HFR002

Properis

High frequency viscoelasticity evaluation apparatus

Introducing for you

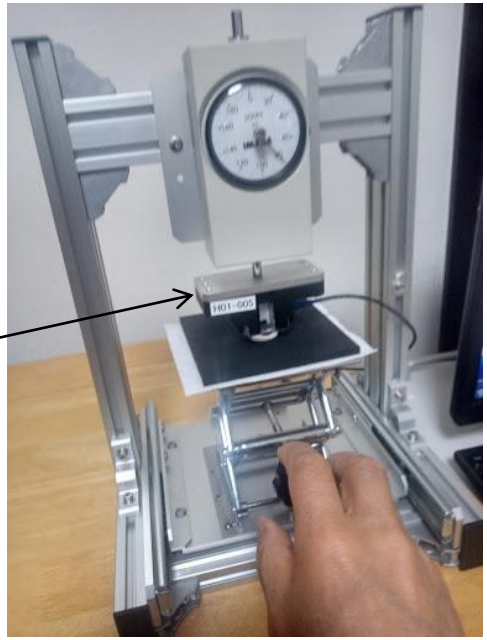
HFR002 is

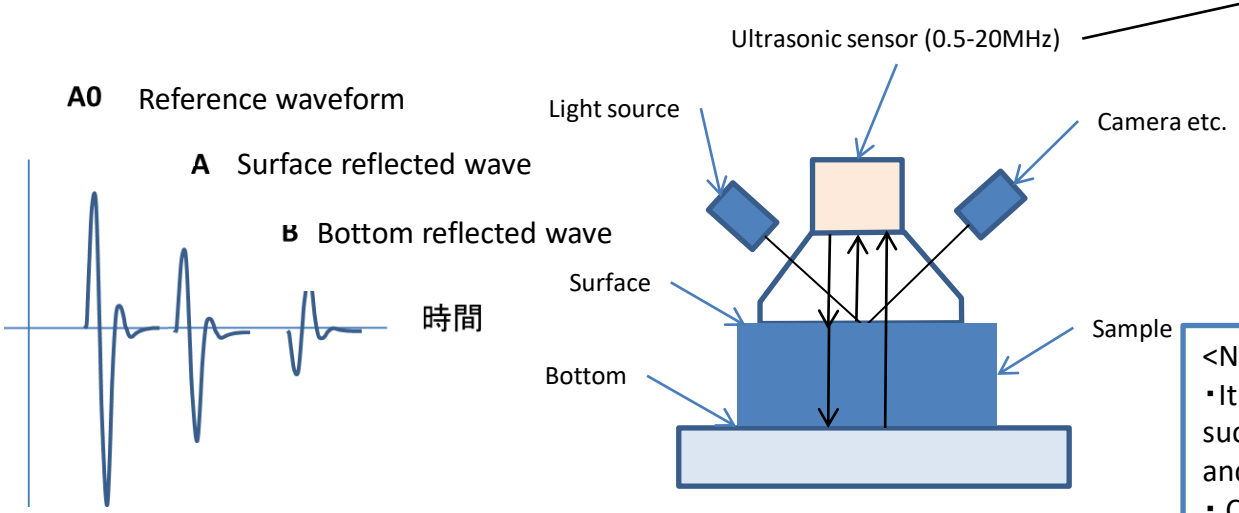
We have achieved unprecedented ultrasonic viscoelasticity measurement.

-Megahertz measurement of surface viscoelasticity (SUF) as well as bulk viscoelasticity (BOT) can be performed.

-You can grasp the high-frequency viscoelastic characteristics that are closely related to the friction of rubber such as tires.

-Megahertz viscoelasticity measurement is possible for materials whose physical properties change due to electric fields.





Viscoelasticity measurement by pulsed ultrasonic waves

<New application example>

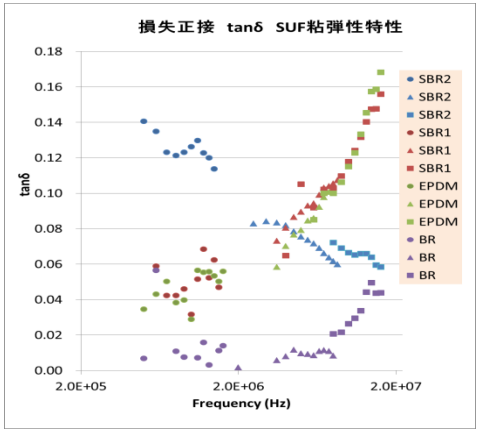
・It is possible to measure suspensions such as ink, liquids such as viscous fluids, and skin layers of elastomers.

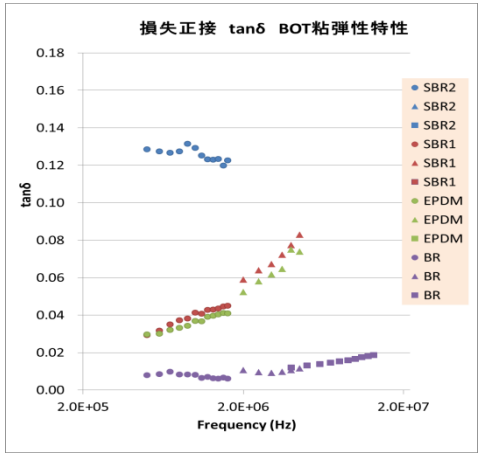
・Collaboration measurement with a rheometer is also possible.

Please request the materials for details.

Comparison of measured values of surface method SUF and bottom method BOT

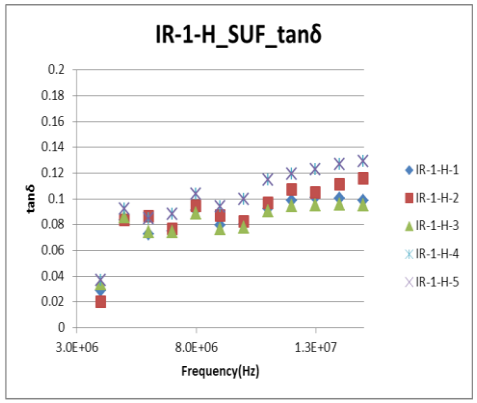
If the surface has the same viscoelasticity as the inside, the same value is shown.



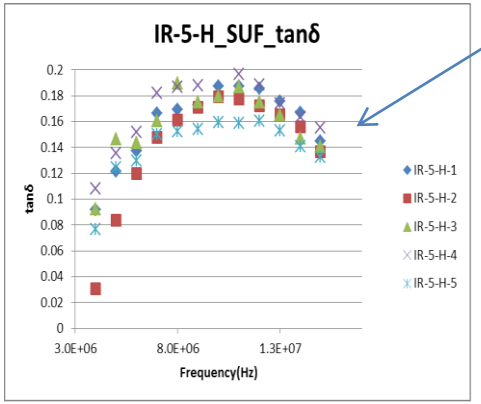


The degree of surface deterioration can be examined

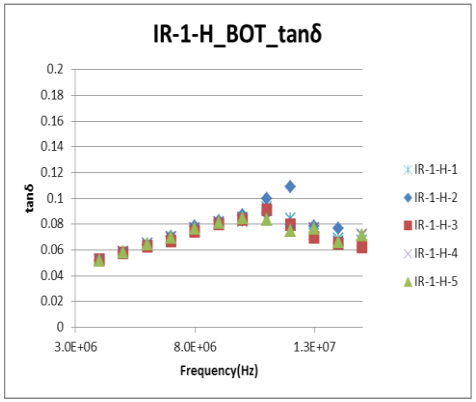
After IR sample exposed to ozone + humidity environment, the surface tan δ changed significantly.
But bulk tan δ has not changed.



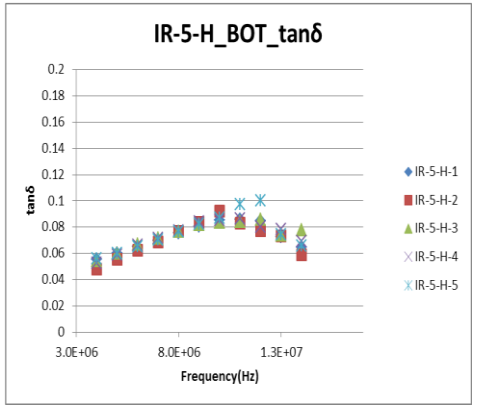
surface tan δ



large



bulk tan δ



Before deterioration

After deterioration

Highfrequency Viscoelasticity Corporation

HFR002 type
high frequency viscoelasticity evaluation apparatus

Properis

Specializing in high frequency range

- **On-site (Real condition) (no need for low temperature tank, no conversion required)**
- **Actual sample (Real sample) (no need to prepare a sample)**
- **Short time (Real time) (results are available on the spot)**

Standard specifications

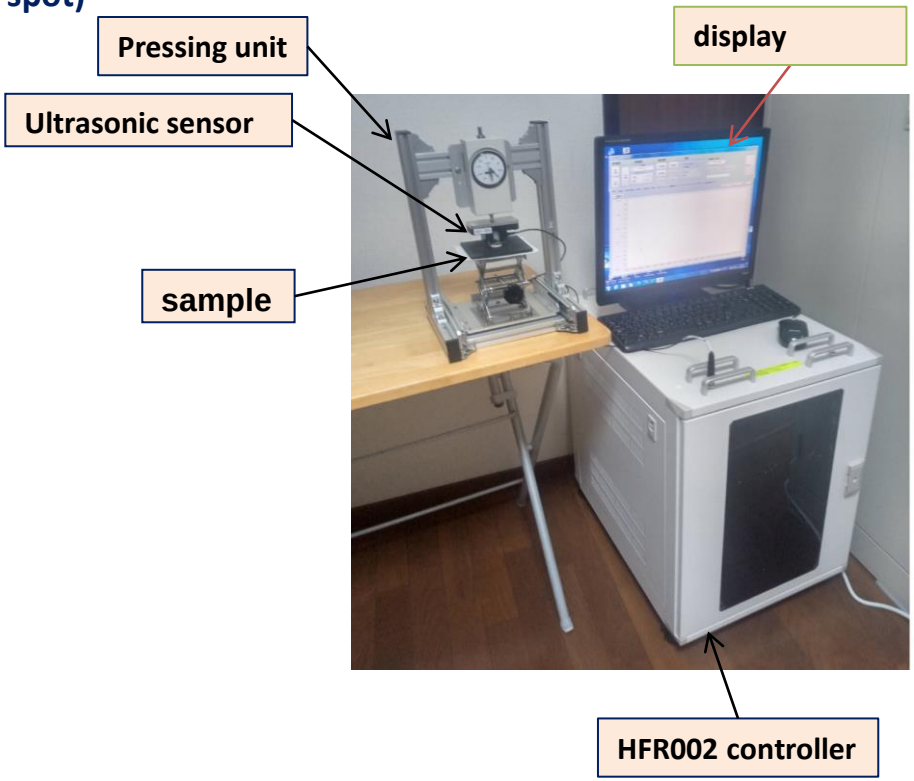
- Measurement frequency: 0.5 to 20MHz
  * Multiple sensors are required. The measurement band varies depending on the measurement sample.
  -Sample: Solid, suspension, liquid (each has a separate attachment)

- Sample size: Flat size 50x50 mm or more
  Approximately 1 to 10 mm thick (varies depending on the measurement sample and measurement band)
- For solids, parallelism and thickness accuracy affect measurement accuracy, so please contact us.

- Solid measurement unit size WDH: 250X200X400mm
- HFR002 controller size WDH: 450X650X700mm

* A constant temperature bath is required for high-precision measurement.
  (Inner dimensions WDH: 360x250x420mm or more)

- Weight: 65kg
- Power supply: 100V 1000w Class D grounding



Specifications are subject to revision without notice for improvement, so Please contact us when using.
2021.11.16

Development, manufacturing and sales **HFVE**

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