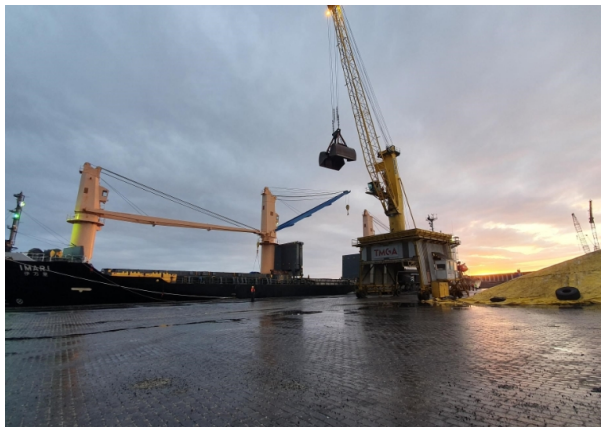


# Cargo Inspection

Applus+ offers complete cargo inspection before, during, and after shipment. We are one of the world's leading testing, inspection, and certification companies with a presence in more than 60 countries.

Our cargo inspectors verify for our clients the quantity and quality of their shipments as well as compliance with contract and legal requirements.

Applus+ has the necessary resources, experience, and laboratories to complete all the freight inspection processes: draft survey, sampling, sample preparation, and testing for different kinds of goods such as coal and coke, agricultural products, cereals, and flours, minerals, LNG and LPG and containers.



## THE Applus+ SOLUTION

Applus+ provides marine cargo inspection services during loads and unloads, assuring our clients that the cargo shipped is the one bought or sold.

Our cargo inspector inspects the vessel before loading to verify cleanliness, environmental, and safety conditions. After loading, they check the safety conditions.

Our report includes information on all the shipment processes: storage, handling, stowage in the receiving carrier, type, name, and/or number of receiving carrier, date of arrival and departure, incidents, delays during the process, etc.

### **Sampling inspection**

Sampling and sample preparation

- According to international standards.
- The first step before testing. Great importance to guarantee representativeness.



## Representative sampling

- Where? Carried out in ports, industrial zones, stores, etc.
- From? Stockpile, conveyor belts, trucks and wagons, vessels.
- How? Automatically and manually.

## Sample preparation

- Different equipment, physical operations: grinding, quating, screening, drying...
- Different methods depending on the product size and test.
- We prepare samples as per the client's internal procedures.

## Material testing

Applus + performs material testing in a laboratory and on-site to verify cargo quality according to international standards. We also verify the characteristics of the products and their compliance with international regulations and contract conditions.

We conduct physical and chemical testing depending on the type of goods and their nature.

## Stockpile measurement

Applus+ provides comprehensive services for stockpile measurement at ports, storehouses, mines, refineries, or manufacturing facilities. We have cutting-edge technologies to determine the volume and density of different materials.

Depending on the work, we determine volume using a laser scanner, [LiDAR](#), topographic survey (GPS), or RPAS.

**TOPODRON** is a complete system for photogrammetry work. It includes Pix4D software for processing data, as well as planning and flight simulator software.

We obtain the [3D model](#), and we provide our clients with the ground digital model, orthophoto, and level curves.

## Draft Survey

The objective is to determine the weight of the material loaded into or unloaded from a vessel using draft survey measures according to internationally standardized draft survey protocol (Procedure EC/ENERGY/19)

We measure the displacement of the water before and after the loading or unloading, and using our specific software, we obtain the weight of the cargo from the difference between the two displacements.

- Applicable to vessels with cargo 5000T.
- Inspections at the origin and final destination.
- Inspections carried out by surveyors.



- High-performance inspections, optimized procedure.

## Target customers

Target clients are mainly manufacturing, power, and mining companies willing to ensure that the quality and quantity of the material acquired is the one they charge in the origin port.

Businesses choose our specialized inspection services for the assurance that the materials they transport align seamlessly with the specified criteria set at the origin port. In an ever-evolving industry landscape, our commitment is to provide clients with the confidence needed for reliable and efficient cargo transportation.

## Key customer benefits

- Quality and quantity assurance during shipment and unloading.
- Compliance with contract and legal requirements.
- Safety control.
- Risk control.
- Minimum material losses.