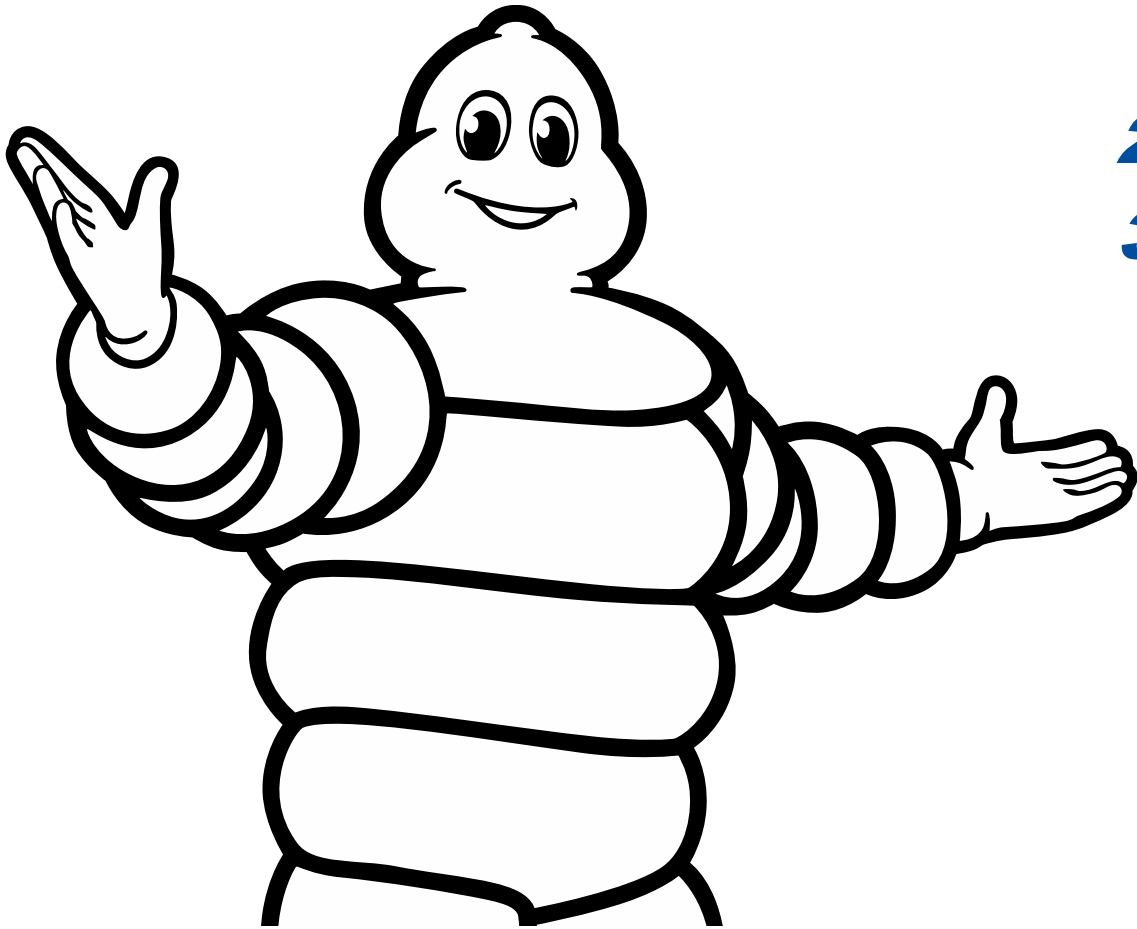


# ***Contact-style WD (dynamic pin) measurement procedures***

***February 20<sup>th</sup>, 2023***

# ***Agenda***

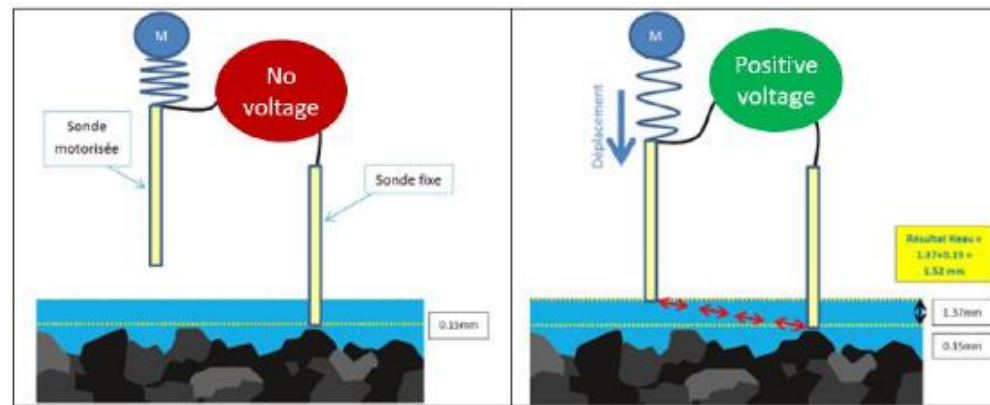


- 1. Principle of the contact WD measurement with dynamic spin***
- 2. Recommendation for the use***
- 3. Pros/Cons***

# Principle of the contact WD measurement with dynamic spin

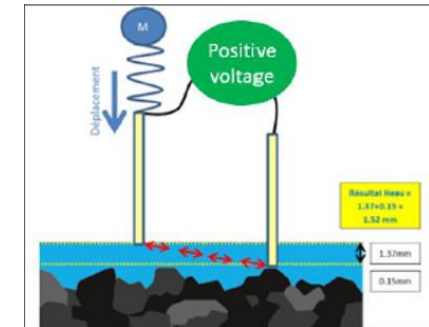
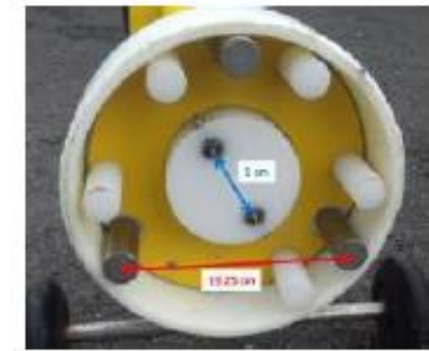
⊙ The operating principle is based on a measurement by electrical contact.

- The device is laid on the pavements, **using several pillars**. A **reference fixed spin**, at the same altitude of the pillars (minus un short altitude) is thus **at the level of the peaks of the pavement**
- A **moving spin**, whose displacement is controlled by an electric motor, moves down from an initial height (out of water). This moving spin is **connected to the reference spin** by a generator. When the moving spin touches the water, the **electric flow passes between the two spins**.
- The **water depth** is then **the difference of height between the two spins**.



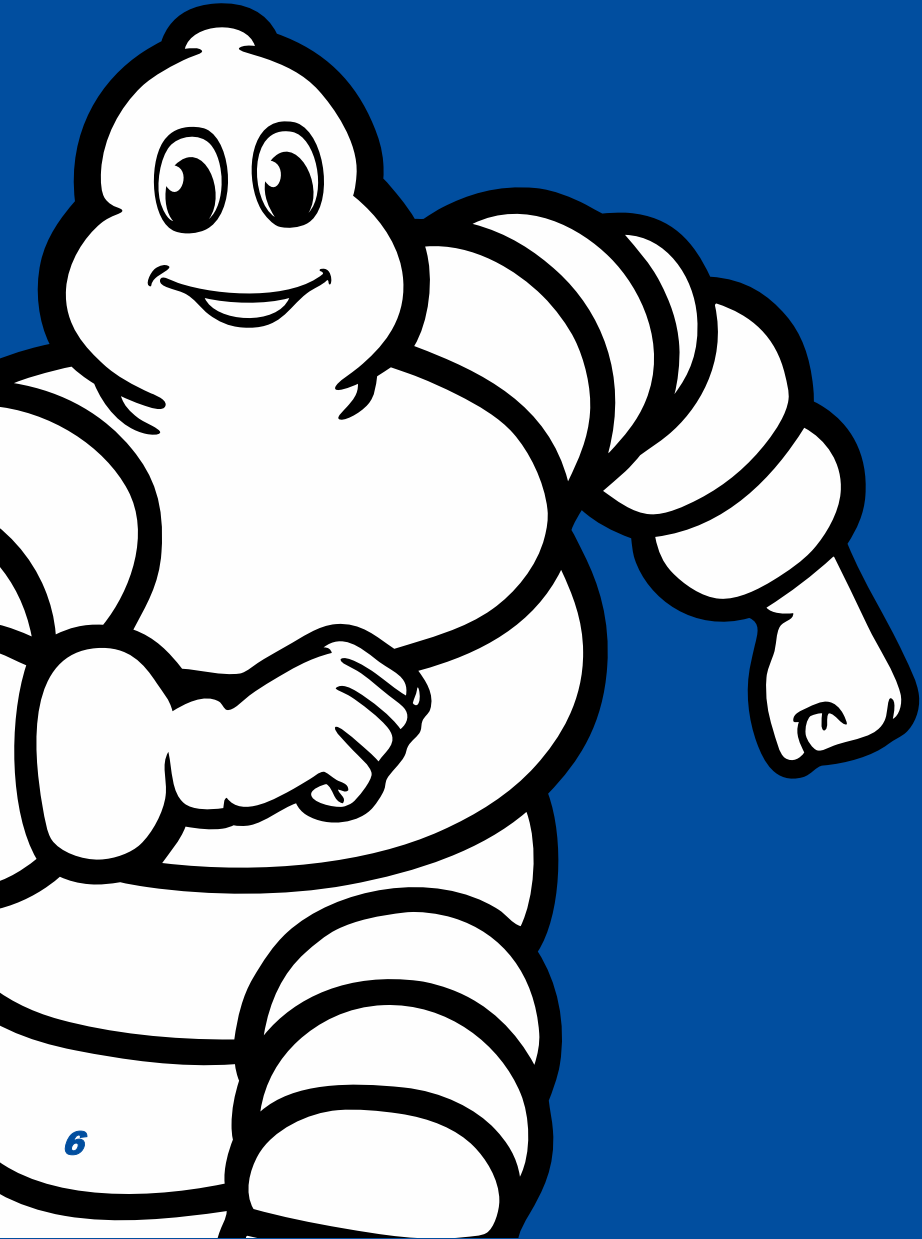
# Recommendation for the use

- ⦿ Device laid on the peaks of the pavement, on pillars → important to have several pillars (at least 3)
- ⦿ Measurement = length between the reference and the top of the water film
- ⦿ MTD is well considered by construction
- ⦿ The automatic water depth measurement system allows the acquisition and recording of water height with a good mechanical resolution and GPS location.
- ⦿ Use digital display device to reduce reading uncertainties



# Pros/cons

	<b>Pros</b>	<b>Cons</b>
<b>Contact WD with dynamic pin</b>	Real water depth	Reading uncertainty if tool has no digital display device
	MTD is considered	
	Resolution of the device is high	
	No effect when putting the system in place (if contact area of tool is minimized)	Local data: need to be measured at different places



# ***MOTION FOR LIFE***

6

