

Marking ISO Shipping Containers

Camcode Global Helps UK MoD Track Shipping Containers to Avoid Unnecessary Costs

Background

The United Kingdom Ministry of Defense (UK MoD) has a large fleet of shipping containers located around the world. Some containers are owned by UK MoD, others are rented or owned by commercial suppliers. The containers come in multiple shapes and sizes, including basic shipping units, portable workshops, and generators. Individual assets are shipped in the ISO containers with an active RFID tag attached to each container for tracking purposes. This tag has a unique number assigned for each journey or consignment. The number is recorded in a database where associations are made between the tag number and the container's contents. This allows the container to be tracked through the various extant active reader networks.

Objective

The objective was to treat the container the same as any other managed asset. Therefore, ISO containers would be maintained and utilized far more efficiently and cost effectively. In order to better manage and track ISO containers throughout their life cycle, the UK MoD requested that Camcode Global mark a fleet of 15,000 ISO containers using a durable marking method.

As the UK MoD's Unique Identification (UID) Enabling Contract holder, Camcode Global was tasked with helping the UK MoD implement a method to identify, track and manage its fleet of ISO containers.



Challenges

The biggest challenge was the availability of the containers, because each container has a service and maintenance requirement. ISO containers cannot be used for shipping without being serviced and certified according to international and military shipping regulations. The containers were recorded in a local database with no authority to ensure maintenance is carried out, or any way of implementing governance.

Containers were frequently left idle in a state of unknown repair, not returned to custodians, and, most importantly, did not have accurate maintenance records associated. Therefore, they could not be used for shipping until remedial action was taken. This resulted in empty containers being shipped around the world in order to facilitate the redeployment of UK Forces. This generated significant purchase, shipping and management costs for the UK MoD.

Solutions

After consulting with the UK MoD project team, and assessing the assets themselves and their working environments, the Camcode Global engineering team determined that stainless steel was the appropriate marking material. Stainless steel was selected to avoid the potential galvanic reaction that can occur when an aluminum label is paired with a steel substrate, such as the container itself.

The Camcode Global team delivered an on-demand label production center in two locations to identify and register all ISO containers passing through each location. The UK MoD concluded that most of the containers were located in two key locations: Camp Bastion, Afghanistan and Bicester, England. The MoD provided Camcode Global with all of the ISO container label data, which was used to create a UID lookup table, allowing a user to match data and produce labels. Camcode Global then established a production station and data reconciliation team in Bicester and sent production data to a team already located in Afghanistan. The project required Camcode Global to produce 30,000 stainless steel labels so that each container included two UID labels – one on each end. Thus, the user was always able to scan a label even when containers are stored end to end.

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Results

Through the use of UID labels, each ISO container's maintenance requirement is now managed in the Engineering Management system and each unit is responsible for the custody and maintenance of the ISO containers it receives. This increased knowledge and accountability has led to units returning or accounting for the containers rather than abandoning them.

The UK MoD estimated that each container costs average of £4k. Individually they are not valuable, but the annual cost of losses and non-maintenance of even 10% is over £7m in replacement costs, which does not include the costs of shipping and receiving. With better tracking, the UK MoD can avoid such costs altogether.

The UK MoD is now able to track ISO containers throughout their life cycle, allowing more accountability and efficient use of each container. In addition, maintenance tracking now ensures containers that are damaged or destroyed can be removed from charge and removed from inventory, reducing the overall cost to the UK MoD.

