

We claim:

1. A method of determining a decay characteristic of a meter assembly of a flow meter, the method comprising receiving a vibrational response from the meter assembly, the vibrational response comprising a response to an excitaton of the meter assembly at
5 a substantially resonant frequency, with the method further comprising:
receiving the vibrational response from the interface;
allowing the vibrational response to decay from a start response voltage to a stop
response voltage;
measuring the response voltage from a start response voltage threshold to a stop
10 response voltage threshold; and
determining one or more fractional decay characteristics of the meter assembly
based on the start response voltage threshold and the stop response
voltage threshold, wherein at least one of the start response voltage
threshold and the stop response voltage threshold is between the start
15 response voltage and the stop response voltage.
2. The method of claim 1, wherein the start response voltage is a response voltage
of the response to the vibration of the meter assembly at the substantially resonant
frequency and the stop response voltage is proximate zero volts.
20
3. The method of claim 1, wherein one of the start response voltage threshold is
proximate the start response voltage and the stop response voltage threshold is
proximate the stop response voltage.
- 25 4. The method of claim 1, wherein determining the one or more fractional decay
characteristics of the meter assembly based on the start response voltage threshold and
the stop response voltage threshold, wherein at least one of the start response voltage
threshold and the stop response voltage threshold is between the start response voltage
and the stop response voltage comprises ~~one of:~~
30 determining one or more fractional decay characteristics of the meter assembly
based on one or more stop response voltage thresholds relative to a start
response voltage threshold ~~;~~ and

~~determining the one or more fractional decay characteristics of the meter
assembly based on one or more start response voltage thresholds relative
to a stop response voltage threshold.~~

- 5 5. The method of claim 1, further comprising determining a decay characteristic-to-
response voltage relationship for compensating a decay characteristic that is based on
the start response voltage threshold and the stop response voltage threshold.
6. The method of claim 1, wherein the start response voltage threshold is
- 10 determined based on the start response voltage.