My work in 2016

6-4

Hiroki Tanaka

heat load test(5th)

- We did the preparation of the 5th heat load test.

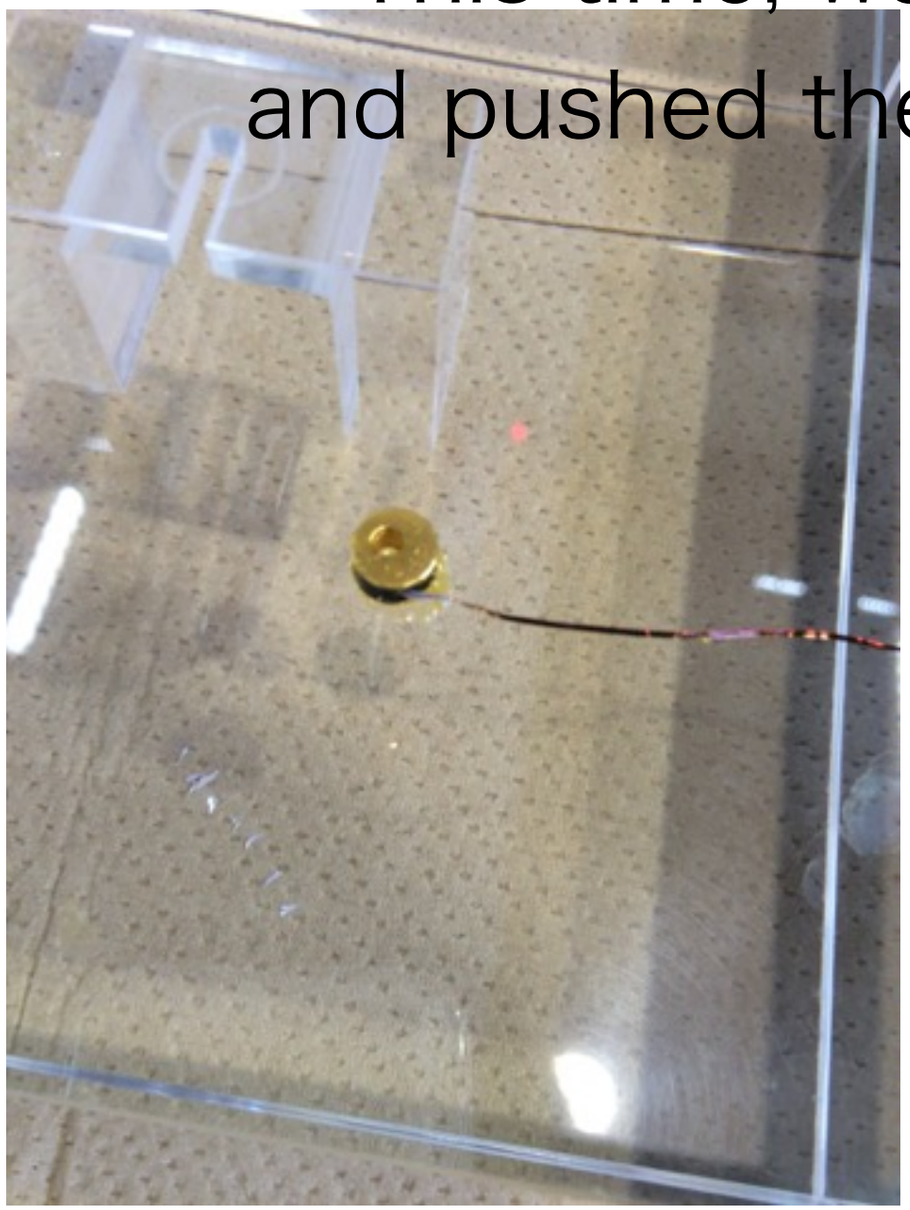
- Ushiba-san checked the previous setup and pointed out some problems.

Vanish

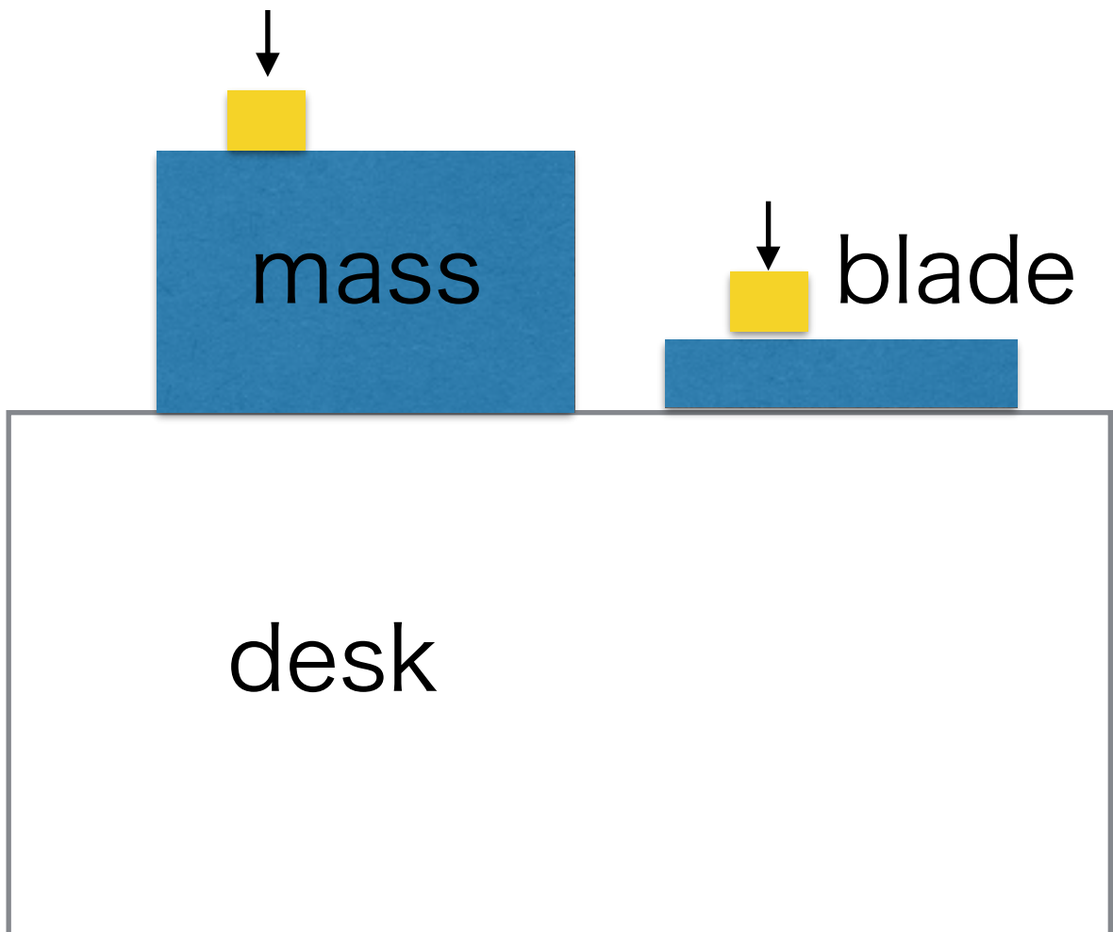
The heater and the sensors were separated easily.

This time, we put each parts on the desk

and pushed the sensor by my finger strongly.



We pushed here.



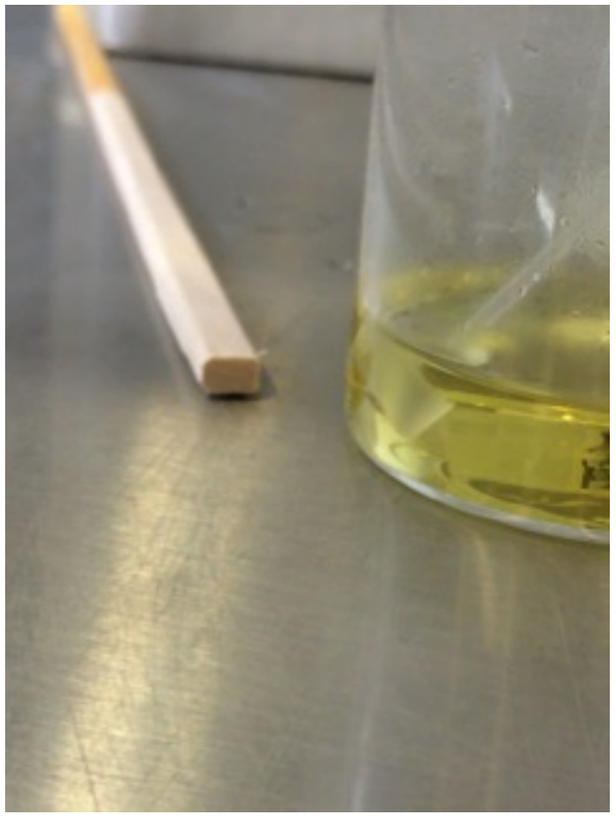
remove Indium

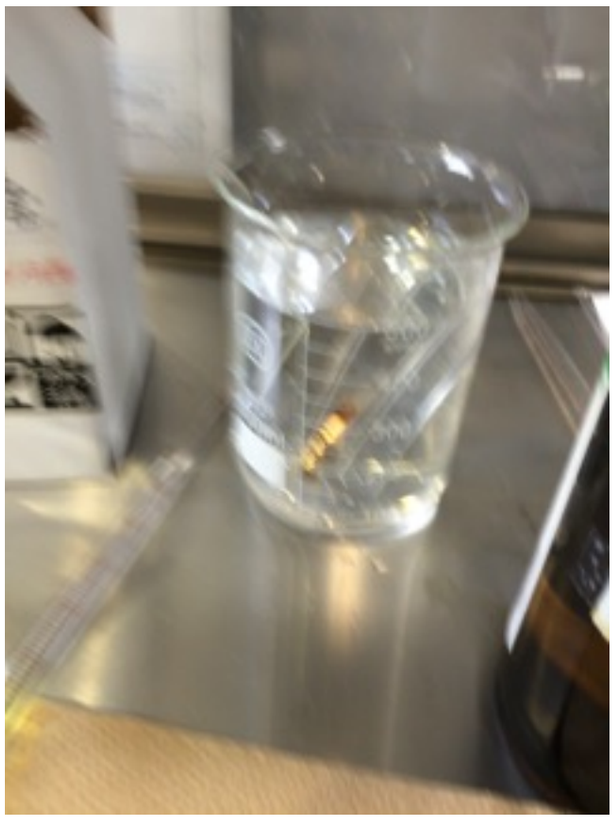
- The Indium was not melted.

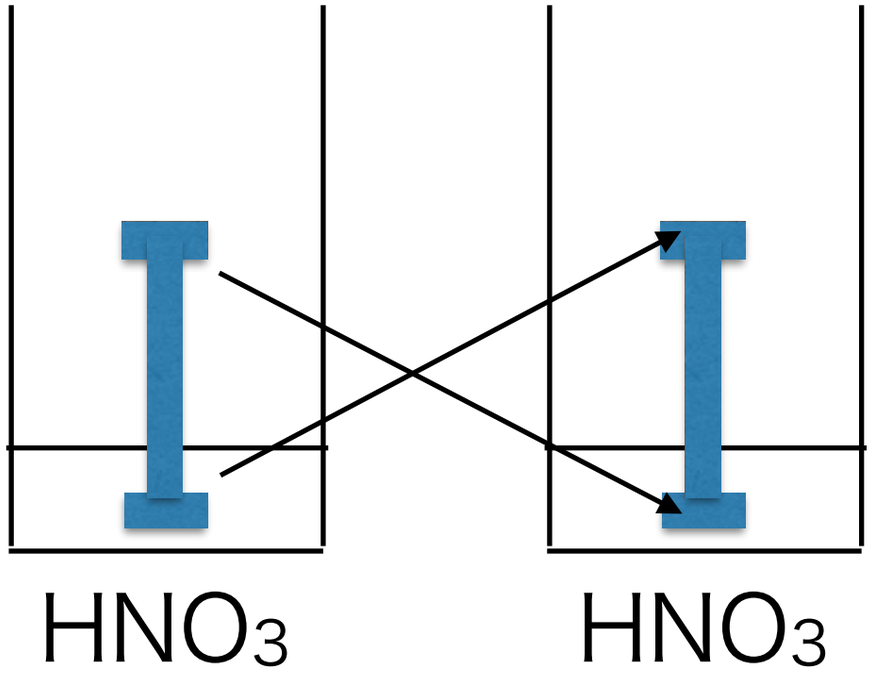
- So we removed the Indium.

remove Indium

In order to remove the Indium, we put the fiber and the blade into HNO_3.







trial of Indium welding

- The stronger halogen lamp was broken (The new one will be delivered this week).
- We tried Indium welding using the previous one.

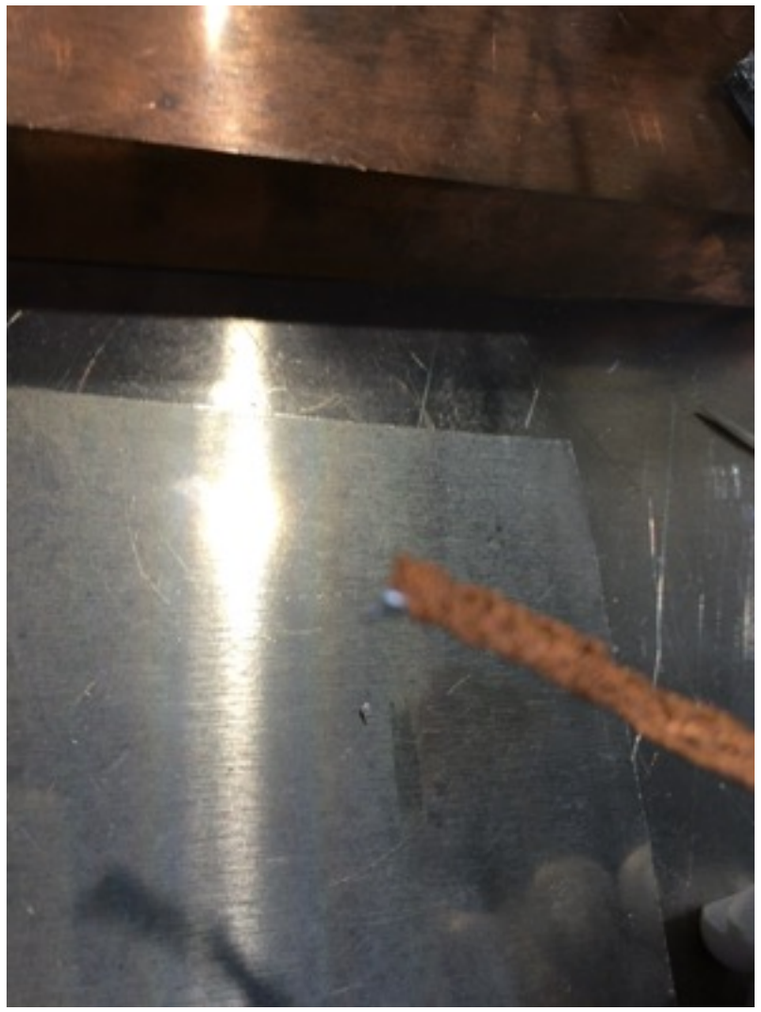
trial of Indium welding

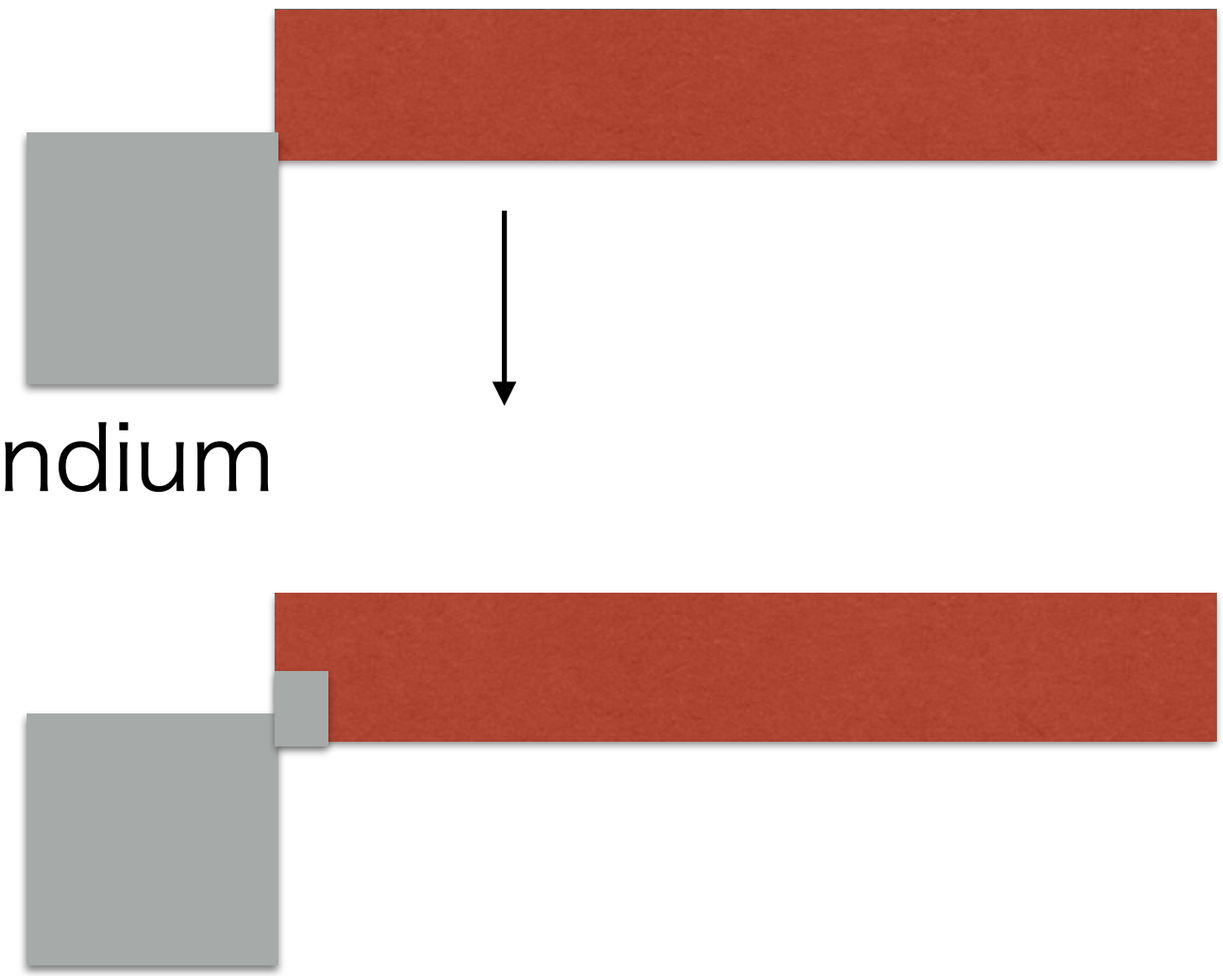
- So far, I checked whether the Indium was melted by hand.

- It is ambiguous, so Ushiba-san suggested new methods.

trial of Indium welding

When the copper net is touched to the Indium, Indium will flow into the net if it is melted.

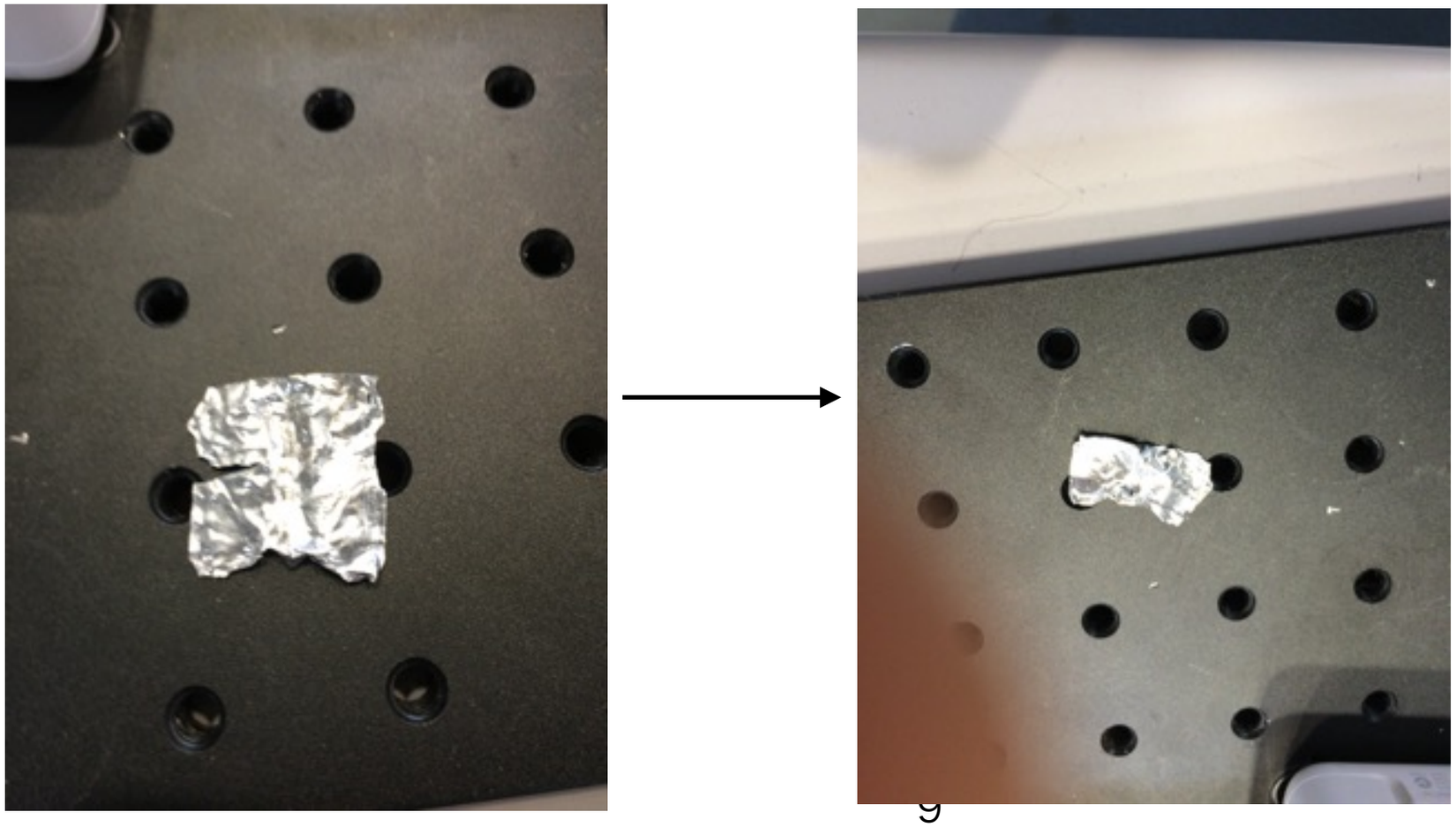




trial of Indium welding

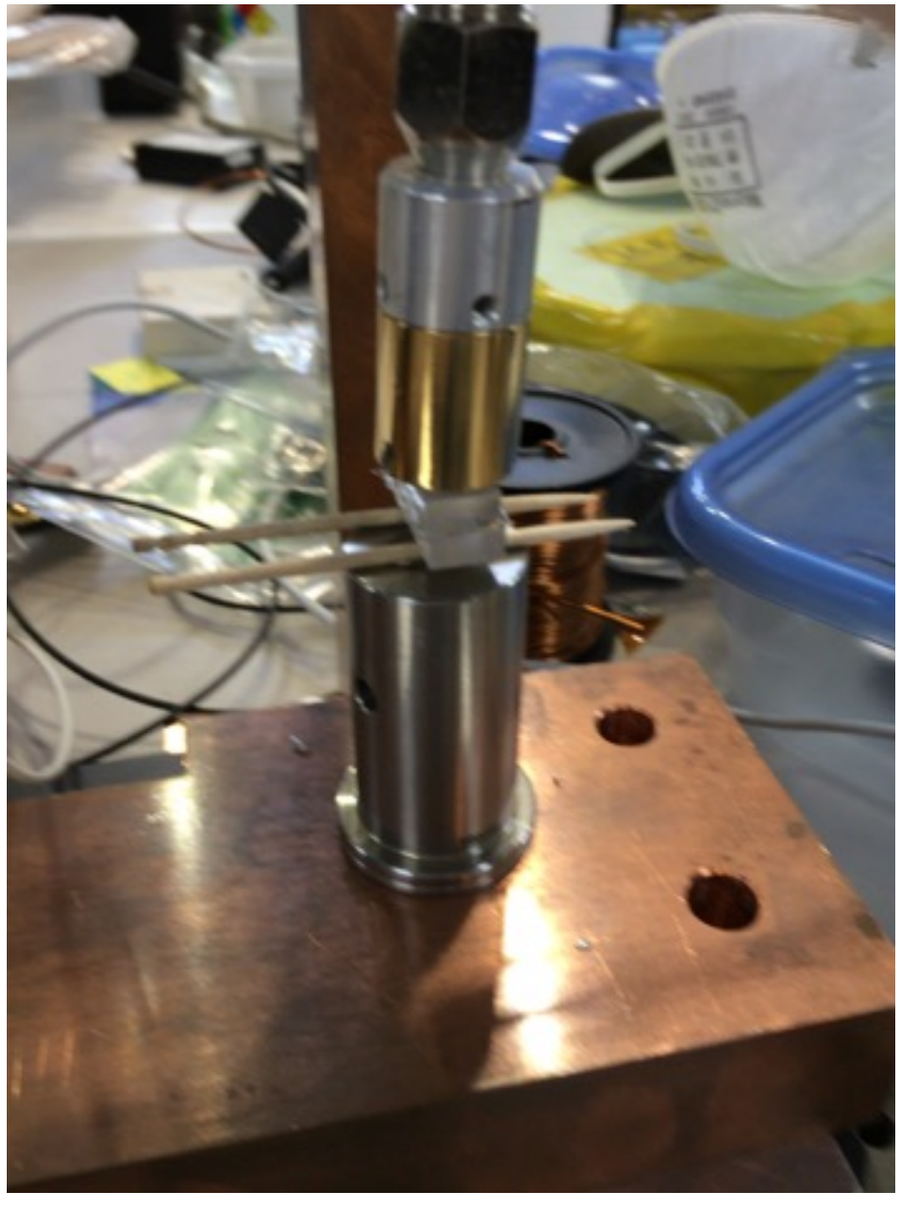
- We fold the Indium like below.

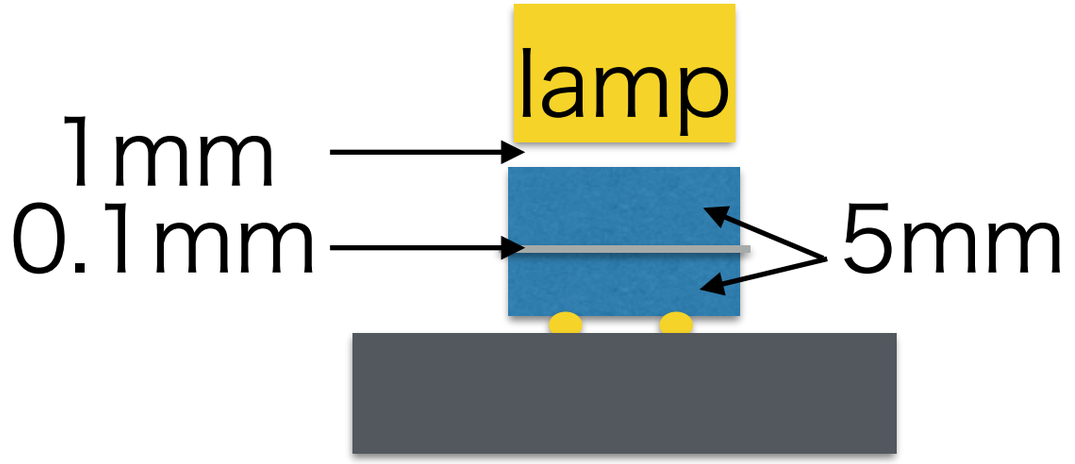
- If it is melted, it looks as one-layer.

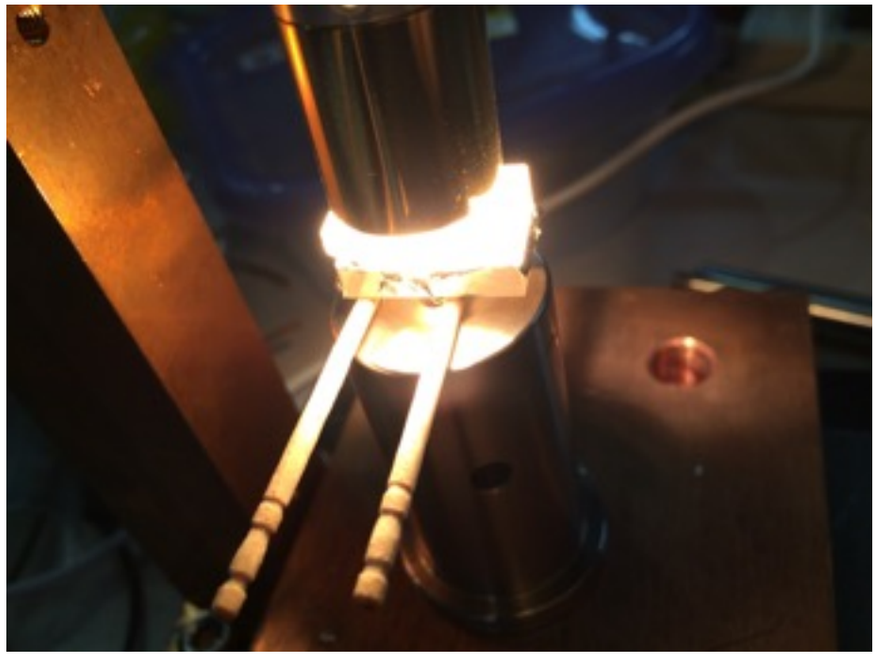


trial of Indium welding

When we inserted two toothpicks between the sapphire blocks and the metal, it succeeded.

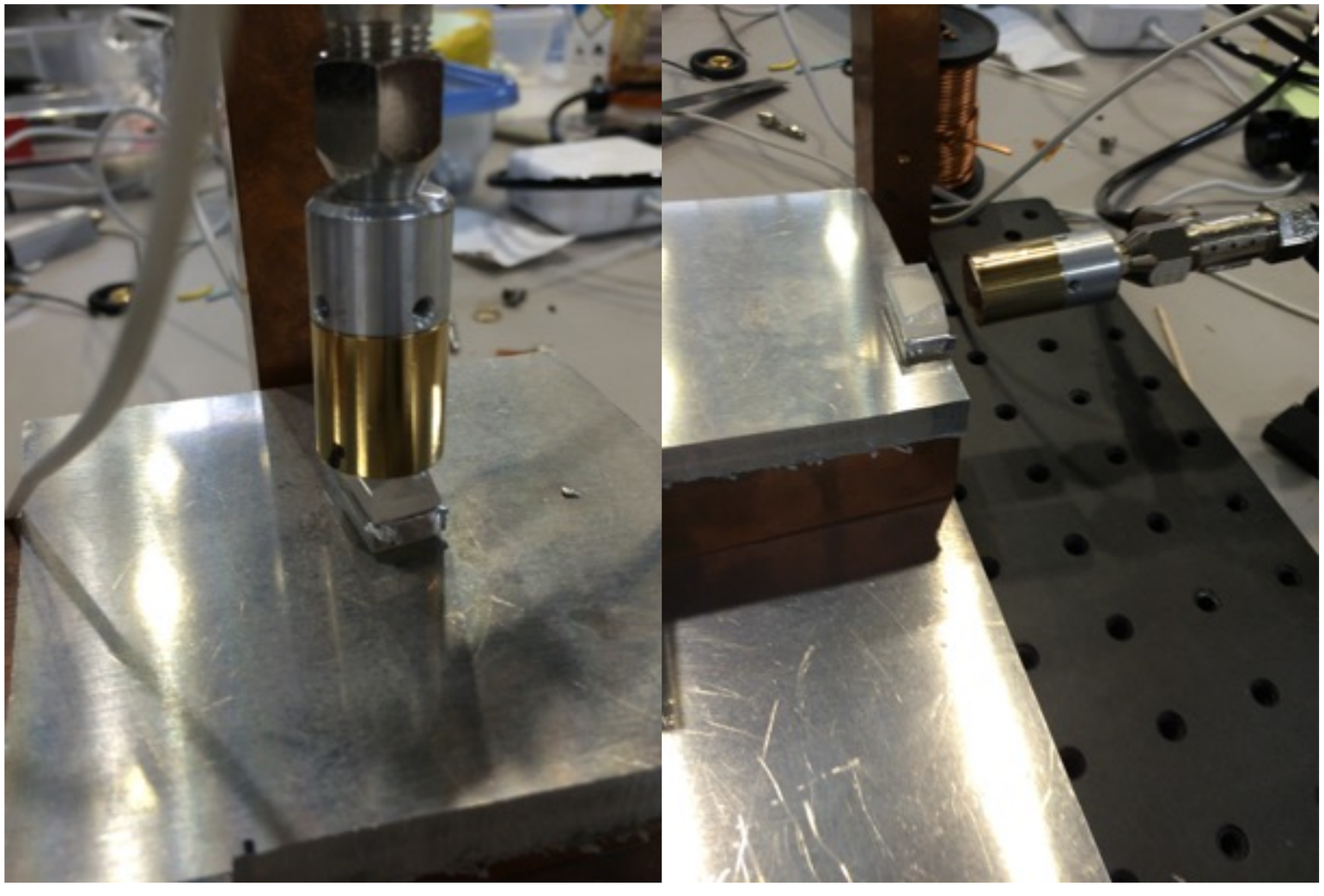


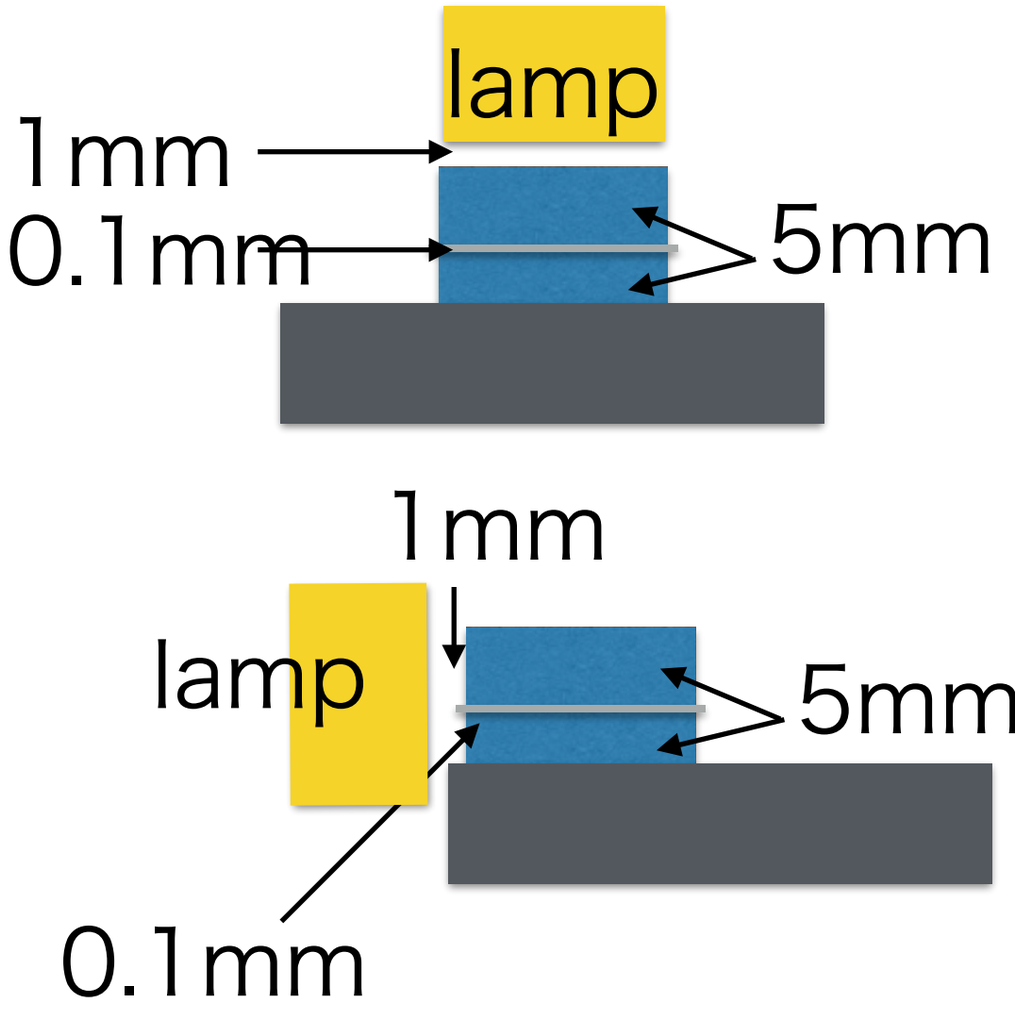




trial of Indium welding

When the sapphire was directly touched to the metal, it failed.



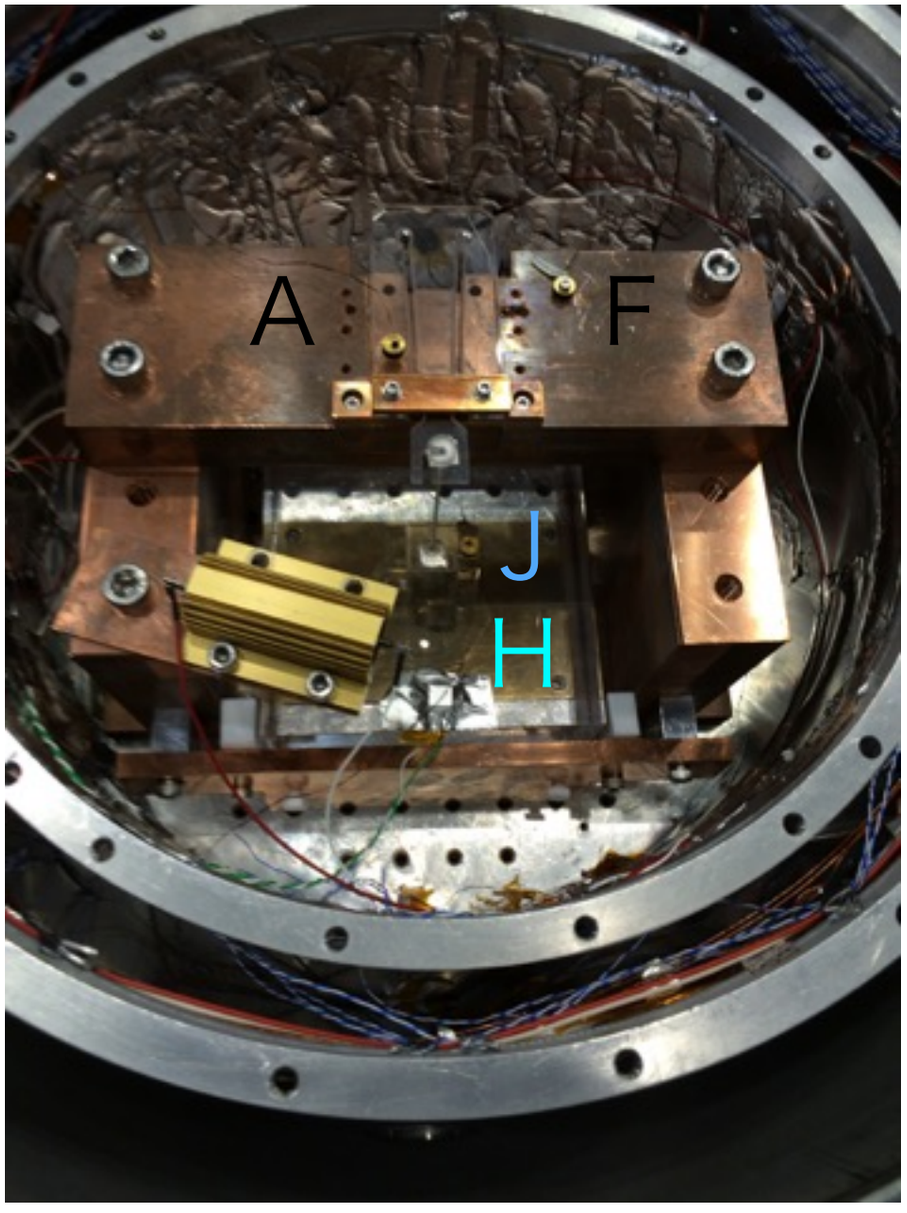


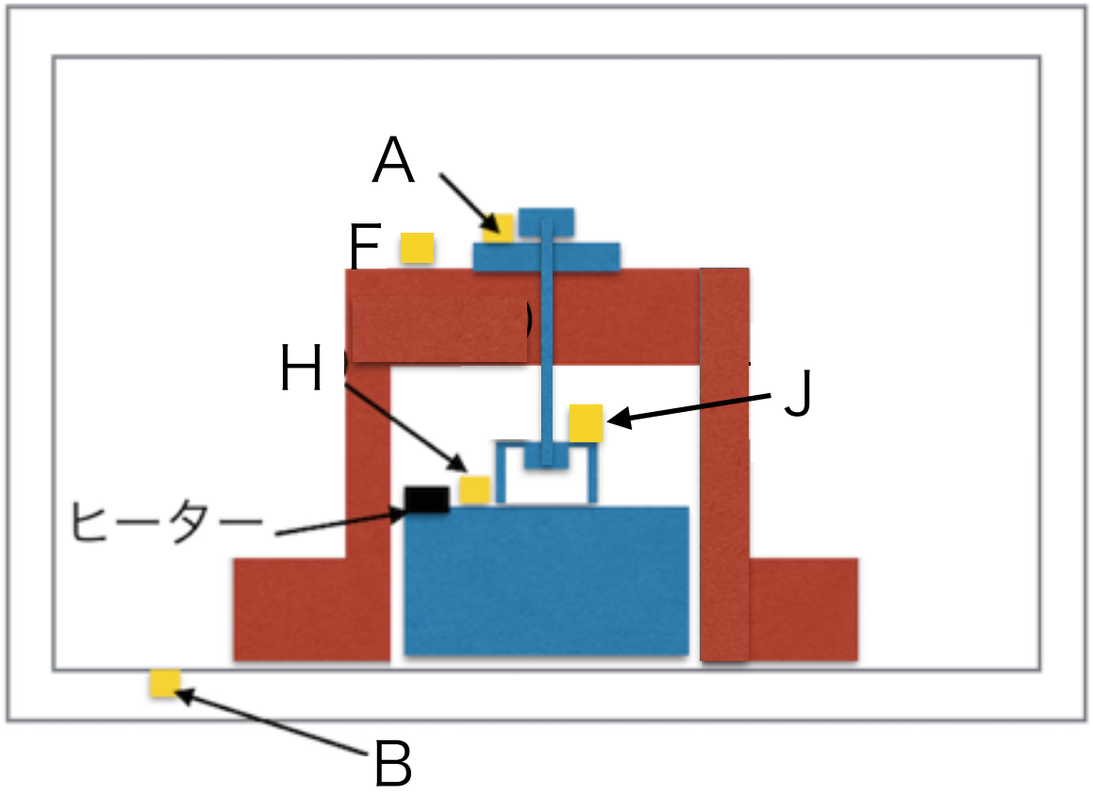
Indium

- This time we only inserted the Indium whose thickness is 0.5mm.

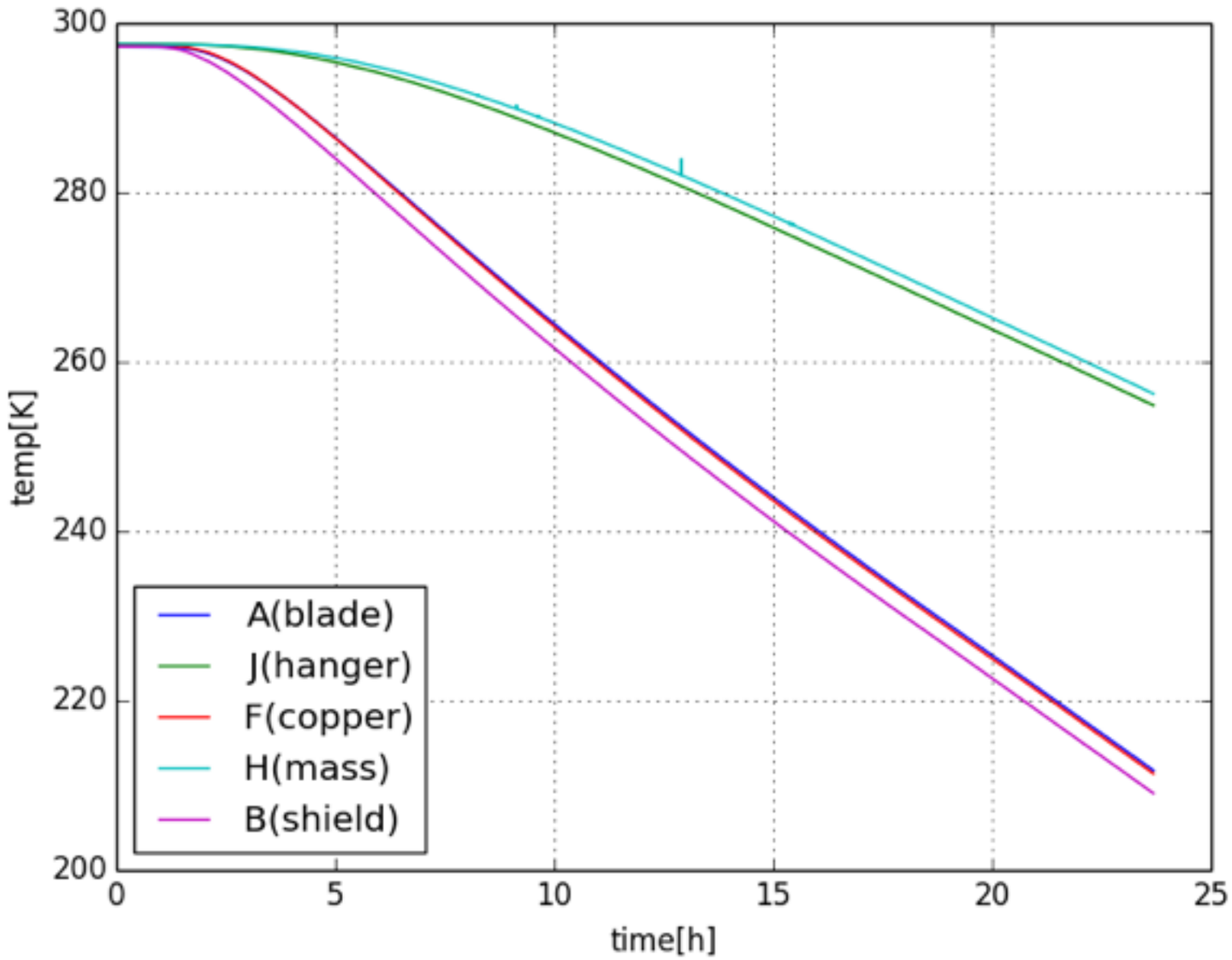
heat load test(5th)

We started to cool down the cryostat.





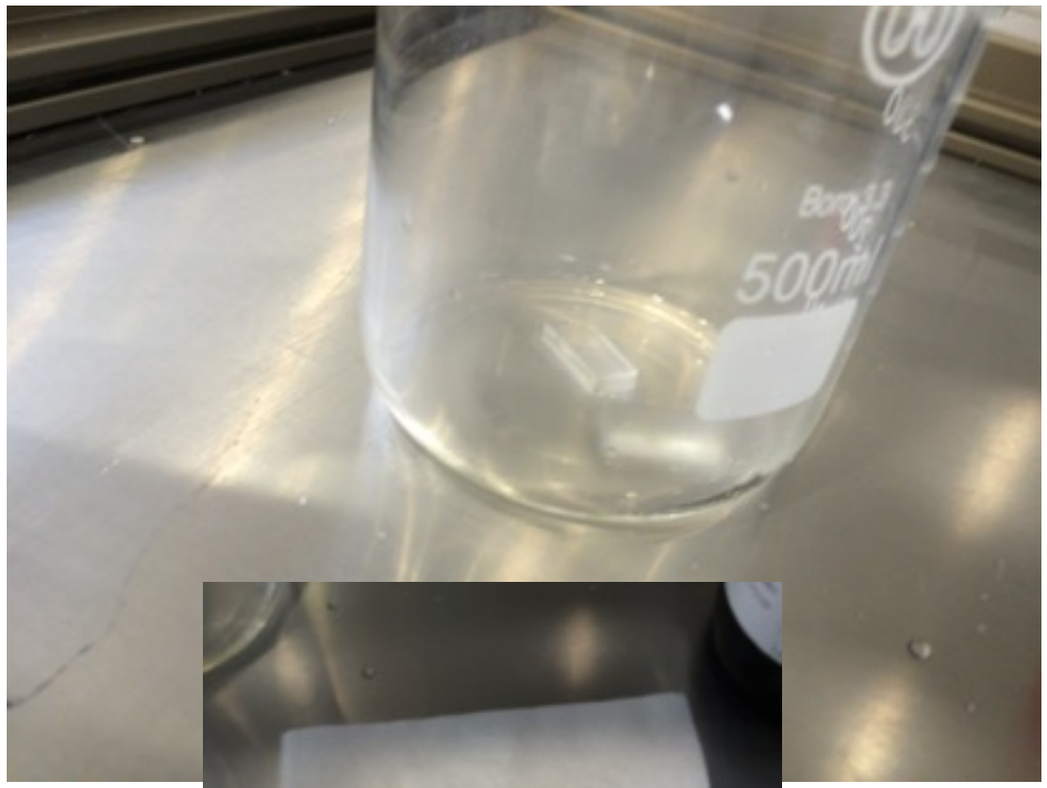
heat load (5th)

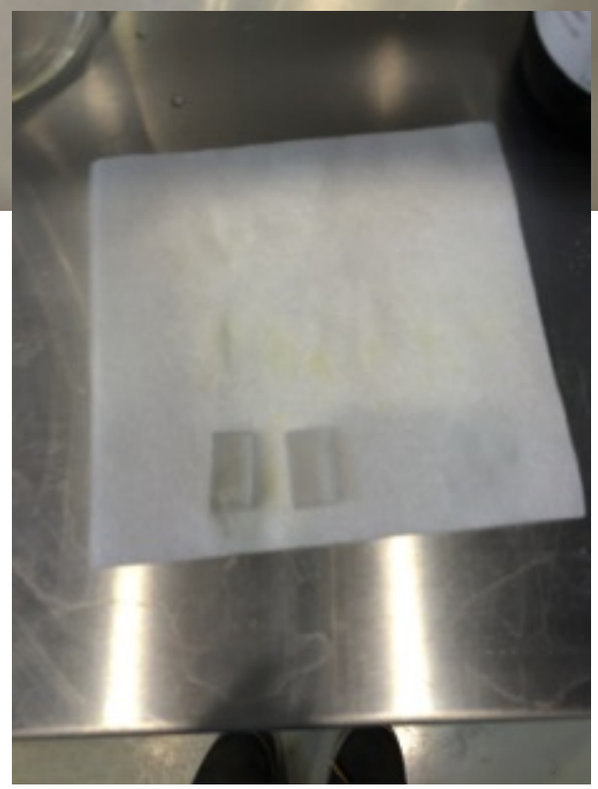


Future work

- We will finish the heat load test this week.
- After this test, we will start the Q measurement of one fiber prototype again.

remove Indium





trial of Indium welding

Even if we used the parabolic mirror （MPD249-M01）,
it failed.