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(54) Title: METHODS AND APPARATUS FOR MONITORING A PROCESS IN A PLASMA PROCESSING SYSTEM BY MEASURING A PLASMA FREQUENCY

(57) Abstract: A method for in-situ monitoring a process in a plasma processing system having a plasma processing chamber is disclosed. The method includes positioning a substrate in the plasma processing chamber. The method also includes striking a plasma within the plasma processing chamber while the substrate is disposed within the plasma processing chamber. The method further includes obtaining a measured plasma frequency that exists after the plasma is struck, the measured plasma frequency value having a first value when the plasma is absent and at least a second value different from the first value when the plasma is present. The method also includes correlating the measured plasma frequency value with an attribute of the process, if the measured plasma frequency value is outside of a predefined plasma frequency value envelope.

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