



'No Spies At World Cup'

This headline jumped out of a newspaper article and it prompted the thought—surely having spies at the Rugby World Cup in France this September would be a little late for the companies responsible for the kit and equipment of the twenty competing nations. The design and construction of boots and clothing would have been completed long ago.

It then became clear that Spies was Pierre Spies, the back row South African rugby player, and he has been ruled out on medical grounds and his doctors were ruling out of any contact sport for up to eight months.

The disappointment to the young man, at the age of 22 and with nine Springbok caps to his name, and his colleagues must have been acute but it is a measure of the dangers faced by international players at the highest level of what must be one of the most physical of contact sports—15 men on either side doing their utmost to prevent members of the opposing side

scoring. (Despite the doctor's warning, Spies is still hoping to take part in the event.)

Multiple opportunities for sponsors

The 20 nations include countries not automatically associated with major international tournaments. Among the teams are England and host nation France, both beneficiaries of Nike interest, as well as New Zealand and Argentina, both with an association with adidas, the overall official supplier to the tournament which runs from September 7 and will only reach its final on October 20 in the Stade de France, in the Saint-Denis suburb of the French capital.

Wales has attracted interest from Reebok, while Canterbury Clothing (of New Zealand) will be working with Scotland, Ireland, Australia, South Africa and Japan. Italy has joined forces with Kappa and Samoa is working with Puma. Other teams that have made it to the final rounds are the USA, Canada, Fiji, Romania, Tonga, Namibia, Portugal and Georgia.

Canterbury Clothing is the official kit supplier of five national teams at this years Rugby World Cup including Scotland and Ireland.

 Fotosport/David Gibson



While a team may be sponsored by a major brand, individual players across the board are able to have sponsorship arrangements with other brands for items such as boots, which are regarded as equipment. So while Puma, for example, may only be linked to Samoa, many other players will be wearing Puma boots on the field.

Adidas has been developing further its Predator range of boots and introduced its +Predator Absolute, which features new PowerPulse technology that shifts the centre of gravity closer to the point of impact. The power apparently lies in the insoles and the PowerPulse concept was developed in co-operation with the University of Calgary and delivers the sort of sweet spot science more often associated with golf clubs. Scientists found that shooting with these boots increased ball speed by 2% compared to the most recent Predator, or by 5% compared to a standard rugby boot.

The boot comes with two insoles, one with a specially positioned 40g weight and one without. The weight, which has been moved from other parts of the boot, sits behind the foot at the point of impact creating maximum power transfer. The interchangeable insoles allow players to customise to their needs – more power or less weight.

The adidas Predator Rugby boot employs PowerPulse technology to increase ball speed when kicking.

 adidas

Less grip

Nike has focused on the clothing. At the time of the last World Cup, in Australia in 2003, new textile technology was used by the giant brand, which made it harder for opposing players to grab the shirt of a player running with the ball—which is a legal tackle in rugby. It has worked on extending the perceived advantage. Lightweight, tighter, durable and visually striking, the new England kit is designed to give the team every possible advantage, helping the players meet the varying physical demands of the game in their individual positions. Through Nike's research, this season sees a further reduction in garment measurements that makes it even more difficult for an opponent to grab a player's shirt. It has reduced

Canterbury's new look Australian rugby jersey with rounded neck and close-fit stretch panels.

 Fotosport/David Gibson



the number of panels used to make the jersey also aiding comfort through reduced seams.

Dri Fit Knit Fabric has been specially engineered to be stronger and more flexible than previous jerseys, while also wicking away sweat. The new shirt also features an extensively tested rubberised gripper print for players on the torso, when they are carrying a wet ball, and on the shoulders, when locking into the scrum.

Along with the shirt, the shorts and socks have been developed to improve comfort and moisture management for the full 80 minutes of the game. For the shorts, Nike has used three fabrics: a woven ripstop as the main fabric (ideal for lifting in the line out), a knit fabric for ease of running and kicking and a chamois, which helps to keep the players' hands dry.

The sock is made up of a mix of Lycra and nylon separated into three zones, with the footbed containing Coolmax technology to keep the foot drier and cooler than ever before.

There is little doubt that Nike's work inspired some of the other principal suppliers serving the rugby players of the world to rethink traditional aspects of their clothing. Canterbury Clothing which has a long heritage in the sport, dating back to 1904 certainly began to re-examine both fabrics and designs.

In today's world it might go without saying that everyone is trying to develop better technical fabrics that will keep players as dry as possible, either in terms of the sweat generated through physical endeavour or weather, and as comfortable as possible, depending on where and when the game is played. Southern Hemisphere countries, including the formidable trio of New Zealand, Australia and South Africa, have slightly different requirements as a result of the climate in which they play the game. Northern Hemisphere majors such as the countries making up the United Kingdom and Ireland, as well as France, might find themselves playing in snow and icy conditions that don't normally apply in the southern half of the globe.

The company has developed a base layer for both hot and cool climates, which work in tandem with the outer jersey for maximum comfort.

It is interesting to note that Canterbury maintains two R&D centres, one in New Zealand and the other in the UK. It also works closely with Loughborough University renowned for its work in sports. Before any new concept goes into production, every item is tested by the players with whom the company works. The balance between comfort, strength, durability and weight has to work in practice.

A shared advantage

As a result, it has not only developed its own fabric, Temex, a 250g moisture management



Glove-like Puma boot

Puma has reintroduced its v-Konstrukt concept with the H8 rugby boot. First launched as a football shoe, the rugby boot will be worn by Puma's star rugby players, including players from England, Ireland, Wales, Scotland, France and Samoa. The H8 is made from full grain leather with a quilted vamp and GripTex ankle lining. The lightweight PU-cleated outsole includes DuoFlex technology with aluminium cleats for optimal grip on soft natural surfaces, as well as wet conditions.

The v-Konstrukt II rugby boot made for the 2007 World Cup has all of the same highlights as the football boot, including DuoCell in the heel. The soft, full grain leather upper is shaped by Puma's AptoLast to provide a glove-like fit and comfort by conforming to the shape of the foot. The Dynamic Flex Guard provides protection to the foot. 

knit structure of 78% polyester/22% cotton, for use in its clothing but it has also analysed the designs—and no longer does one style fit all. Each of the fifteen positions in the team has been thoroughly reviewed and, whilst the result may seem a trifle odd to the purist, Canterbury expects to give a serious advantage to the players in the five national teams it supplies.

There are two specific areas of interest because of the nature of the game: the scrum, made up of eight men, which means that there are 16 substantial bodies locked in shoving against each other. It's almost like two tug-of-war teams, except that in this case they are driving into each other rather than trying to pull each other apart.

The other area of interest to the technologists is the tackle, the means of bringing a player down. This is where the concept of less grip came to prominence—less fabric to grab hold of,

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and if one grabbed the fabric, less chance of hanging on to it—in effect, more slip. As a result, Canterbury has even changed its iconic collar style for the purposes of the game at the most competitive level. The shirt no longer has a loop neck collar, but is a shorter, more rounded neck that is also more streamlined. Stretch panels are also used in the construction to provide a closer fit.

The real analysis has been in the positions of the players within the scrum and what is required of them, both in the scrum and in the line-out. In the same way that Speedo pushed the envelope in swimwear by designing for specific swimming disciplines, creating variable patterns and fitting individual swimmers in water, so Canterbury has developed shirts with different sleeve lengths and with different panels. The idea is to make it more difficult for an opponent to get benefit from his opposite number in the scrum while at the same time allowing his appropriate team-mate with the chance to bind more strongly within the scrum.

The same players are involved in the line-outs and some are nominated to jump above the rest to grab the ball. In some cases, the player can be lifted into the air to a height similar to or higher than a London double-decker bus. To help lift the player (who will weigh a minimum of 100kg and more), Canterbury has developed special honeycomb silicone panels in certain parts of the both the jersey and the shorts.

Individualism

Adidas launched its new and improved All Blacks team jersey as the lightest, strongest and most performance enhancing jersey ever made by the company. Adidas New Zealand managing director, Greig Bramwell, said the new jersey was the result of months of testing and consultation with both All Blacks players and the New Zealand Rugby Union. The jersey incorporates a number of technical features to enhance players' performance including bonded seams to reduce chafing and irritation, and a lighter weight fabric. "The new All Blacks jersey is 45 per cent lighter than the last, which makes it easier for players to wear and move in," Greig said. It also features the adidas ForMotion concept, to fit with the movement of players' bodies and designed specifically to the way the body works during a particular activity, accenting and improving the natural movement of the body. (It also complements the brand's TechFit undergarments worn by a number of players.)

The jersey is a 'three dimensional garment' and has been designed to support the body with the player's arms out in front, rather than at the side of the body. In a game of rugby, it is rare for a player to have his arms doing nothing. Bodymapping technology has also been used to map heat zones during play to ensure the jersey breathes in all the right places to keep players cool and has mesh inserts to assist. New Zealand Rugby Union Deputy CEO Steve Tew said the adidas design would help the All Blacks: "The technology and innovation in this latest jersey will continue to give our players a competitive advantage." Will Argentina get a similar advantage as the ForMotion concept will also be used for its team kit?

Whilst Spies the player may miss out on the tournament, it is probably a fair bet that the textile and technology spies of the big brands will be attending—to see if there are new ideas for developing in time for the next World Cup in 2011 when it will be played in New Zealand. 🌐