

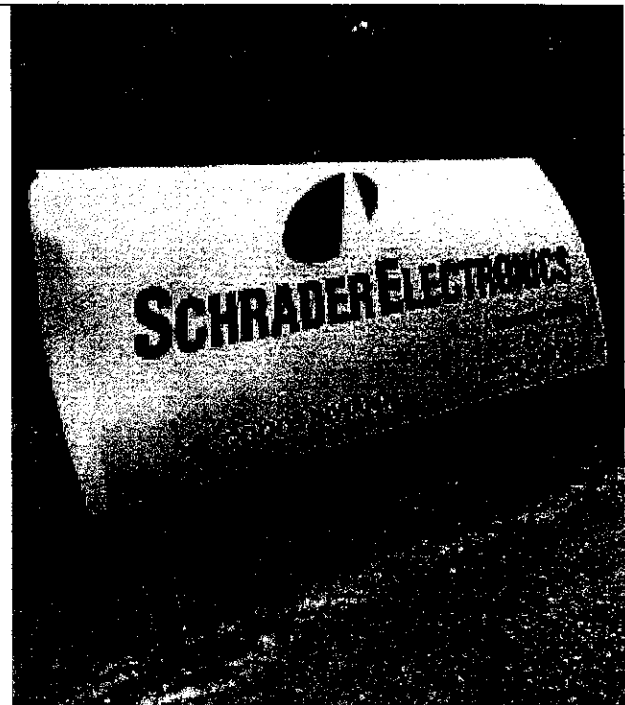
NORTHERN IRELAND'S
**TOP 400
COMPANIES**

Top 100 focus

SPOTLIGHT

COMPANY PROFILE

- 1988: Neotech, a company which designed and manufactured electronic tyre gauges is founded in the newly-built Antrim Technology Park.
- 1990: A research programme is launched into tyre pressure monitoring on behalf of Schrader Automotive, a division of Arvin Industries. In the same year, Neotech was renamed Sentronics.
- 1992: The first working tyre pressure monitoring system is installed on a vehicle.
- 1994: The Antrim-built product is selected for use on the General Motors 'C5' Corvette and 'generation one' development begins.
- 1995: Schrader acquires Sentronics and the name changes again, this time to Schrader Electronics Ltd.
- 1996: Production of the generation one gauges begins for the GM Corvette and the Chrysler Prowler.
- 1997: Generation two development begins to stimulate mass market interest in tyre pressure monitoring sensors. ISO9001 and QS9000 certification is awarded to Schrader Electronics Ltd.
- 1998: The generation two sensor is selected for the Renault Laguna and the Peugeot 607. The same year, Schrader Electronics was acquired by Tomkins plc and became an operating division of the Gates Group of Companies.
- 1999: Production begins on the generation two model for the Peugeot 607 and an extensive expansion is unveiled at the Antrim headquarters.
- 2000: The generation two sensor begins to appear on vehicles worldwide. The Tread Act was introduced in the US in November of this year, mandating the fitting of pressure monitors to passenger vehicles. Schrader also introduced its first auto rotation system.
- 2001: Schrader wins the Gates Award for Innovation and also receives ISO 14001 certification. In the same year, the pressure gauges are launched on the Nissan Infinity and the Chrysler Grand Cherokee.
- 2002: Schrader takes the Queen's Award for Enterprise and the monitors are launched on the Vectra, the Saab 93, the Peugeot 807 and the Citroen C8 among others.
- 2003: A new facility is announced for Carrickfergus and further successful launches take place at General Motors.
- 2004: The firm is awarded ISO/TS 16949 certification and it opens a new European regional sales and engineering support office in Paris.
- 2005: Legislative changes are announced in the US which will make it compulsory for every passenger vehicle to have the gauges fitted.
- 2006: Schrader's new manufacturing facility is opened at Carrickfergus by Leslie Morrison of Invest NI; announced co-development of a new sensor with the Pirelli tyre firm and a new contract is signed with BMW Motorcycles.



Schrader Electronics

Businesses frequently condemn new government regulations as restrictive but for Antrim-based Schrader Electronics, a small company by international standards but the leader in its field, a law passed in Washington has driven its sales from £25m three years ago to more than £50m today – with £100m its target by the end of 2008.

Schrader designs and manufactures remote tyre pressure monitoring systems. This is only its second year in the *Ulster Business* Top 100 listing, moving up to 80th position from last year's 83 with an annual turnover of £54.7m. Its team pioneered and developed the remote tyre gauge, a small plastic box attached to the back of a tyre valve into which is packed a pressure-sensitive chip, a 10-year battery and a radio transmitter which sends a warning signal to a dashboard display if pressure falls.

Since the first working system was installed in a vehicle 14 years ago, it has increasingly been adopted by the world's leading car manufacturers either as standard or as an optional extra, with sales steadily climbing year-on-year for the firm. From the end of next year, however, (following a three year

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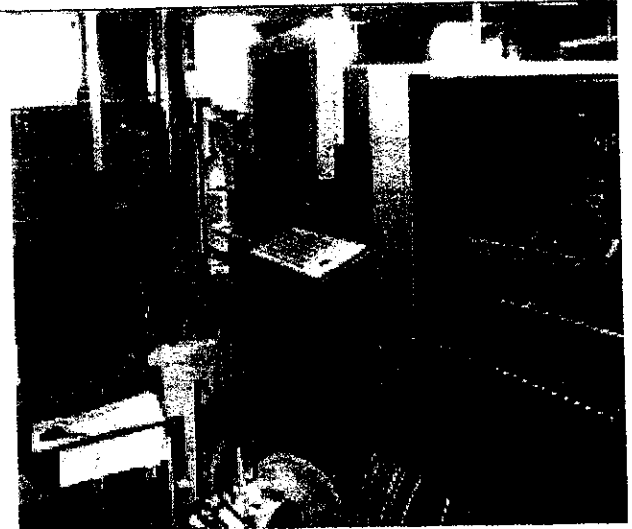
(phasing in' period) every car sold in the United States, including imported models, will have to be fitted with a tyre pressure monitoring system. That means a market of four sensors for each of 16 million cars! Currently discussions are underway with a view to introducing similar safety legislation in the EU. And although this wildly expanding market has naturally bred a field of competitors, including some of the world's biggest hitters - such as automotive electronics giant Siemens - Schrader Electronics is successfully maintaining its lead position and market share.

How?

"By keeping a 100 per cent focus on one product which we pioneered and are continually developing to maintain its technical edge and cut costs. We are now selling the fourth generation of our monitors and are working on the fifth," says Stephen McClelland, who was the first employee taken on by the firm when it was set up in 1988. He also headed the design team that developed the first monitors and is now managing director.

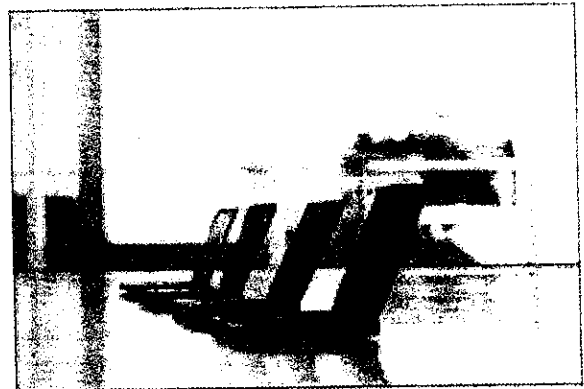
"We operate in a very tough industry; very competitive and cost-conscious. The key to success, indeed survival, is innovation. We are still the lead supplier and we make a good profit. Our challenge is to maintain both of these positions and we do it by continually re-investing in R&D to evolve our products. This year our R&D budget is £4m, a re-investment of eight per cent of revenue. That is how we stay ahead of the chasing pack."

Schrader also believes in keeping close to its customers. "Our travel bill is scary," says McClelland. "On any one day, I may have 10 people on planes visiting car and tyre manufacturers and electronics firms in Europe, the United States and the Far East - not just marketing people doing the selling but engineers talking ideas or problems through with other engineers. Our customers appreciate us going to



meet them face-to-face; it's almost like we become part of their teams.

"It's one of the advantages of being a Northern Ireland company, our staff are not just skilled and knowledgeable, but they're good communicators with a sense of humour and good fun to work with. This is really appreciated, particularly in



the paperless office.

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PROFILE

◀ Japan. The Japanese and the Irish have a lot in common", he adds.

TEXAS ENTREPRENEUR

The Schrader Electronics story goes back to 1988 when a Texas entrepreneur who had an idea for a digital tyre gauge was looking for an offshore location to develop and manufacture it. On an IDB trade mission at the time was Northern Ireland businessman, Jim Bloomer. They met and the result was the setting up of technology company, Neotech in the new Antrim Technology Park.

The company gradually expanded its development team but the digital tyre gauge never took off, perhaps because it was considered too expensive compared with the traditional 'pencil' type tool. In 1990, however, Schrader Automotive, the world's biggest tyre valve company with factories in every continent, decided to diversify into a more high-tech range of products. It asked Neotech to come up with ideas for a 'smart valve' and its response was the revolutionary concept of putting a pressure monitor inside the tyre.

With R&D funding from Schrader North America, Neotech (by then under a name-change to Sentronics) developed the system and launched a worldwide marketing drive. In 1995, with a proven product successfully developed, Schrader bought the Antrim firm, renaming it Schrader Electronics and in 1996, the first pressure monitors were fitted to a production model, the iconic Chevrolet Corvette.

While the development work was underway, the team helped make ends meet by doing other contract work for international firms, such as producing PCB boards for Daewoo. In 1997, McClelland became MD and had a workforce of 34. It is now grown to 500, with an expanded manufacturing plant, an R&D unit in Antrim and a second plant in Carrickfergus which opened in 2003.

Stephen McClelland had gone to Portadown College and then on to Queen's, where he graduated in electronic engineering in 1984. He designed chips for Plessey in England for four years before returning to Northern Ireland as design engineer with the new Neotech company.

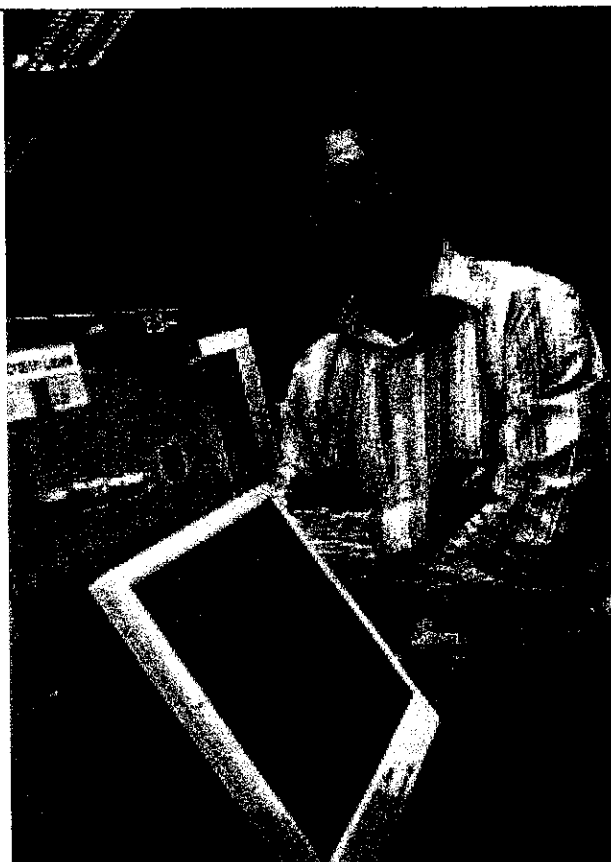
But isn't it unusual for an MD to come from an engineering background?

"Not at all", says McClelland. "We're a technology company; innovation, engineering and R & D are our lifeblood. Of our nine top managers, five are engineers".

From 1998 onwards, business just grew and grew thanks to contracts with giants such as Chevrolet, Chrysler and Cadillac, and then a big break into Europe with Renault (the Schrader monitors have been fitted as standard in the Laguna since 2000) and Peugeot.

It was the Firestone-Ford tragedy that led Congress to pass the Tread Act in 2000 which introduced accountability for executives and mandated reporting of safety problems and the fitting of monitors to passenger vehicles. It had emerged that top-heavy Sports Utility Vehicles were being fitted with tyres that de-laminated at high temperatures – a total of 150 people are believed to have died in the US over a three-year period. It was claimed that the manufacturers knew of the problem, which had also appeared in the Middle East, but said nothing back home.

The first monitor valves in 1996 cost \$25 each – they now cost less than \$10 because of design and production



Stephen McClelland

efficiencies and high volume output. Depending on customer requirements, Schrader will supply a full system, comprising monitor and display unit, but increasingly works with other suppliers to provide an integrated system. The radio transmitter in the monitor works exactly the same as the key-fob locking control on cars so the same dashboard 'receiver' serves both (but with different frequencies).

- Nearly 250,000 accidents per year occur in the United States alone due to low tyre pressure
- 75 per cent of roadside flat tyres are preceded by a slow leak or are obviously under-inflated
- According to a recent survey, it was found that if Americans cut their fuel consumption by 10 per cent, they could save a collective of \$2bn a year. Which, says Schrader, means that 4x4 drivers could be saving \$674 a year on fuel by keeping their tyres properly inflated
- Up to 40 per cent of European motorists are riding around on under-inflated tyres, which affects directional stability, fuel economy and tyre-wear rates
- Surveys conducted in the UK have found that up to 80 per cent of motorists fail to regularly check their tyres
- A tyre can lose up to half of its air pressure without appearing to be under-inflated