

## Process Control Lockout – procedures for use in the Petrochemical Industry

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Procedures for managing access to, and the maintenance of pipelines involve processes that control and securely lockout sections. These procedure need to be enforced and rigorously policed to prevent potentially highly dangerous accidents from occurring.

Lockout procedures are frequently documented but usually hard to physically enforce. A slight infringement of such procedures could have lethal consequences.

The Traka solution offers an automatic, fully audited, procedure using industry approved electronic key cabinets and a special development of Traka software. The system forces the users to comply with the procedures. Once a section of pipeline or piece of equipment has been locked off, it cannot be unlocked until the procedures have been completed.

### How it works

The unique key retention locks are permanently attached to the special Traka iFobs and kept in the Traka electronic key cabinets. The lockout process is divided into two sections: Mechanical Lockouts and Electrical Lockouts. The same lock is used for both types of lockouts; if it is a Mechanical Lockout the valve is locked in a closed position; if it is an Electrical Lockout the isolator is locked in the OFF position.

When a piece of equipment is to be maintained, the Production Group Leader must withdraw the required number of locks, which are then used to lock off the equipment. Only suitably qualified staff have the necessary permissions to withdraw the locks and every lock withdrawn is automatically audited.

Access to the cabinets is by individual existing access cards with optional secondary PIN access so producing an automatic audit trail. The lock is then handed to the Senior Process Controller who actually locks off the equipment.

Upon returning the key to its correct position in the Traka key cabinet (pictured right), the Production Group Leader will be prompted to confirm that the equipment is locked out. Once the lockout is confirmed the key will be locked in place and will not release until the correct procedures are followed.

The Production Group Leader will use the Traka software to create a works permit number. This will detail the required work and may be complementary





to any existing system. This is completed using the special touch screen module incorporated into the Traka pod.

Part of this procedure will be to allocate the relevant Maintenance team members such as mechanical, electrical or instruments departmental operatives. Each allocated member of staff must then use their ID card to accept responsibility for the required task.

As each area of work is completed, so each Maintenance team member must then use the software to look up the required works order and following the on screen menus, swipe again to confirm that the work has been completed. Only after every Maintenance team member has signed off the work, by swiping their card will the lockout key be released from the cabinet. This may be further restricted to the original Production Group Leader who created the Works Permit.

The equipment is unlocked and the lock is returned to the cabinet ready for use on the next lockout. An additional benefit of the Traka lockout software is the built in feature that allows the Production Group Leaders to transfer personnel signed onto a permit. Repair work might not be completed in one shift, the person going off shift therefore needs to transfer his responsibility to the person coming on shift. This is easily done by a few swipes of their ID cards.

The Traka lockout software also provides the Production Group Leader with the ability to specify a work permit expiry date. Certain work is more critical than others and needs to be completed within a

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certain time frame. When creating the work permit, the Production Group Leader can specify the expiry date of the permit; this in turn can then be configured to send an automated email to specified recipients as soon as the expiry date is reached. This helps ensure that critical repair work is completed on time.

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