

Report of MERIT corporate Internship (2014. 11. 17 – 2015. 1. 30, Econergy Co., Ltd.)

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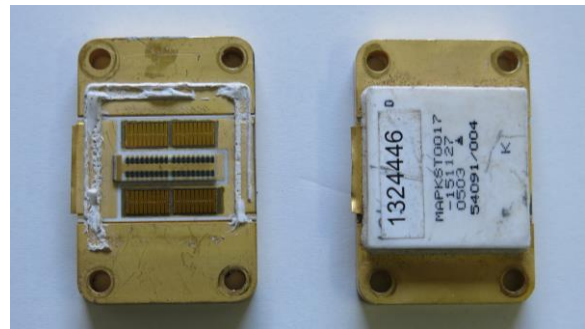
The inaugural class

I participated the internship program of Econergy Co., Ltd. and TOKYO TEKKO CO., Ltd. from Nov. 17<sup>th</sup> 2014 to Jan. 30<sup>th</sup> 2015.

#### (1) The purpose and the contents of the internship program

The research in progress is focusing on the recovery of precious metals from waste of electric and electronic equipments (WEEE). We demonstrated the possibility of ecofriendly recovery system of precious metals using pure wire, but there are several problems to apply this process for the WEEE. In this internship program, I focused on how to solve such problems through the collected WEEE.

The most of precious metals contained in substrate of WEEE, and this substrate will be the main target of recycling process. But the substrates contain other metal elements and materials, and they will cause problems to recover the precious metals. And some of precious metals are contained in covered area. The picture is showing the same part of processor, and its cover was removed from the right one. Under the cover, we can find the gold wiring. To increase the recovery rate of precious metals, we have to consider about these parts.



#### (2) General over view of the internship program

Through this internship program, I learned about the differences between academic process and industrial process. For instance, we have to treat chips on substrate to recover the precious metals from WEEE as much as we can. But too much treatments cause extra costs and environmental load. Thus, we have to evaluate the best combination of new recycling process in progress and usual processes, like pyrometallurgy or hydrometallurgy.

We can't find such differences in academic research, but these knowledge are very important for my research.

## Acknowledgement

This internship program was supported by Econergy Co., Ltd. and TOKYO TEKKO CO., Ltd. I am also grateful for MERIT program about the support to this internship program.

And my supervisor, Assoc. Prof. Yasunari Matsuno took very hard effort to fix this internship program. I would like to express the great appreciation to this support.