal solution to your needs! Don't settle for less.



#2

DO TAKE ADVANTAGE OF THE FULL VALUE CHAIN

Not only can your protective fabrics supplier help you find out which safety norms apply to you, but you can count on them to connect you with other players in the value chain. TenCate Protective Fabrics has a broad team of experts across many niche industries, working with end users, industrial laundries, garment makers, and distributors on a daily basis. That in-depth expertise is available to you!

#3

DON'T UNDERESTIMATE HOW MUCH TIME YOU'LL NEED

Selecting new protective clothing is never a quick process, but you can speed it up by setting clear expectations for your stakeholders from the beginning. For instance, avoid costly delays due to miscommunication by ensuring your technical and purchasing departments are both on board before your protective clothing tender is drawn up.

#4

DO INVOLVE YOUR SUPPLIERS IN YOUR WEAR TRIAL

Testing your new protective clothing is essential, but consider having your fabric supplier and garment maker present to truly maximise your wear trial. You'll gain a more in-depth understanding of how you can make the most of your protective clothing, as well as wear it safely. Correct fit is a crucial aspect of safety when it comes to PPE.



YOU DON'T HAVE TO DO IT ALONE. START YOUR PROTECTIVE WORKWEAR JOURNEY HERE.

As a HSE professional, you're always looking for ways to improve the quality, cost-effectiveness, performance and wearability of your organisation's protective workwear. But you don't have to do it alone.

After reading IJsselland's story, you may be excited to approach your selection process in a more collaborative way, too.

Take your first step towards your own high-tech protective clothing by talking with one of our in-house specialists. They'll help you define your starting point and get clear on what you're looking for.

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