

Edouard Michelin

Born in 1963, **Edouard Michelin** has an engineering degree from *École Centrale de Paris*. He joined Michelin in 1985 and has held various posts in the fields of research, production and sales: starting as Production Manager at the Puy-en-Velay (France) plant he then became CEO of Michelin North America, where he was in charge of both industrial plant and truck sales and distribution. Co-opted as a Managing Partner in 1991, he joined François Michelin and René Zingraff in Clermont-Ferrand in mid-1993, and was appointed Michelin's new head by the Annual Shareholders Meeting held on 11 June 1999.



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ISO Focus: How much is Michelin involved in the development and use of ISO standards? How do you value them as assisting in your relations with regulators and with your customers?

Edouard Michelin: Michelin, a multinational company, with factories located on several continents, has decided to use ISO International Standards in order to comply with the requirements concerning quality and environmental management systems of vehicle manufacturers but also of the national authorities which deliver approval of tyres. We can illustrate our commitment by the following figures:

- all our industrial sites are certified (or in the process of being certified) to the ISO 9000 family of standards or their equivalent;
- more than 90 % of finished products are manufactured in ISO 14001 certified sites.

“Our sites, ISO 14001 certified, limit their impact on the environment.”

- In the future, an increasing demand for International Standards is foreseen in the automotive sector in answer to the two major needs expressed by society, at the global level: improving the user's safety and reducing negative environmental impacts caused by land transportation.

ISO Focus: Often standards and innovation are opposed. But it is also contended that International Standards contribute to the dissemination of technologies and good practices, facilitate trade and offer consensus based mechanisms that ensure their acceptance by the market place and regulators. What is your opinion on this, as a renowned, technology and innovation driven, multinational company?

Edouard Michelin: In the field of standardization, we implement two kinds of standards: professional standards (those that are concerned with sizes and design of tyres) and universally recognized standards (those for tests methods and quality and environmental management systems). Historically, three sets of professional standards have been developed by the tyre industry to follow the vehicle growth market inside the three major economic areas (Europe, North America, and Japan). In each area, the objective was to define the common technical performances in terms of definition of design characteristics for each tyre category, according to the local specifications of vehicles, road designs and tyre uses in order to guarantee tyre interchangeability between different brands for the user.

Today, these standards are upgraded, at the tyre manufacturers' initiative, at a rate corresponding to the local needs of the vehicle makers. In addition, our professional organizations have developed simplified and speedy procedures in order to check innovations within a controlled professional framework (“experimental standards”). After testing in the field, an innovation can be validated and issued as a new professional standard. In some cases, innovations can be treated as ISO standards. In particular, for some countries where national tyre organizations don't exist or are not recognized by authorities, ISO standards offer a guarantee as an international worldwide reference.

In parallel, in the global market, ISO standards are well adapted for the following domains:

- Description of performance in use and measurement methods which can



Michelin has demonstrated its ability to develop tyres for all types of competition and surface. Mexico car rally, 2005.



complete the essential elements for the construction of regulations; these International Standards should represent a unique technical solution in order to limit the proliferation of local standards which could be requested for imported tyres;

- Definition of Quality Management Systems and conformity assessment; for instance, ISO 9000 and ISO /TS 16949 have facilitated, in the vehicle industry, the relations between suppliers and customers by reducing the number of audits of production plants; it is hoped that, in the near future, certified tyre production plants will be recognized by all regulatory bodies as equivalent to their own requirements in order to limit multiple and redundant audits.

ISO Focus: *What are some of the major challenges in the tyre industry today in terms of the environmental impact of your products and how do you overcome them? What may be the added value of our ISO 14000 series of standards?*

Edouard Michelin: *Our products and services must contribute to environmental protection.*

Michelin, as an innovation-driven company, has continuously contributed to protecting the environment. Among the technological breakthroughs, we can list:

- as far back as 1946, Michelin invented the radial tyre which allowed a reduction of 30% in the quantity of raw materials required to make a tyre, while also significantly improving their lifespan;
- In 1980, the first Michelin non-studded winter tyres with rubber sipes which avoid mechanical damage to pavements yet assure a high level of safety on snowy or icy roads, while maintaining perfect safety on dry roads;

- In 1992, Michelin developed “green tyre” technology which lowers rolling resistance by 20% and brings substantial reductions in fuel consumption of vehicles;
- Recently, Michelin launched a revolutionary tyre assembly, the vertical anchored tyre (“PAX system”). With its new profile and its original mounting system, this new tyre offers rolling resistance that is reduced by further 10% over equivalent standard tyres.

“In the future, an increasing demand of International Standards is foreseen in the automotive sector.”

All these innovations have been introduced on the market. In the near future, the challenge for the tyre industry, and more specifically for Michelin, will be to promote what is now clearly inseparable: mobility and respect for the environment. Accordingly, our permanent innovation policy focuses on enhancing the environmental performance of mobility.

Life cycle analyses have shown that it is during the tyre's use that we can best contribute to reducing the impact of road-based mobility on the environment. To achieve this, we constantly work on reducing our tyres' rolling resistance. By helping reduce total vehicle energy consumption, we contribute to reducing pollution levels and the use of non-renewable fuels – the most common sources of energy used on the vehicles of today.

Right from the design phase, our researchers take into account these environmental objectives in the choice of materials, architecture and manufacturing process. Accordingly, wear resistance on our passenger car tyres or the possibility of regrooving or retreading our truck tyres extends product life. Thus, they can take full advantage of the raw materials used and the energy consumed in the manufacturing process.

“ISO standards offer a guarantee as an international worldwide reference.”

Our responsibility also extends to the implementation of efficient end-of-life product recycling solutions, by drawing value from used tyres in the form of energy or reusing basic materials after appropriate processing.

Our sites, ISO 14001 certified, limit their impact on the environment.

Permanent progress in terms of respect for the environment at our industrial, administrative and commercial sites is a major issue for Michelin.

The ensuing responsibility of the management teams at each site is clearly defined. Our Environmental Management System is a practical tool that identifies the impacts of our activity on the envi-



Cutaway of a Michelin “PAX system” showing the internal support ring and the new tyre design. This innovative breakthrough allows continued mobility in case of puncture.

Michelin intends to carry out this mission, fully assuming its responsibilities in all aspects of its operations. Accepting its responsibilities means taking part in the development of sustainable mobility or, in other words, achieving increasingly efficient solutions to meet expectations and aspirations, while respecting the natural environment. This also means taking into account the long-term effects of the choices we make. A company's performance must be measured against each and every one of these aspects.

Reducing pollution, improving safety, transitioning gradually toward renewable energy sources, improving traffic flow, enhancing widespread access to means of transportation, improving infrastructure planning using judicious various mode of transport: these are the challenges for the future of mobility.

It is the Michelin Group's responsibility to contribute to finding long-term solutions to these questions. But these solutions can only result from concerted efforts. For this reason, we take part in research programmes regarding concepts and technologies for the transportation of the future aimed at establishing sustainable mobility. In this context of a long-term research study, the specialists in charge of building this standardization will be able to accompany or anticipate all technological innovations which will contribute to sustainable mobility. The international Michelin experts will have to engage and to implicate themselves actively in these long-term strategic projects. ■

ronment and provides a range of control mechanisms. By perfecting this tool, we intend to make it a Group standard, enabling us to fully meet existing regulations or to apply the best possible International Standards like ISO 14001.

ISO Focus: *What role is Michelin playing in driving technology and safety standards today, and how do you expect that role to evolve in the future? What new ISO International Standards would you welcome?*

Edouard Michelin: Michelin contributes to sustainable mobility. Since the company was first founded, Michelin's stated mission has been to contribute to progress in the area of personal and goods mobility and, beyond this, social progress. The company's goal is to satisfy the fundamental human need to socialize, exchange, and discover.