Measurement of pressure on the wall of a rotating drum
IITM Technology Available for Licensing

Problem Statement

- Washing machines are now far more sophisticated and most of them are controlled by software built into PCBs which runs like a computer program some known washing appliances include sensors for **reviewing the parameters related to operations and safety features.**
- Further, it is challenging for **measuring pressure on the walls of high speed rotating system** which is a drum of washing machine.
- The major concern includes appropriate fixing of force sensor & overcoming the sensor noise caused by the high speed rotating drum.
- The present invention is addressed the above issues in efficient manner.

Technology Category/ Market

Technology: Pressure measurement on the wall of rotating drum;
Industry: Washing machine Industry, Heavy electricals;
Applications: OEM, CAPITAL Equipment, washing machine;
Market: The global market is projected to reach **$61.95B by 2030**, growing at a **CAGR** of **7.9%** during the forecast period (2021-**2030**).

Technology

- Present patent claimed a **means for measuring pressure on the wall of a drum using a force sensor in a particular arrangement involving wireless module ZigBee**.
- Said means consists of **ZigBee wireless module & force sensor** connected in a **frame & plunger** arrangement.
- The arrangements between force sensor & plunger are made ensuring some amount of free back & forth motion of the plunger system with respect to the frame.
- Sensors connected to ZigBee module & receiver of module connected to a computer outside the rotating drum.

Images

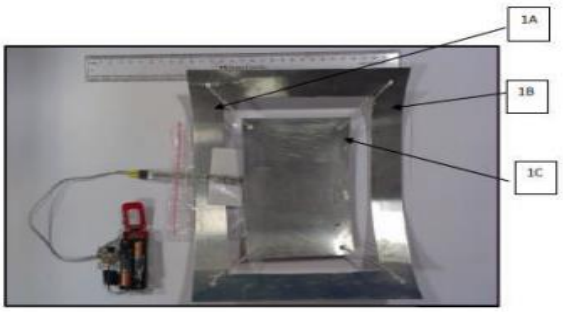

Figure 1

Fig.1: Illustrates a mean for Measurement of pressure on the wall of a rotating drum

Key Features / Value Proposition

- ***Technical Perspective:*** **Sensors** are arranged along the **surface of the cylinder** for Pressure measurement.
- ***Industrial Perspective:*** **Efficiently** applicable in **washing machines**.

Intellectual Property

IITM IDF Ref. 1240;
Patent No: 429318 (Granted)

TRL (Technology Readiness Level)

TRL- 3, Proof of Concept ready & validated

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