

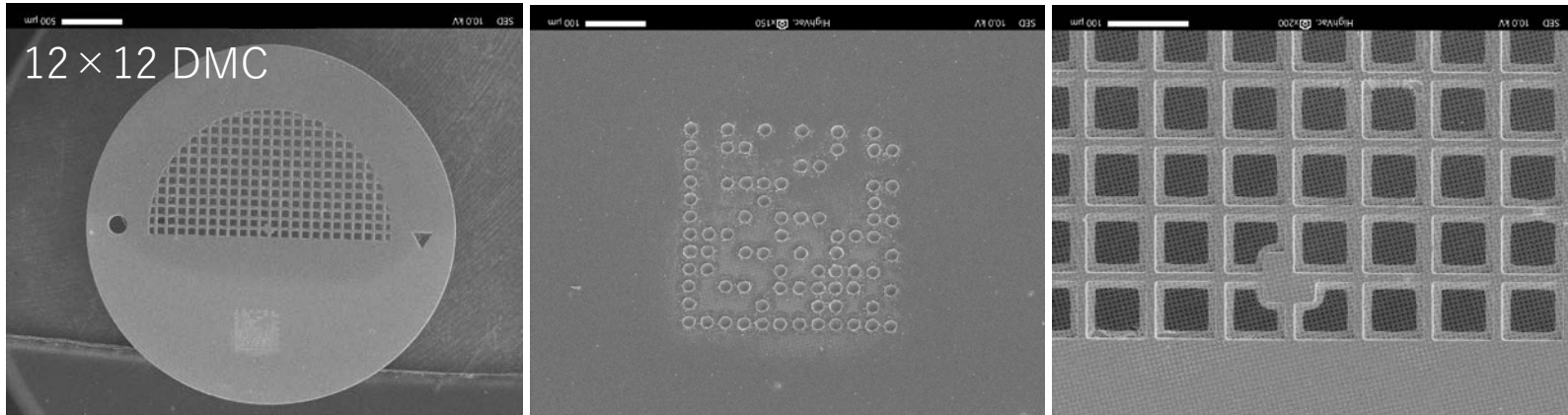
Japan EM Workflow Liaison TF Report

Dec. 17. 2021

K. Asayama / JEOL, T. Onishi / Hitachi High-Tech.

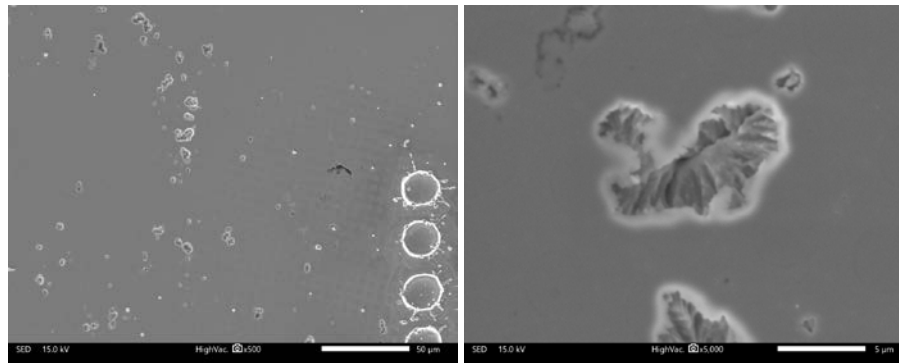
1. Implementation test of LC (E177)

To further improvement DMC reading quality
downsizing of DMC 16X16 → 12X12



Just after DMC write, all DMC reading quality were “A” grade.

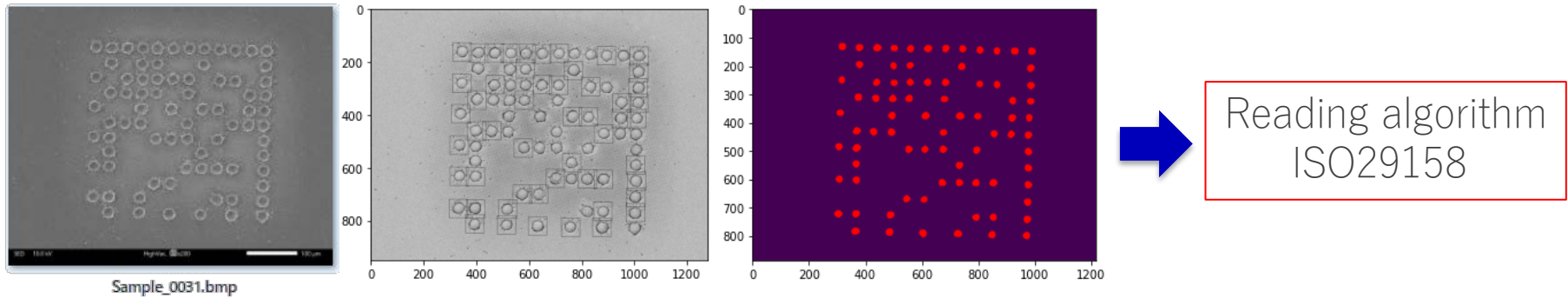
After Carbon process, reading quality were decrease. (“A”=3, “B”=4, “C”=3)



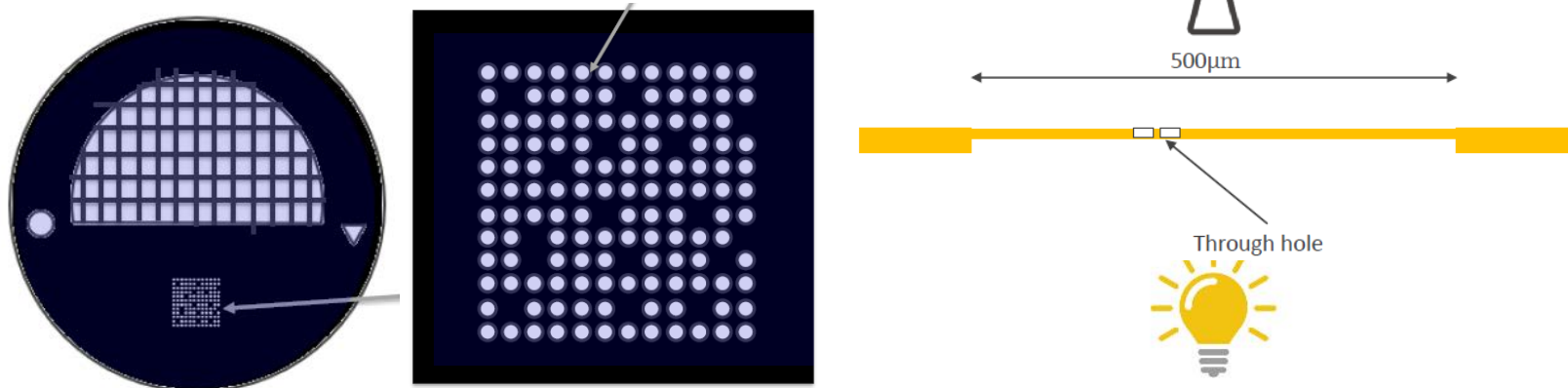
Etch Pit like structure on Copper LC surface caused by DI water.

Counter measure of DMC reading quality

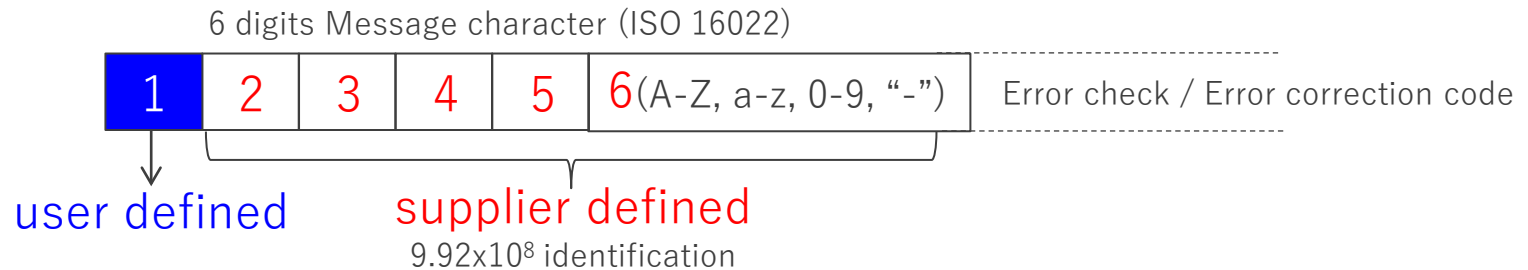
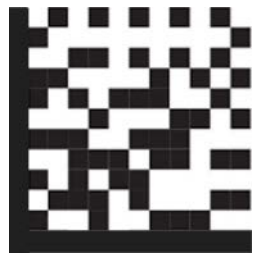
1. Camera based image processing



2. Through hole type DMC



ID Mark specification on LC



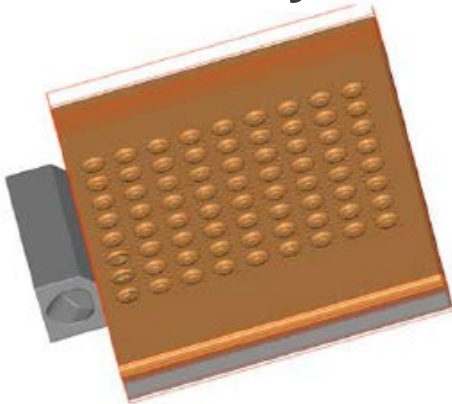
Japan Team Conclusion

- LC (E177) standard implementation test is on going
Reading quality of DMC and some counter measures propose and testing schedule.
- ID mark specification on LC proposed.
First digit is used to user defined.
Second to sixth digit are used to supplier defined.
By using this specification, almost 1 billion LCs can be distinguished.

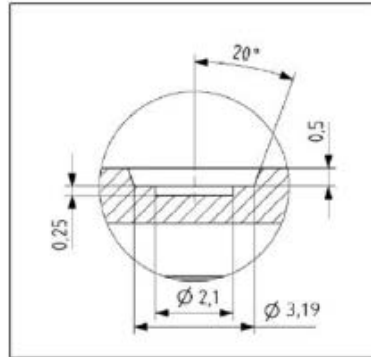
EM Workflow TF (NA)

LCC (Lamella carrier container) physical design and dimension

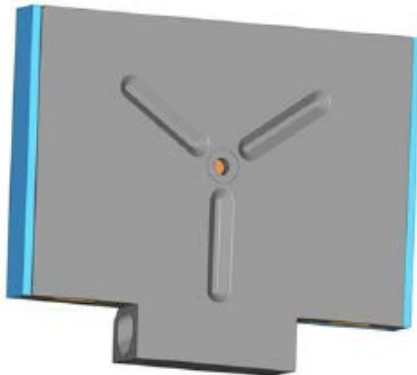
LCC Body



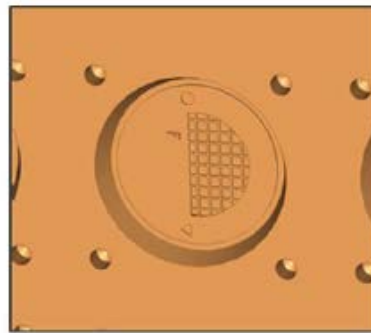
*LC pockets with vacuum bores
(72 shown here – LCC would have 25)*



LC pocket dimensions

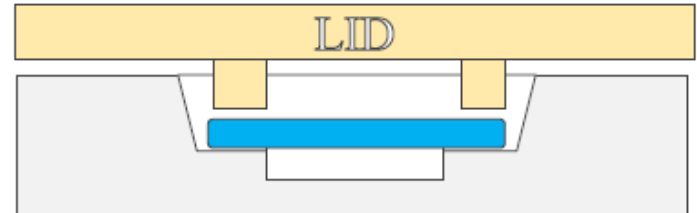


*LCC base with kinematic coupling
and vacuum connector*

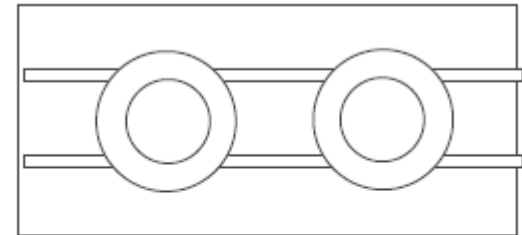


Pocket fiducials

LCC Lid



LCC with LC in pocket and LID



*Top view of LCC base with
grooves for LID topography*

Conclusion

Physical design of LCC was proposed.

- LCC is rectangle and more 30 LC pockets.

- LC in each pocket of LCC is holding by vacuum.

- LCC chucking way and LCC lid was proposed.

- LCC body has a fiducial mark at each pocket.

→ Draft document 6592 will propose at next meeting.

New SNARF

LC Shipping Box was proposed at PI&C TC (NA) in Aug.12.

End of presentation

EMWF Liaison TF leader
JEOL / K.Asayama