



WSS S.A. is a service company, part of the SOTECO S.A. Group, which since 2001 develops and carries out various activities in the field of Conformity Assessment, through its activities of Inspection, Sampling, Analysis and Testing, Product Certification, Calibrations and other complementary activities.

WSS S.A. has offices in the main cities and ports of Chile, such as Arica, Iquique, Calama, Antofagasta, Valparaiso, San Antonio, Santiago, Concepción. It also has offices abroad in Ecuador and Peru.



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## DIVISIONS



This Division is specialized in providing inspection, certification, quality control, training and consulting services to shipping companies, warehouses, port terminals, stevedoring companies, exporters and importers, customs agents and freight-forwarders as regards to the entire logistics cycle derived from the international transport of goods.



This Division offers a wide variety of inspection and testing services for industrial and infrastructure projects, both during the acquisition of structures, equipment, machinery, parts and components, as well as in the manufacture, construction and maintenance thereof.



#### TESTING AND SAMPLING

Testing and Sampling Division offers chemical, microbiological and physical-organoleptic testing and analysis services, in conjunction with sampling, require within the country's regulatory framework, in the areas of water quality, industrial liquid waste and residual solids, quality and food safety, raw materials for the food industry for human and animal consumption, among other items.



This Division has personnel with high experience in calibration services for instruments, equipment and measurement systems, which allows us to provide support in matters of metrology and related topics to our clients, as well as studies that allow the design, reformulation and implementation of systems for Metrological assurance for the industry.



## PRODUCTS CERTIFICATION

The Division works mainly with the internationally recognized certification models, called ISO / CASCO, from No. 1 to No. 8. This Division also provides some inspection and testing services in factories, based on standardized statistical sampling plans, either by attributes or variables.



#### MINING

The Division provides integral solutions for the Great Mining based on its experience supported on the multidisciplinary team of professionals that compose it. This makes us national reference services for both operational control and for management systems that involve aspects of certification, quality, safety and environment.

## INSPECTION DIVISION

#### **OUR SERVICES**

#### **Container and cargo inspection**

- Container structural and suitability Condition
- Verification of container seal condition
- Cargo and sea condition
- Evaluatio/Valorization of damages and/or losses of
- Stuffing and stripping supervision
- Inspection of refrigerate cargo and reefer units Temperature control and monitoring
- Marine casualty investigations (P&I).
- Maintenance and repair of reefer containers during
- Lashing certification
- **Cubic measurement Inspection**
- Seawater test (using the silver nitrate method)

#### In bulk inspection

- Cargo condition and quality inspection
- Suitability of warehouses
- Truck's inspection prior loading and discharge
- Structural condition of docks, hoppers, clamshells and
- Phytosanitary and physical organoleptic inspection Discharge of bear bulk cargo supervision
- Weight scale Control
- Sampling as per Standard GAFTA 124
- Supervision of fumigation in warehouses and vessels
- Cargo trimming supervision
- Determination of humidity and temperature control

#### **Vessel Surveys**

- Pre purchase survey
- Inspection to the vessel damages
- Hull and machinery technical survey
- Nautical surveys
  On-off hire condition (Delivery and re delivery certificate)
- Draft survey, on-off hire condition
- Bunker surveys
- Loss prevention surveys
- Risk prevention
- Marine Casualty Investigation (P&I)

#### **Break-bulk cargo inspection**

- Cargo condition inspection during loading/discharge Cargo condition Inspection in factories or warehouse
- Inspection, Certification and valorization of damages

- Stowage and lashing condition inspection of damage Stowage and lashing condition inspection Seawater test (using the silver nitrate method) Inspection of packaging, marks and labeling Dispatch supervisión of cargoes into trucks Hold/warehouse condition and suitability survey (tightness test).

#### **Vehicle Inspection**

- Arrival and discharge inspection of vessels
- Pre-shipment and loading inspection of vessel Inspection to the stacking areas
- Loading inspection and road transport reception
- Control key inspection on board vessel
- Measurement Inspection on board vessel and terminals
- Tally control inspection and accessories inventory
- Follow up inspection of incidents, sinisters and
- Preventive surveillance inspection
- Measurement inspection to trailers, machineries
- Inspection at Intermodal terminals

#### Other services

- Workshop supervision (stopper's and d-rings removal, welding of steel plates, painting, etc.) Reefer Technician onboard (Control of reefe
- containers during navigation)
  Control of fuel discharge from vessel to the terminals
- Container technical service Pre and Post arrival / discharge to the depots and terminals Operations Consultancy, Cargo Dispatches and Escort
- service for inland transportation
- Loss prevention (Cargo claims, analysis and incident insurance coverage, research of potential risk in port
- Certification of Production and audit of Factories (China and Europe)



# INDUSTRIAL INSPECTIONS DIVISION

## **OUR SERVICES**

#### **Inspection Area**

- Inspection and certification of cranes and bridge cranes
- Inspection and certification of lifting equipments
- Inspection and certification of lifting accessories
- Inspection and certification of transport tanks
- Welding technical inspection
- Technical inspection in workshops
- Manufacturing technical inspection
- Inspection of storage tanks
- Inspection of lines and pipelines
- Coatings inspection
- Visual inspection
- Monitoring of conditions
- Welding procedure qualification
- Welders qualification

#### Non-destructive testing Area

- Penetrating liquid test
- Magnetic particles
- Conventional ultrasound assays
- Phased Array ultrasound assays
- Measurement of thicknesses by ultrasound
- Roughness measurements
- Visual examination
- Tightness test
- Hydrostatic and pneumatic tests
- Remote visual examination (borescope)
- Mechanical tests (all types of materials)

#### **Training Area**

- Non-destructive Testing Courses
- Basic welding courses (normative)
- Lifting Inspection courses



Gonzalo Araya Industial Inspections Division Manager





## METROLOGY DIVISION

The Metrology division works with a quality management system according to the norm NCh-ISO 17025: 2017, and is currently accredited in the magnitudes: mass, temperature, pressure and length.

#### **OUR SERVICES**

#### Mass magnitude

- Calibration of standard weights, calibration chains, scales, scales and weighometers.
- Load tests.

#### Temperature magnitude

- Calibration of thermometers, thermometric systems, temperature and humidity recorders, calibration of autoclaves, stoves, muffles, etc.
- Monitoring services for environmental conditions.

#### Pressure magnitude

• Calibration of manometers (hydraulic and pneumatic), vacuum gauges and valves.

#### Length magnitude

• Calibration of vernier, rules, flexometers, external micrometers.

#### Volume magnitude

- Volumetric laboratory instruments, such as pipettes, micropipettes, burettes, flasks, dispensers, among others.
- Hydrometers, saccharometers, hydrometers, breathalyzers.



- Refractometers: in refractive index and Brix scale.
- Grain hygrometer.



Liliana Jiménez M. Metrology Division Manager



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## PRODUCTS CERTIFICATION DIVISION

#### **NUESTROS SERVICIOS**

#### Certification

- Protective bars against overturning
- ROPS structures
- FOPS structures
- WedgesFire reels
- Mining equipment
- Maxibags Personal protection items
- Medical devices
- Foundry products
- Metallic structures
- Fire protection
- Technical service of fire extinguishers
- Certification of procedures

#### **Factory Inspections**

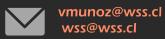
- Structural projects
- Lifting equipments
- Cages and structures hike man
- Drilling mining equipment
- Forest support equipment
- Assembly centers
- Operational state of equipment and machinery

#### **Testing**

- Hydrostatic pressure
- Pneumatic pressure
- Hydraulic pressure
- Pushing force
- Dimensional control
- Tightness test
- Impact test
- Functional test of equipment and machines
- Magnetic particles
- Penetrating inks
- Coating thickness
- Steel thickness by ultra sound
- Torque control, light assembly



Víctor Muñoz R. Certification Division Supervisor



WSS S.A is the only organization accredited to the INN, for the certification of bars protective structures against rollover of vehicles and wedges under Certificate No. 097, and attack reels for fire protection under Certificate No. 098.

# TESTING AND SAMPLING DIVISION

The Division is focused on offering services in the area of food that ensure quality and food safety, under a Quality Management System based on NCh-ISO 17025:2017

#### **OUR SERVICES**

#### Chemical laboratory

- Proteins
- Digestibility
- Fat
- **Antioxidants**
- Moisture
- На
- Granulometry
- Non-Fatty Solids

- Pollutants (heavy metals)
- FFA
- Peroxides
- Histamine
- TVN
- Sand
- Ash
- Mycotoxins

#### Microbiological laboratory

- Fecal coliforms
- Total coliforms
- Escherichia coli
- Fungi and yeasts
- Salmonella
- Aspergillus fungi
- Shigella
- Listeria Monocytigenes

- Staphylococcus aureus
- Enterobacteria
- Aerobic Mesophilic
- Reducing sulfite anaerobes
- Vibrio parahaemolyticus
- Clostridrium Perfringens
- Enterococcos

#### Sampling

- Flours (aviars, viscera, fish, blood)
- Oils and fats
- Waters
- GrainMineral concentrates
- Frozen products
- Foods
- Surfaces and manipulators

#### Research and development

- R&D for special services
- Attention to special needs and / or unusual tests

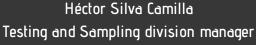


Miguel Arroyo Navarro Development Manager



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# DEPARTMENT OF **ENVIRONMENT AND CONTAMINANTS**

## **OUR SERVICES**

#### **Consulting Services**

- Environmental management consulting
- Process management consultancy
- Lifting of environmental liabilities
- Development of integrated waste management plans
- Development of hazardous waste management plans
- Resolution of environmental conflicts
- Processing of sector permits, SEREMI Salud
- Design of sampling plans for hazardous and non-hazardous industrial soils and waste
- Advice on issues related to emission control, raw material verification and process control, among others
- Development of emergency plans and response to spills
- Preparation of safety data sheets (HDS)
- Consultations in acute and chronic toxicology
- Occupational health consultancies

#### **Training Services**

- Training in Environmental Regulations aimed at companies and individuals. Standards ISO 14000, D.S.148, D.S.594
- Training in Integrated Waste Management Plans
- Training in Specific Hazardous Waste Management Plans
- Training in Pollution in Environmental Matrices (air, soil and water)
- Training in Occupational Health

#### **Physical-Chemical Analysis Services**

- Analysis of pollutants in soil, air, water, heavy metals, organic compounds, pesticides and hydrocarbons
- PCB's in dielectric oils
- Fertility in soils (N, P, K, S)
- Toxicity in toys and school supplies
- Physical-chemical characterization in finished products
- Potentiometric determinations, pH and electrical conductivity
- Granulometries
- Moisture



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## MINING DIVISION

## **OUR SERVICES**

- Mine and Plant process control
- Inspection of Cu concentrates for shipments
- Support services to the area of Geology
- Metallurgical studies
- Administration and operation of pilot plants
- Sample taking campaign for validation of HT methods and analysis of their information
- Drill cutting DDH and AR
- Drilling samples storages and administration, mining operation sites administration y witness samples storage facilities
- Training in measurement instrumentation control, such as temperature of dry-cleaning equipment
- Control of automatic sample cutters
- Sanitary inspection of restaurants/cafeterias in Mining facilities
- Management of support in environmental aspects.
- Taking and analysis of water samples in tasks.
- Calibration of temperature instruments in the laboratory
- Ground temperature measurements
- Measurement of ground mass



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# ACCREDITATIONS, CERTIFICATIONS AND MEMBERSHIPS

Accredited by INN Chile (Instituto Nacional de Normalización) in Calibration Laboratories according to the Norm NCh-ISO 17025: 2017 in:

- Magnitude Mass LC 101
- Magnitude Temperature LC 102
- Magnitude Pressure LC 103
- Magnitude Length LC 104

Accredited by INN Chile (Instituto Nacional de Normalización) in Testing Laboratories according to the Norm NCh-ISO 17025:2017 in:

- Microbiology and sampling area for hydrobiological products LE 1149
- Microbiology and sampling area for foods for human consumption LE 1150
- Microbiology and water sampling area LE 1151
- Microbiology and sampling area for utensils, surfaces, environments and manipulators LE 1152
- Physical-organoleptic area and sampling for Hydrobiological products LE 1153
- Chémical area and sample for Hydrobiological products LE 1155

Accredited by INN Chile (Instituto Nacional de Normalización) as a Product Certification Organization according to the Standard NCh-ISO 17065: 2013 in:

- Area Items for road vehicle safety CP 097
- Area Fire protection devices, with the scope indicated in annex CP 098





















Testing laboratories and sampling areas Concepción Office - Chemistry and Microbiology Areas. In the process of Certification ISO9001: 2015





