

Panel #4: EUV mask usage

Exposure tools receive, store, install (chuck-in and chuck-out) and finally take out masks.

If mask cleaning is done at mask houses, these actions have to be near perfect.

1. Need to establish data base.
2. Handling technique will be developed by exposure tool companies. If mask cleaning is done at mask houses, this technique has to match with a mask carrier to be developed.
3. Interface should be standardized.
4. Cleaning in mask houses or in FAB will affect how serious we will be in interface standardization.

To develop handling technique, critical process may be chucking and venting.

To work on chucking, technique has to match with chuck film and chuck itself, the latter of which meets SEMI P37. Again if mask is cleaned at mask houses, we have more seriously manage so that particles will not be generated as much as possible by chucking and never be migrated to the mask quality area.

Venting is dangerous to migrate particles to the mask quality area. Note that the quality area is usually located most inside, and air comes into the quality area. This happens after the mask undergoes chucking action.