

A simple in-house method for maintenance of Remote Tongs

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1. Introduction

Chemical hot cell is set up with tele-manipulators and remote tongs to perform various operations. Manipulators are used for precise tasks such as chemical experiments, while remote tongs are used for relatively simple tasks since their movement within a given space is limited. A remote tong consists of a handle, rod, adapter and gripper. The major cause of remote tong failure comes from damage of the rod connector. In this report, we introduce a simple in-house method for maintenance the routine performance of remote tongs.

2. Methods and Results

The maintenance method is as follows. Pins are removed After disassembling the pin cover of the remote tong handle. The remote tong handle and rod are separated from each other.

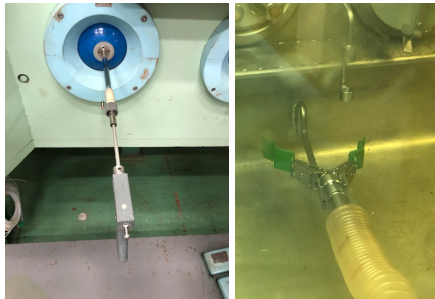


Fig1: Remote Tong

After marking the head portion of the rod with a black pen, it is reassembled to identify the part that causes interference. The interfering part is grinded with a file and the operating status of the remote tong is checked.



Fig2: Remote Tong Rod Head

When replacing the gripper, the handle should be turned 90° counterclockwise and linked to the hook of the device. Then, the handle is turned 180° clockwise to separate it. To perform coupling, these steps are carried out in the reverse order. The task is completed after performing checks to ensure that the remote tong is operating normally.

3. Conclusions

We introduce a simple in-house method for maintenance the routine performance of remote tongs. Our maintenance is proved to be useful for troubleshooting of remote tong under malfunction.