

# 50 Years as Pioneers of Gas Detection – How Honeywell Analytics has Helped Shape Gas Detection's Evolution

**As with all things in life, evolution is constant and the gas detection industry is no exception. Looking back to the origins of the industry over 60 years ago, the first groundbreaking devices developed highlight just how much things have changed, when compared to today's offering. Not only has product innovation changed, but there has been massive evolution in the marketplace itself. Back at the beginning of the gas detection story, mining was the key application for this type of equipment, but the advent of enhanced site safety and new legislations have meant that a wide variety of applications and industries now use gas detection equipment.**

Few suppliers have been there since the beginning, but one company can boast not only a consistent presence in the industry, but a hand in some of its key innovations and benchmark technologies. Honeywell Analytics is one of the market leading suppliers of gas detection and the organisation recently celebrated an impressive milestone; its 50th anniversary.

From humble beginnings as a small gas detection supplier based in Poole in the UK, the company has grown to become one of the World's leading providers of gas detection solutions; growing from one single site with only a handful of employees to a global enterprise

with offices across the World and thousands of staff.

Originally incorporated as EIC-Sieger in 1959 and later re-branded as J&S Sieger Ltd in 1961, the company revolutionised the fledgling gas detection industry when its founder, Joshua Sieger, invented the first low-power catalytic bead in 1958, designed for the detection of flammable gases onboard boats.

Sieger, who was a keen boating enthusiast, invented the new catalytic bead driven device, called the Mark 9, to fill a gap in the boating market. The device used a new technology that provided lower power consumption and minimal cross interference; aspects previously unavailable.

At the time of its invention, there were only a few companies offering gas detection solutions, and these organisations were focused primarily on serving the mining industry, which was the key market for gas detection at the time.

Mark 9 was so well received that it facilitated the company's entry into mainstream gas detection, following a request from a large corporation for a variant model capable of detecting Ammonia. The resulting device, known as Mark 7, became the first in a long line of innovations that would define the company as not only a premier provider of quality detection solutions, but also as a technology leader and pioneer.

## Pioneers of innovation

The company once more pushed the boundaries by developing a method of detection capable of providing physical evidence in 1971. Chemcassette technology was developed and provided unique, tangible evidence of a gas release. This was achieved using colourimetric paper tape, which changes colour when it is exposed to a reactive agent; in this case a specific target gas. Chemcassette is still considered to be one of the leading solutions for providing

tangible proof of a gas release today.

Over the next eight years the company gained momentum, bringing more solutions to market and expanding its product portfolio. In fact, the company's reputation grew so much it attracted the interest of the Swiss owned corporation, the Zellweger Luwa Group.

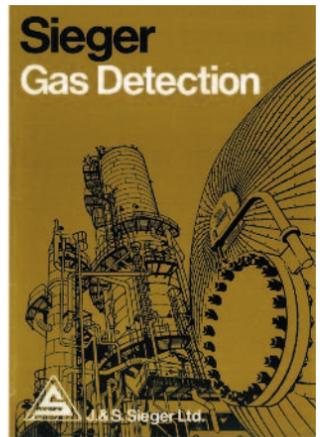
J&S Sieger Ltd was acquired by the organisation in 1979 and was later re-branded as Zellweger Analytics. Two years after the acquisition, MDA Scientific - a company specialising in hi-tech products designed for semiconductor fabrications and laboratories - was acquired, bringing with it a range of specialised, highly sensitive gas detection solutions into an already comprehensive range.

Fresh from its integration into the large and resource rich Zellweger Luwa Group and the acquisition of additional products through the purchase of MDA Scientific, the rapidly expanding organisation was beginning to make a notable impact in a wide variety of new markets.

Whilst continuing to diversify its interests, Zellweger Analytics still retained the enviable position of market leader for mining, oil, gas and petrochemical applications.

The 1980s marked a period of intense innovation, which saw the company bringing a number of exciting propositions to market. Zellweger Analytics once more pushed the boundaries with the first poison resistant catalytic bead in 1982, the SG7 (Siegestor 7). This was soon followed in 1983 by the launch of the company's first range of field transmitters (the 1050 range), using a technology that permitted simple, one man calibration and set up. This was followed by the launch of the 1053 transmitter range in 1984, which featured remote sensor mounting capabilities.

The success of the new products helped catalyse more innovation and product development, allowing the company to develop the unique Sieger Digital Gas Data Acquisition and Control System (GDACS) in 1985. This industrial control system provided users with a level of interaction and flexibility that is still unsurpassed by many contemporary systems, including Supervisory Control And Data Acquisition (SCADA).



This historic assets highlights the brand evolution at Honeywell Analytics



Gas detection has come a long way since the days of historic products like Gas Tec; a portable unit designed to detect underground gas leaks



Chemcassette provided a solution capable of providing physical evidence of a gas release

A big step in the evolution of gas detection was the emergence of optical detection in the 1980s. This was an area in which Zellweger Analytics was very active, setting the benchmark for optical detection in both point and then subsequently open path infrared (IR) detection.

1985 saw the invention of one of the first point IR flammable gas detectors, the 5050, marking the company's migration into infrared based detection. 5050's high quality performance, coupled with the benefits of using IR detection when compared with more traditional sensing principles, gained a lot of interest from the marketplace.



Impact marked the industry's first multi-gas portable with easy swap sensor cartridge technology

This optical expertise was soon recognised when a global oil giant chose to work with the company on developing a conceptual idea that further evolved optical gas detection in 1987. The resulting commercially available model, called Searchline, was the first hazardous area certified Open Path detector on the market.

Today, Honeywell Analytics is still a global leader in optical gas detection solutions, and a manufacturer of market leading IR products, including Searchpoint Optima Plus (Point IR) and Searchline Excel (Open Path IR).

The early 1990s saw the company's first products that combined complex certifications, delivering enhanced flexibility to users. Series 2000 was launched in 1992 and featured a range of mixed certification gas transmitters that provided simplified sensor replacement in hazardous areas without the need for a hot work permit.

A few years later an important acquisition would be made, bringing with it a wealth of new in-house technology and expertise, catalysing further development of the portable gas detection line of business. Neotronics, a pioneering provider of state-of-the-art portables was acquired in 1996, and allowed the company to launch one of the World's most popular portable devices; Impact.

The Impact range was launched in 2001 and was considered revolutionary at the time with cutting-edge functionality such as 'Plug and Play' replacement cartridges. The Enforcer, one of the Impact range's supporting accessories was even more groundbreaking; it was the first device on the market capable of offering automatic calibration of a portable for the cost of a bump test; this meant that a device could be fully calibrated in just minutes, with a single button press.

Aside from setting the standard for innovative functionality capable of adding genuine value, Zellweger Analytics also managed to consistently retain an enviable position of excellence for cell and sensor manufacture. Building on the existing electrochemical cell technology for detecting toxic gases, many manufacturers tried to develop the basic cell construction in an attempt to improve performance in harsh environments.

However, it was the company's radical re-design of the electrochemical technology that led to the launch of the Surecell™ in 2000, now one of the World's leading and most reliable electrochemical cells, particularly in high temperature and high humidity environments.

The company was also the first to fully automate sensor production of the Surecell™, eradicating the traditional errors and faults associated with manual production.

Zellweger Analytics also made a dramatic impact upon the consumer market when it established its SF Detection brand in 1991 to supply domestic Carbon Monoxide (CO) units to consumers in the UK.

Again, a pioneering spirit prevailed in its endeavours, and the company was the first to bring a kitemarked product to market in 1996, whilst a subsequent model, the SF350BS released in 1998, was the first device to be approved to the new British Standard.

When the European Standard governing the use of domestic CO alarms (EN50291:2001) was released in 2001, the company responded by launching the SF350EN in 2002; the first CO alarm in the UK to be certified to the European Standard.

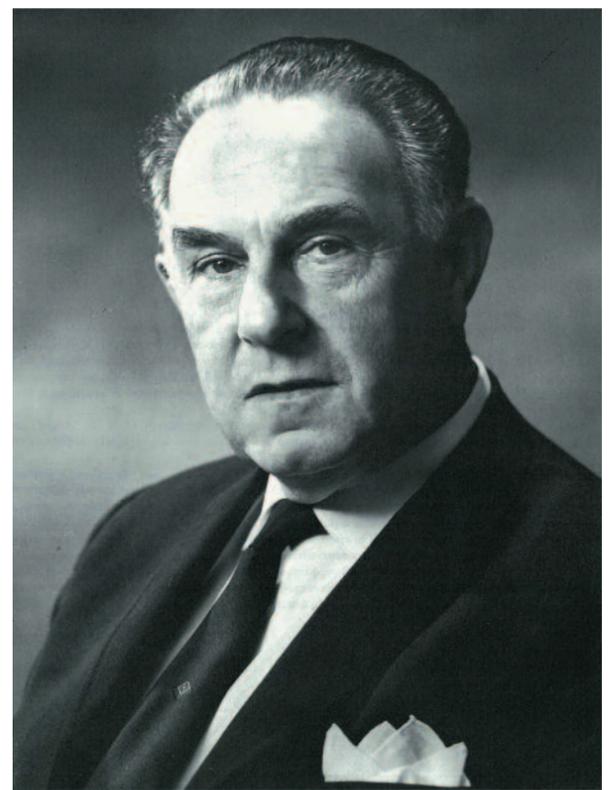
In 2005 industrial leader Honeywell acquired the company and subsequently re-branded the organisation as Honeywell Analytics,

within its Life Safety Division. In 2007 MST Technology, a market leading German supplier of semiconductor fabrication and laboratory based gas detection, was acquired and integrated, bringing a variety of products into the range of solutions offered.

Today, the company has offices all over the World, and provides gas detection solutions to all industries and applications; from low-cost, compliance equipment suited to a wide range of industrial settings to high-end, high-functionality devices.

As one of the World's premier providers of gas detection, Honeywell Analytics has come a long way from its humble beginnings 50 years ago, enjoying more technological firsts than any of its competitors.

And with the advent of new product releases such as the XNX Universal Transmitter, which can be used with any of Honeywell Analytics' gas sensing solutions and Sensepoint XCD, which is the first device that clearly shows the unit's status at a glance; even from a distance, more ground-breaking innovation is very much on the horizon, as Honeywell Analytics begins its next 50 years in business.



Joshua Sieger C.B.E, master inventor and company founder

**Honeywell Analytics – Celebrating 50 Years of Pioneering Products:**

1958: Mark 9: The first low-power, minimal cross interference catalytic bead device

1971: Chemcassette: First physical evidence based detection principle available

1982: Siegestor Sensor (SG7): First poison resistant catalytic bead sensor available

1983: 1050 transmitter range: First device offering simple, one man calibration and set up

1984: 1053 transmitter range: First device to offer remote sensor mounting capabilities

1985: 5050 Point IR detector: One of the first point IR devices available

1985: Sieger GDACS: First communication based industrial control system available

1987: Searchline: First Open Path IR device available (developed in partnership with Shell)

1998: SF350BS CO Alarm: First CO alarm to offer a Kitemark and be officially approved to the British Standard in the UK

1998: Searchline Excel: First Open Path device offering dynamic monitoring of up to 200m

2000: Surecell: First fully automated sensor production, eradicating errors associated with manual production

2001: Impact Portable Range: First multi-gas portable device offering plug and play easy swap sensor cartridges

2001: Impact Enforcer: First automatic calibration device offering portable device calibration for the cost of a bump test

2002: SF350EN CO Alarm: First CO alarm to be officially approved to EN50291:2001 – the European Standard governing the use of domestic CO alarms

2005: Zareba range is launched offering low-cost compliance based solutions to customers



Searchline Excel still remains one of the market leading Open Path IR device

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