

# Improved PRIDE Access Control System

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## 1. Introduction

There is a facility named PRIDE in KAERI for developing Pyroprocessing technology. In PRIDE depleted Uranium feed material and a depleted Uranium mixed with some surrogate material are used for performing engineering scale Pyroprocessing.

When entering PRIDE, every people had to use the RFID(Radio Frequency Identification) system. But the RFID system had a lot of disadvantages. To get more specific radiation dose and data, we improved PRIDE's access control system.

## 2. Improvement

### 2.1 Pre-System

RFID system was PRIDE's existing system. It detects Radio Frequency when a person tries to enter the facility. After the RFID system detected the frequency, the entering person has to type some information to open the gate. And even if the person wants to exit the facility, the person has to type some information again.



Fig. 1. PRIDE pre-system.

This system had a lot of disadvantages. Some people miss read their personal dosimeter and write

the wrong value in the system. And also some people can just write '0' in the system because they are annoyed to read their personal dosimeter. So we can tell that the system is very weak on radiation protection perspective.

### 2.2 New system

Fig. 2 is the new access control system which is installed in the PRIDE fitting room.



Fig. 2. PRIDE new access control system.



Fig. 3. System gate.

As you can see there is a gate in the new system. The gate is to prevent people who is not authorized to enter PRIDE. Also there is a hole which you can see in Fig. 4. The hole is to put the personal dosimeter in. When the dosimeter is in the hole, the computer

which is linked to the hole reads the personal radiation dosimeter automatically. It reads the radiation value and the entering time in real time. After reading the system sends the data to the main server which is managed by the ‘Security Division’



Fig. 4. New system's hole.

### 3. Conclusions

We can now strictly manage the radiation-controlled area by improving the access control system. Also it can collect all the person's radiation level easily than the pre access system in real time

This system will be a beneficial useful in many areas or facility which has to be strictly managed.

### REFERENCES

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