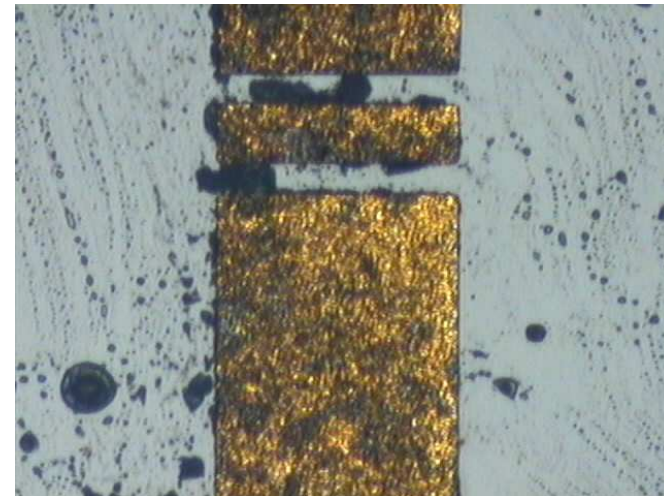

Cleaning Calibration Substrates – How to proceed ?

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Intro

- This presentation shows a method, how to solve a common problem in RF laboratories: How to clean the very expensive calibration substrates used for S-parameter measurement calibration, if they are contaminated ?
- Contamination should be of course avoided by careful handling and storage of the substrates.
- However, in real life situations with handling errors may appears. The result is a dirty and contaminated substrate
- How to proceed then ?



Cleaning Calibration Substrates



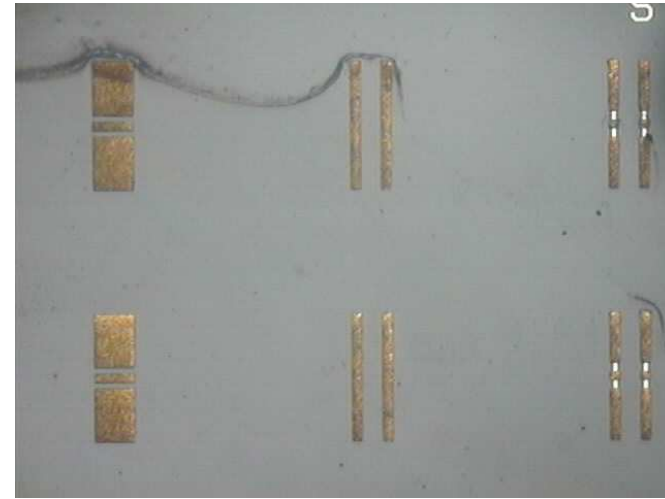
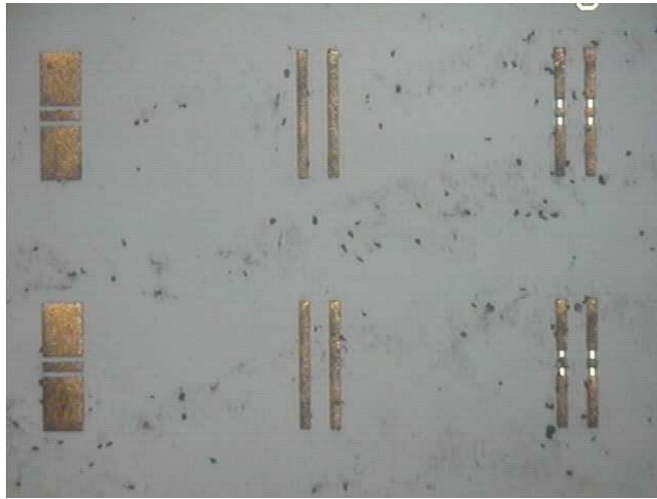
- The first idea is often to use swabs and a cleaning fluid like Isopropanol to remove the dirt
- However, the result is in most cases unsatisfying

Cleaning Calibration Substrates



- A better way is to use an ultrasonic bath
- The bath is filled with distilled water and a small amount of usual cleaning agents
- The procedure: the substrate is treated with $t = 15$ min. and $T=50$ C
- After cleaning the substrate may be dried by dry air

Cleaning Calibration Substrates



- The result of the ultrasonic cleaning depends on the contamination level
- It may be necessary to repeat the cleaning several times, to reach sufficient results
- The substrate will not look like a new one, but you may use it again
- Try it !