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LeghornGroup

Protection - Control - Identification - Tracking

Since 1978

HOW TO PREVENT A CONTAINER TAMPERING AND THE SOLUTIONS TO AVOID IT.

PROTECTION - CONTROL - IDENTIFICATION - TRACKING

HOW TO PREVENT A CONTAINER TAMPERING AND THE SOLUTIONS



After ISPS CODE introduction, the possibility for unauthorised parties to have access to controlled areas and act on stored containers is a topic of major interest.

ISPS CODE is indeed a set of laws and rules under which all the port areas (TERMINALS) must be equipped with control systems against any terrorist attack.

Therefore, controlling the entry and the exit of any person, product and means of transport is needed.

Despite all this, it is not avoided the use of containers for terrorist purposes and there are hundreds of thousands of dollars of stolen goods each year.



HOW TO PREVENT A CONTAINER TAMPERING AND THE SOLUTIONS

Let's analyse the different ways of tampering and the possible solution to avoid it.

The security seal is supposed to ensure that the goods in the container weren't tampered with, during the transport stages.

Currently, there are more and more sophisticated seals, which, if used in a proper way by trustworthy personnel, can be a considerable support against tampering and the lack of goods in the container.



Figure 3

But it should be remembered that any seal can be removed or tampered, having proper tools and available time.

And if it is not possible, the seal can be removed or duplicated (3D).

Thieves have understood the advantages of 3D print. They are able to perfectly clone and reproduce the numbering and the customisation.

This system gives major results on bolt seal covered with plastic. Cloning is near perfect. But on high security metal bolt seals, cloning is more difficult and underperformance.

Therefore, it is much safer to use a metal bolt seal ISO 17712:2013 approved.

Checking each high security seals with a hammer on one side is always a good rule : if it is a fake seals, it will break into pieces.

HOW TO PREVENT A CONTAINER TAMPERING AND THE SOLUTIONS



Let's analyse another way to tamper a container:

Once a container is loaded and regularly sealed, there are two ways to have access to it :

- a) By tampering or removing the security seal applied on the right door.
- b) By tampering and by opening the doors of the container without touching the seal.

Regarding point "a", there are several ways to tamper a seal : some of them have already been solved by manufacturers by ensuring that the seal is able to bear some attempts at tampering (ISO 17712:2013 - Clause 6).

Regarding point "b" the problem gets difficult, because the plate that is welded on the right part of the container is pried with a crowbar by allowing also to open the left door of the container.

In this case, the security seal isn't touched.

By doing so, one can have easily access to the goods. Once they are tampered, the left door will be positioned as first and then also the plate.

Attempts at tampering are not easy to be discovered for a person who is not an expert in the field.

To avoid this type of tampering, a barrier seal is required. Our "FORKSEAL" or "NEW FORKSEAL", ISO 17712: 2013 approved, lock the two central barriers of the container, by avoiding any possibility to open the doors without cutting the seal.

HOW TO PREVENT A CONTAINER TAMPERING AND THE SOLUTIONS



Let's analyse another way to tamper a container.

Another type of tampering consists in perforating with a drill the rivet that links the handle of the door to the closing pole.

In this way, the handle is detached from the pole and this allows it to be turned and then open the door of the container.

Once the load has been tampered, another rivet, which can be found at a low price on the market, is put to link once again the handle to the pole.

Just make sure to dirty it a bit or let it rust with some water and salt before using it. Easy but very effective.

Also in this case, to avoid this type of tampering, a barrier seal is required. Our "FORKSEAL" or "NEW FORKSEAL", ISO 17712: 2013 approved, lock the two central barriers of the container, by avoiding any possibility to open the doors without cutting the seal.



Remember that controls cannot be too careful.

For a cargo higher security, the following precautions must be put into force :

- a) Check if the seal is attached before leaving the warehouse.**
- b) Pick and choose the road carries that will take charge of the container.**
- c) Plan the road and give clear transport instruction to avoid stops and stocks of the container to warehouses, external buildings, etc.**

d) Require that the container is weighted on departure and arrival at terminals and the comparison of the results.

e) Carry out a detailed examination of the seal and of the container on the arrival at embarkation and disembarkation terminals.

f) Check the seal and the container when they arrive at the receiver. Remember that a simply check of the seal cannot be too careful. It is necessary to check also the type of seal, making comparison with pictures taken before the departure.

WHAT SHOULD BE DONE IN CASE OF TAMPERING?



In case of tampering, what should be done?

It is necessary to scrupulously check if the seal is intact and then check the entirety of the handles of the container in order to find any forcing suspicious sign.

In case of any proven anomaly, it is necessary to write it down on the consignment note and take pictures before opening the container.

Regarding the seal, all its broken pieces should be stored and have them checked by an expert.

Basically, it is necessary to demonstrate thanks to an expert that the goods have been loaded, and on the arrival another expert declares any lack.

These steps are required in case that the seal tampering cannot be proven.





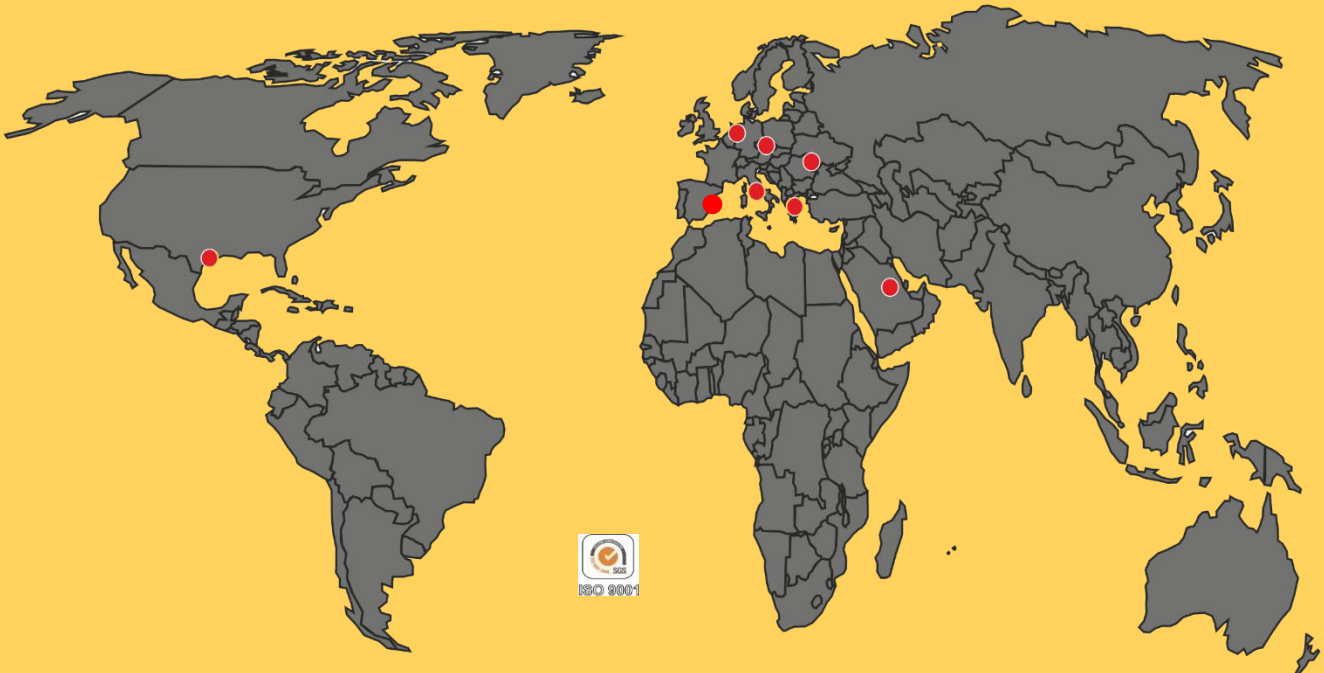
All these problems can be avoided by using state of the art RFID seals, manufactured by LeghornGroup. They give the following basic information :

- a) New seal
- b) Close seal
- c) Open seal

Thanks to this seal "MIRMIDON" both doubts and cloning possibility are avoided. However, it goes without saying that the human control has an essential role.

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