

PATENT OVERVIEW

The patent work carried out by Kilburn & Strode with [redacted] is exemplary, as their technology—originating in Italy—has reached full maturity with the granting of several patents across the UK, Europe, and the USA.

What sets their approach apart is its engineering-driven methodology, applied to medical pulse oximetry measurements taken at the wrist rather than the finger or earlobe—and therefore entirely non-invasive. Life Meter is able to accurately measure, solely from the patient’s wrist, blood oxygen saturation levels in a virtually continuous manner, thereby providing the clinical specialist with a volume of data previously considered unattainable.

This naturally enables highly accurate diagnoses of a wide range of medical conditions which, until now, required at least several days of hospital observation to be identified—and, most importantly, it allows such diagnoses to be performed remotely. The patented technology focuses on various sensor calibration techniques, both at a “dynamic” level (i.e., how the sensors respond across the full spectrum of saturation values, referencing a diverse population in terms of age, sex, ethnicity, skin condition, and wrist morphology) and at a “static” level, by providing the sensor with measurement adjustments tailored specifically to each individual patient.

Status of patent applications:

Two patents have been granted in the United States. In the United Kingdom, Patent #1 has been granted, while Patent #2 has been abandoned in favor of the International Patent, which also provides coverage in the UK. The European application corresponding to Patent #1 and the International application corresponding to Patent #2 are pending, with grants expected by 2025.

Short description of patent families:

Life Meter has two pending patent families comprising respective granted patents in the UK, as well as pending patent applications in the USA and Europe. The first patent family covers the concept of “dynamic” calibration of the SpO₂ sensor. In simple words, the SpO₂ sensor is calibrated for different values of SpO₂ across a plurality of individuals having similar age, ethnicity and other characteristics. The second patent family covers the concept of “static” calibration of the SpO₂ sensor. In simple words, the SpO₂ sensor may also be calibrated according to patient-specific variables, such as skin type and exact location of measurement on the wrist. It is through these calibrations that the sensor has been found by Life Meter to be able to perform medical diagnosis on the wrist of the patient, which is the key USP (unique selling point) of the technology. In addition, the second patent family covers multi-sensor applications (M-Broxy), exploiting the same principles, for increased accuracy in the SpO₂ readings.

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