



MARIO ISOLA (PIRELLI HEAD OF CAR RACING)
ON THE NEW FORMULA 1 SPECIFICATIONS

Everything new

Mario Isola (Pirelli's Head of Car Racing) talks about the challenges of tire development for the new Formula 1 cars in an interview with AutoRäderReifen-Gummibereifung. More aggressiveness, faster lap times - Pirelli as a tire supplier is a decisive factor in making the class of motorsport more spectacular and exciting.



Monitors the constant development of the Formula 1 rubber: Mario Isola, Pirelli Head of Car Racing.

Formula 1 is much more aggressive than in previous years. How do you like the look of the new vehicles - what is the share of the new tires?

The latest generation of cars certainly looks spectacular and the new wider tyres form an important part of that look. In the end though, the form follows the function: with the increased cornering speeds made possible by the new aerodynamic rules this year, we needed wider tyres capable of generating the grip needed to get the car round the corners. The result is a car that not only looks more aggressive, but is also around five seconds per lap faster than 2015, which was the chosen benchmark when the regulations were being formulated. Personally, I really like the new look.

The new P Zero tires are about 25 percent wider. What was the challenge in the development?

Fundamentally the biggest challenge was to give the tyres the additional strength and stability to operate at these much higher speeds compared to the previous era, and to ensure that we had a product that answered the brief set for us by the teams, governing body and promoter. Just because the tyre is 25% wider, it doesn't mean that there is 25% more energy going through the tyre: the equation is much more complicated than that, with dramatically increased forces. So, we had to design a tyre that would answer all the different demands that were made of it, without having a real 2017-specification car to test it on while we were carrying out the development. This was a very big part of the challenge too.

What changes did you have to make on the new tires in terms of structure, construction, mixing?

This is the biggest set of changes that we have ever made to the tyre specification from one year to the next since our agree-

ment with Formula 1 began in 2011, so it's fair to say that everything changed and we started off with a completely blank sheet of paper for this year. The construction and compounds are completely new, in keeping with a new philosophy for 2017, which is to reduce degradation and have fewer peaks of temperature, allowing drivers to push hard from the start to the finish of every stint. In order to achieve that, we had to rethink the whole concept of the tyre completely, while still taking on board all the lessons learned to date. But there's very little carry-over.

In the run-up to the season, you said that the development with a view to the 2018 season will continue throughout the next season. Please describe the test and development procedures.

Testing for next year will continue broadly along similar lines to the tests that took place in 2016 for this year, with 25 car days of dedicated tyre testing for 2018. It should be a bit easier because at least we have representative cars to test with. The other important difference is that all the teams will take part, rather than selected teams. There are going to be eight circuits hosting the tests, but the tests will all be carried out in the same way as they were last year: 'blind' tests, with none of the teams knowing exactly what they are testing. This way we can ensure that nobody gains any advantage.

The current tires allow races with less pit stops. Was this the official guideline?

There was never any official guideline to have fewer pit stops, but this is often a natural consequence of increasing the durability of the tyre, with less degradation. While we will probably see a number of one-stop races this year like Australia, there's also a high likelihood of two-stop races, as seen in Bahrain, and three-stop races are far from impossible too. As the season goes on and the cars evolve, it's likely that we will see lap

times become even faster, which means that the cars could use their tyres more. As is often the case in Formula 1, you are chasing a moving target. So far, the balance of durability and degradation is about right in terms of pit stops, but we will obviously keep a close eye on it.

There is thus no need for a major problem in the external representation. It was certainly in the years before not easy to convey to the public that the order to Pirelli was to guarantee several pit stops by faster tyre wear. Does it make your job easier and will Pirelli be able to benefit from the commitment more easily?

As we have said on a few occasions before; it makes no difference to us: we will supply whichever tyres Formula 1 would like us to supply, with high or low degradation as required. It's not at all a question of making our jobs easier, just a question of giving the sport what it wants to have. Formula 2, for example, chose to keep the philosophy of tyres that deliberately degrade, and we had two very exciting races at the first round in Bahrain.



The new P Zero tires are about 25 percent wider.

The verdict we've received from the drivers so far on the new generation of F1 tyres is very positive, so that's obviously pleasing.

But equally, we're never standing still; we're already working hard on the next generation of tyres for 2018. (kle)



The Formula 1 in 2017 again radiates more aggressiveness.



NOKIAN TYRES WHITE HELL

Glancing behind the scenes of R&D

Many international press representatives and customers were greeted with "Welcome to 'White Hell'" in mid March. Nokian Tyres had invited to Ivalo in Finnish Lapland in order to enable a deeper insight into the R&D activities of the company.

The research and development department is based in Finland, whereas the main production takes place in Russia. Nevertheless, some tyres are also produced in Finland: The company Nokian Tyres, of which Bridgestone holds 50 per cent as shareholder, manufactures 2.5 million tyres in Finland. "We are planning a third factory", announced Antti-Jussi Tähtinen, Vice President for Marketing and Communications, in Ivalo. Nonetheless, there is no further information where, when or even if at all the factory is supposed to be opened. According to him, a decision will be taken between North America and Russia. While negotiations concerning the successor of the CEO were still going on in March, this question was answered in the meantime. Nokian Tyres nominated Hille Korhonen as new President and CEO of Nokian Tires plc Licentiate of Science. She will start working in this position from June on.

Changing conditions

"Like the 'Green Hell' – the race course at Nürburgring – the 'White Hell' changes its weather without further notice and fast", said Antti-Jussi Tähtinen. Thus, tests are possible under different and above all challenging conditions. During one year, about 20,000 tyres are tested in detail. How does the tyre perform on snow and ice? What about accelerating and braking features? Nokian looks for answers to these questions", illustrated Petri Peltoniemi, Head of Tests. Although tests in laboratories are able to inform a lot about a tyre, tests under real conditions



A glance behind the scenes of White Hell.



Olli Seppälä, Head of Tests, presented the test area White Hell.

are not replaceable according to responsible people. This is the only possibility to guarantee that the products also function under difficult and demanding conditions. The test department at Nokian Tyres focuses on indoor and outdoor test. Durability under high speed, wear and rolling resistance are checked during indoor tests. A 700-metre-long tunnel is e.g. at the test area in Ivalo. Tests are carried out there until May. According to company information, only tyres with "outstanding features" are transferred to outdoor tests. Many tyre testers are involved in this and are in constant contact with the company, as the subjective impressions of the test drivers are essential for the development of a tyre.

"The basic construction of a tyre has not really changed, but big development steps are visible in material development and

compound", explained Matti Morri, Head of Technical Customer Service at Nokian Tyres plc. He has been working for the Finnish tyre manufacturer for about 20 years. The Aramid Sidewall Technology is one of the latest technologies, Nokian Tyres is very proud of. It has been used for SUV and truck tyres since 2016. The symbol of a safety vest indicates the technology in the respective tyre, because the material Nokian makes use of can also be found in bulletproof vests. Moreover, Nokian announced a new summer tyre. You will learn more about this in the following interview with Antti-Jussi Tähtinen. (aki)



The tunnel for test purposes is about 700 metres long.

The invited guests were allowed to test different tyre treads of Nokian Tyres in White Hell 2.



AN INTERVIEW WITH ANTTI-JUSSI TÄHTINEN

New range of summer tyres announced

Enquired about

In the framework of the detailed presentation of the test area White Hell of Nokian Tyres in Ivalo, our editors spoke with Antti-Jussi Tähtinen, Vice President for Marketing and Communications at Nokian Tyres, among others about the importance of the German market for the manufacturer and the type of future innovations.

Here in Ivalo, in the so-called White Hell, tyres are tested in an extremely detailed way. Only recently the tyre centre set up in Finnish Lapland celebrated its 30th anniversary. How many euros does Nokian Tyres invest in research and development?

At the moment, we are investing about 1.5 per cent of our sales in the extraordinarily important area R&D.

How many employees do work in your research and development department?

It depends on who is considered to be an employee of research and development. Roughly speaking about several hundreds.

Do you intend increasing the number of employees?

Yes, we do, and above all when opening the Madrid Test Center the number of employees will automatically be increased.

What role does the German market play for Nokian Tyres?

When looking at the markets in Central Europe, the German market is definitely the biggest and most important one. Thus, it plays a crucial role for us too. We would like to express this with e.g. a cooperation with the double Formula 1 World Champion, Mika



Antti-Jussi Tähtinen considers the German market to be the most important in Central Europe.

Häkkinen, as a brand ambassador, because he enjoys a high level of popularity in Germany.

What plans do you have for the German market, how will you operate in the future?

We will increase sales in a so-called traditional way, e.g. we would like to intensify our distribution and marketing activities. In the past, we significantly increased our sales personnel. Furthermore, we will raise our marketing expenditures and will provide a growth of brand awareness by implementing different activities. Thus, you can say that we are currently focusing on basic activities.

First of all, Nokian Tyres is well known as a manufacturer of winter tyres. Will you increase the focus on the summer tyre segment too?

Yes, that is correct. Nokian Tyres is connected with winter tyres. Nonetheless, we also offer a completely new and good summer tyre line-up. There is an extremely high sale of summer tyres, above all in Germany. We are especially good at the production of

SUV tyres. They are designed for a tougher use. Thus, we make use of our so-called Aramid Sidewall Technology, which guarantees that the tyres are extraordinarily stable and robust. It goes without saying that a manufacturer specializing in good winter tyres has to be able to produce good SUV tyres too, as the production and development of winter tyres demand a lot of specific know-how and SUV tyres have to meet the utmost requirements.

The latest tyre, which was presented here in Ivalo too, is the Hakkapeliitta 9. It is a spike tyre, especially designed for Nordic markets like Russia etc.. What type of further products can we expect in the future?

Yes, absolutely. Last year, we launched the WR A4 for the German market and Central Europe. The year before, the WR D4 celebrated its market launch in the same markets. Generally speaking, it takes four or five years until a line-up has to be replaced. As a consequence, we will renew our portfolio of passenger car tyres and will also introduce a completely new range of summer tyres to the market in one or two years. (aki)



Continental has opened its new location in the US-American San José in Silicon Valley/California.

CONTINENTAL STRENGTHENS INTERNATIONAL TECHNOLOGY NETWORK

New research centre in Silicon Valley

Continental has further expanded the international network of its research and development centres. The supplier giant opened a new location in San José in Silicon Valley. According to company information, up to 300 experts will soon be able to work on solutions for sustainable future mobility. Projects will focus on automated driving, electromobility, connectivity and mobility services.

We will clearly focus on the development and design of the ecosystem of future mobility. We will connect our customers' orders and wishes with our innovative ideas and the knowledge, energy, and experience of our global network of more than 32,000 engineers and business partners – leading to common benefit", says Kurt Lehmann, Corporate Technology Officer at Continental. Continental will invest a one-digit million amount of US dollars in its new research and development centre. The new facility will consist of 60,000 square metres for laboratories, workshops and offices. Continental has already been represented in Silicon Valley for many years, as it established headquarters for the Continental Intelligent Transportation Systems (ITS) in 2014.

Kurt Lehmann stresses that the new research and development centre will be a substantial module for the implementation

of the Continental strategy, which focuses on the development of groundbreaking technologies for the mobility of people and transportation of their goods. Software-based solutions, processing big data, and using artificial intelligence will play a crucial role. "The automotive industry finds itself in the middle of its biggest change during its 130-year history. In former times, it created value in a mechanical way, then, it intensified value by using sensor technology, electronics, software and digitalization. Tomorrow, our business will predominantly be characterized by mobility services and intelligent mobility technologies", explains Lehmann. "In the next decades, a majority of electrically driven, fully connected, and automated vehicles in the cities will be run by mobility services and fleet managers. Continental will connect the 'brains' of the vehicles and will thus extend the collective intelligence of the vehicle swarms. As a consequence, all the different areas of Continental will work together in an

interdisciplinary and collaborative way San José. Consequently, new, additional business areas will develop for our groundbreaking solutions", clarified Lehmann.

Continental has more than 18,000 employees in the USA. During the past five years, the company invested 1.9 billion US dollars there. For the next five years, the company plans an investment of a similar amount. According to company information, Continental will invest about nine million euros in a new indoor tyre evaluation centre on its Texan test ground in Uvalde. The new test centre is based on the group-owned tyre test ground and enables indoor tests independent from the weather for all Continental tyres, which are produced in North and South America. The new plant will probably start operation in April 2019. According to information from responsible people at Continental, the new indoor tyre evaluation centre will become an important pillar of the long-term development strategy Vision 2025. (kle)