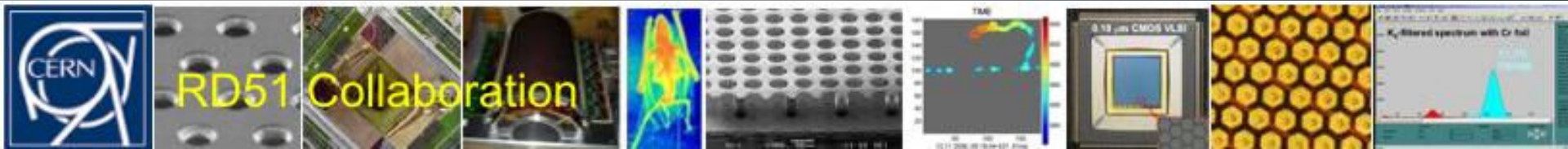


RD51 CERN 24/11/09



Large MPGD workshop upgrade

3 senarios

- ▣ List of new machines for Large MPGD and read-out boards R&D in the future new workshop:
- ▣ List of new machines which gives the possibility to do limited R&D on large size MPGD and large size read-out boards in building 102:
- ▣ List of new machines which gives the possibility to do limited R&D on large size MPGD in building 102 but not on R/O boards:

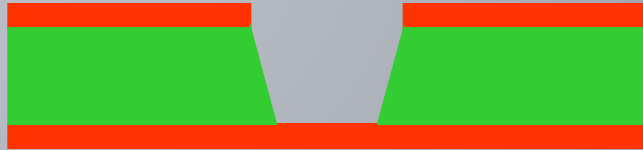
Machine list

- ▣ List of new machines which gives the possibility to do limited R&D on large size MPGD and large size read-out boards in building 102:

- ▣ GEM
 - -1 Cu micro-etch machine
 - -1 polyimide etch machine

- ▣ Micromegas
 - -1 large laminator
 - -1 large oven
 - -1 large size exposure unit
 - -1 large machine for resist development
 - -1 large Dryer
 - -1 large stripping machine
 - -1 large Cu etching machines

Single mask process



Chemical Polyimide etching
Sharper than std process



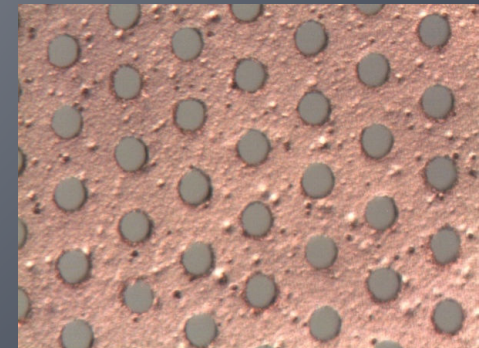
Etching of bottom electrode
by active corrosion protection



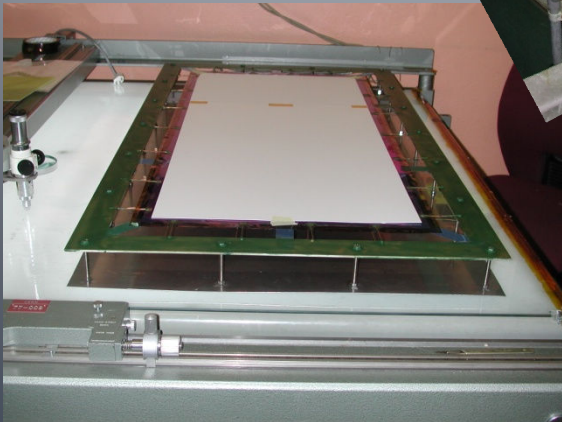
Stripping



Post Polyimide
etching

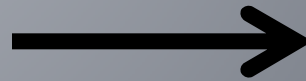
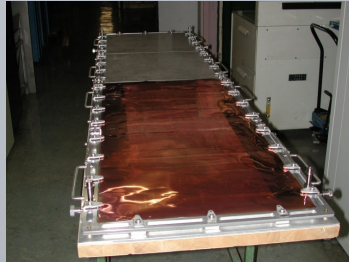


Bottom electrode etching



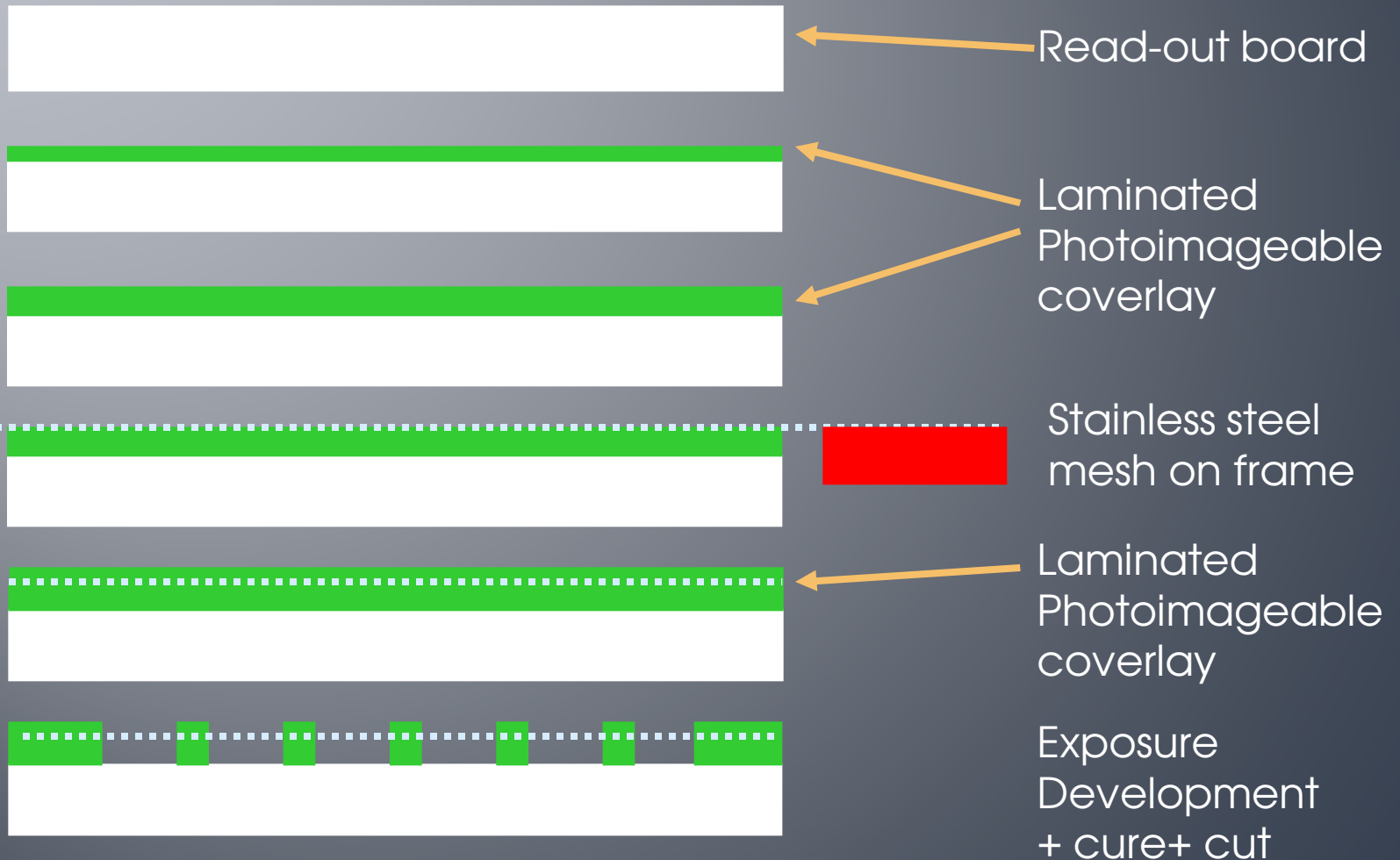
Roll to roll process compatible

Polyimide etching



Roll to roll process
compatible

Micromegas bulk production processes



Lamination



Now: 0.65m max
Future: 1.2m max

Development , stripping , etching



Now: 0.65m max
Future : 1.2m max

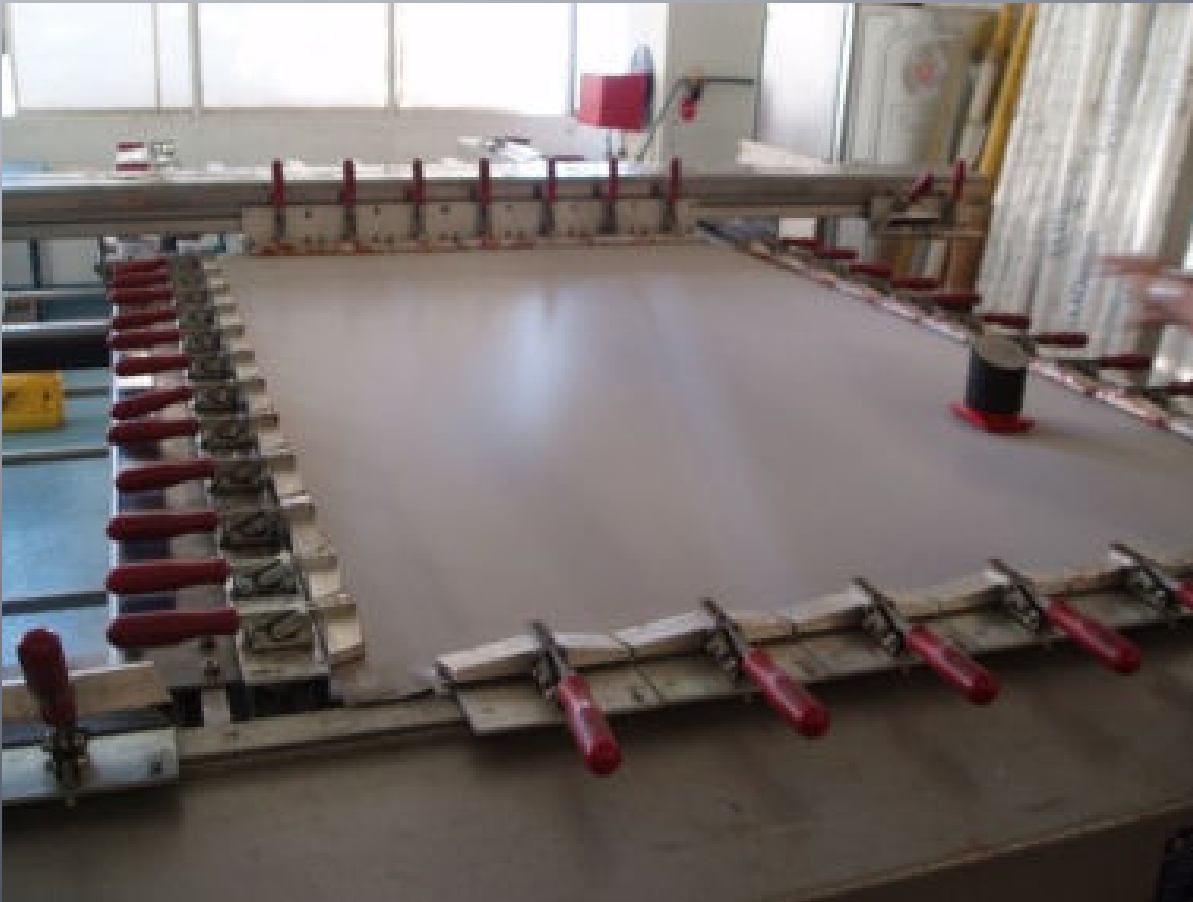
Exposure



Now: 0.6m x 2m max

Future: 1.2m x 2.2m max

Stretching subcontracted



3m x 1.2m
capability



Read-out board



Resist lamination



Resist development



Copper etching



Resist stripping

Each step need a 1.2m large machine.

Micromegas/ SOMACIS



the opportunity
given
by Cern.
so has the
stelfidardo.

new product.
gain should

Dear Mr. Rui De Oliveira
With reference to request
to support Cern in the
organisation we present
This however is seen
necessary production
Looking forward and
This meeting will also
1.Somacis presentation
2.Cern's presentation
3.Cern's presentation
4.Preliminary identification
Roberta Sbodio will
you have any further
We trust this message
Kind regards

Micromegas/ SOMACIS



Visit our plant in Castelfidardo (16-18 /11/09)

1.Somacis presentation

2.Cern's presentation of all technical details concerning the new project/product.

3.Cern's presentation of existing pcb business/requirements.

4.Preliminary identification of the equipments

the opportunity
driven
quired by Cern.
s also has the

Dear Mr. Rui De O
With reference to
to support Cern in
organisation we p
This however is s
necessary produc

Looking forward and in order to develop this business opportunity together we would like to formally invite you to visit our plant in Castelfidardo. This meeting will also serve as the next step in terms of project development. Our proposed agenda would be as follows;

- 1.Somacis presentation (capabilities and technical road map).
 - 2.Cern's presentation of all technical details concerning the new project/product.
 - 3.Cern's presentation of existing pcb business/requirements.
 - 4.Preliminary identification of the equipments to be acquired by Somacis (with the European funds) in order to be able to produce this new product.
- Roberta Sbodio will maintain contact with you in order to coordinate the meeting details. Please also do not hesitate to make contact again should you have any further questions as we would be happy to provide any complementary information if required.
We trust this message finds you well and we look forward to hearing from you soon.

Kind regards

Next steps

- ▣ Ask for real quotation
- ▣ Start the purchase process
- ▣ Install the new machines by the end of 2010