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(71) Applicant: **CONCRETE DATA SENSORS PTY LTD**
[AU/AU]; Level 34, 32 Turbot Street, Brisbane, Queensland
4000 (AU).

(72) Inventors: **CATHCART, Andrew**; c/- Concrete Data Sen-
sors Pty Ltd, Level 34, 32 Turbot Street, Brisbane, Queens-
land 4000 (AU). **MAHER, Adrian**; c/- Concrete Data Sen-
sors Pty Ltd, Level 34, 32 Turbot Street, Brisbane, Queens-
land 4000 (AU). **CHISHOLM, Anthony**; c/- Concrete Da-
ta Sensors Pty Ltd, Level 34, 32 Turbot Street, Brisbane,
Queensland 4000 (AU).

(74) Agent: **DAVIES COLLISON CAVE PTY LTD**; Level
10, 301 Coronation Drive, Milton, Queensland 4064 (AU).

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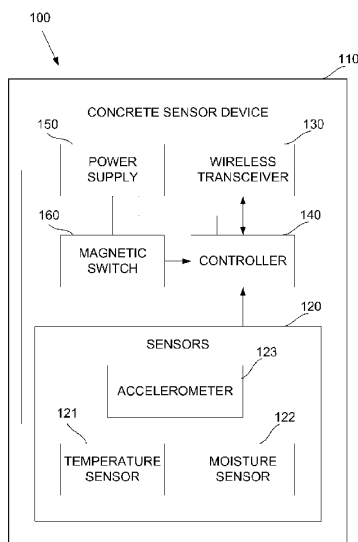


Fig. 1

(57) Abstract: A concrete sensor device for use in monitoring physical properties within a body of concrete, the concrete sensor device being configured to be embedded inside the body of concrete in use, the concrete sensor device including: a sealed housing; sensors for measuring physical properties within the body of concrete, including: a temperature sensor; and a moisture sensor; a wireless transceiver for wirelessly communicating with a gateway device located outside of the body of concrete, the wireless transceiver being configured for wirelessly communicating at frequencies of less than 1 GHz; and a controller configured to: obtain sensor data from the sensors; generate monitoring data using at least some of the sensor data; and cause the monitoring data to be transmitted to the gateway device using the wireless transceiver, at predetermined intervals.

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