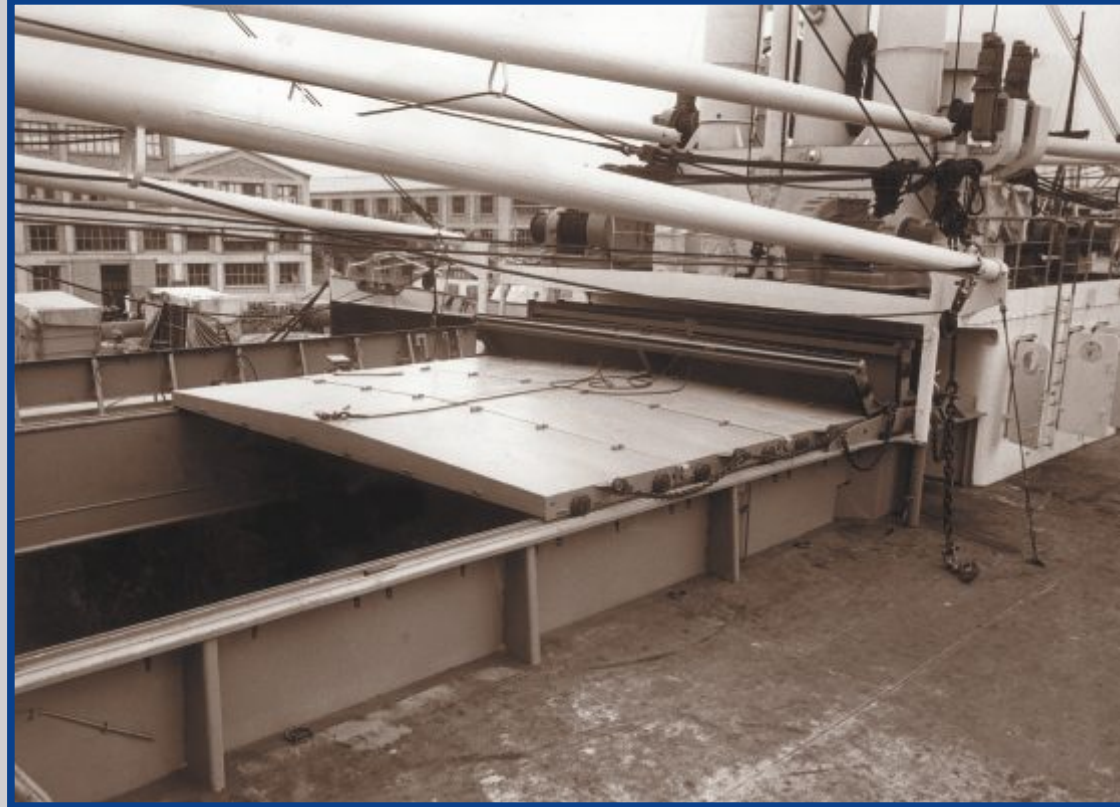


Hatch Covers and RO/RO Equipment Specialist

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41018 SEVILLA (Spain)



HISTORY



Astilleros de Sevilla.- Year 1955
Hatch Covers on Compañía Trasmediterránea M/V "Almudena"

SP Consultores y Servicios is formed by the team of the former Spanish MacGregor which, at its origin, was part of the public Shipbuilding Group Astilleros Españoles and operated from their Seville Shipyard. Later on, between 1986 and 1992, those experts were transferred to MacGregor-Navire, and following the closing of this company at Seville, they started their own venture to continue with similar activities.

Today, **SP** is a private, firmly consolidated company, having reached the status of leader in the supply of Cargo Access Equipment to the Spanish Market. The wide Reference List shows customers of different countries, from highly demanding International operators, to domestic shipowners who handle services between the Spanish mainland and the islands and territories outside the Iberian Peninsula. Customers especially appreciate **SP**'s ability to carry out conversions at a record time, due to the quick-response capacity of their light structure.

Full use of modern computer technology is made, both for planning and logistic purposes, and for detailed calculation of the structural and dynamical parameters of the equipment.

The structure of **SP** has the typical features of any industrial company, where the control of the processes is kept in-house (by the Commercial, Technical, Procurement and Production Departments), while the products are manufactured and installed by outside subcontractors, according to **SP** drawings, technical data and quality standards, and under constant **SP** engineers supervision.

ISO 9001 Standard has been awarded to **SP** by Bureau Veritas.



SP

**CONSULTORES
Y SERVICIOS**

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Fax +44 (0)191237 7242

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Serdijn Ship Repair B.V.

Gustoweg 35-37
3029 Rotterdam (Netherlands)

Tel +31 (0)10-4737400
Fax +31 (0)10-4737361

New Zealand

Quay Marine Ship Repair Ltd

Interislander Terminal
P.O. Box 2876
Wellington

Tel +64 (0)44-991560
Fax +64 (0)44-990880
email AJFKCOLLINS@xtra.co.nz



Since 1993, ships with **SP** equipment sail on the world's oceans under different flags. Tailor made solutions have been created to give answer to every requirement laid by the shipyards and shipowners, contributing to the progress of the shipbuilding.

Hereunder follows pictures showing a wide selection of ships with **SP** solutions.



"Sierra Lara"

Reefer Nb. 392 Construcciones N. P. Freire
Folding Hatch Covers



"Manuel Azaña"

Ferry Nb. 497 Astilleros de Huelva
Bow visor, bow ramp, stern ramp, cardecks



"Bunga Mas Tiga"

Container Nb. 349 Juliana C. Gijonesa
Pontoon covers



"Willen Van der Zwan"

Trawler Nb. 405 Construcciones N.P. Freire
Hatch Covers



"Sierra Laurel"

Reefer Nb. 395 Construcciones N. P. Freire
Folding Hatch Covers



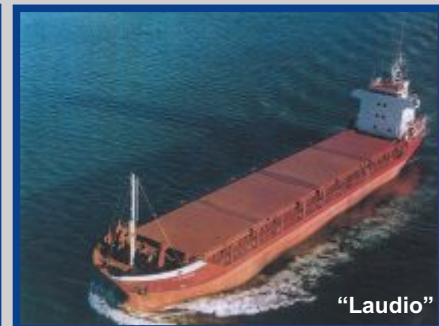
"Asta"

Cargo Nb. 565 Astilleros de Huelva
Folding Hatch Covers



"Aratere"

Train Ferry Nb. 1570 Hijos J. Barreras
Stern door, internal ramps



"Laudio"

Cargo Nb. 192 Astilleros de Murueta
Folding Hatch Covers



"L'Audace"

Car Carrier Nb. 1571 Hijos J. Barreras
Stern ramp, internal ramps, cardecks, hatchcovers



"Marqués de Comillas"

Container Nb. 1550 Hijos J. Barreras
Pontoon covers



"Iberus"

Cable Layer Nb. 1907 Hijos J. Barreras
Stern door

SP has a very wide experience in the design and production of every type of hatch covers. Since the critical influence that the pre-order coordination has in the ship project, senior designers are ready to collaborate with the shipyard/shipowner technical staff in order to select the most appropriate solutions.

SP experience includes hatch covers for weatherdeck (watertight) and tweendecks, with a wide choice of operation solutions, and easily adaptable to customer's needs.

- Folding
- Pontoon (Lift On-Lift Off)
- Multifolding
- Piggy Back
- Side Rolling
- Single Pull
- Pivoting



Pontoon with non-sequential opening



Multifolding for tweendecks



Very large multifolding



Side rolling



Multifolding on weather deck



Hydraulic pivoting, insulated, and tweendecks folding

RO-RO EQUIPMENT

SP is deeply involved in the market of the Ro-Ro vessels, with its special characteristics of detailed design and accurate fabrication and installation.

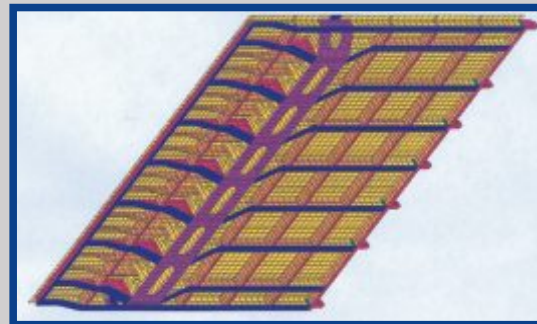
Large pieces of equipment, which must combine integrity with flexibility, are analysed by means of computer programs. This allows the practical behaviour of the structures when loaded, to be seen.

SP is licensed by Lloyd's Register of Shipping (client serial number 2545) for the ShipRight SDA FEM program, and makes wide use of its powerful tools of analysis.

Again, the pre-contract work to define the interface between ship and equipment is of the utmost importance. SP technical staff contribution to the commercial discussions is considered one of the main assets of the company.

SP experience includes all types of equipment, such as:

- Bow visors and bow doors operating and securing devices
- Bow bulkhead doors.
- Bow ramps.
- Stern ramps (axial and quarter).
- Stern doors.
- Shell doors (passangers, pilot, bunker).
- Internal ramps.
- Cardecks.
- Rampway covers.
- Sliding bulkhead doors.
- Flood control doors.
- Cargo lifts.



Stern ramp: FEM model.



Bow visor and bow ramp.



Two-sections pivoting cover over fixed ramp.



Stern ramp



Stern ramp and internal ramp



Stern door for railferry



Cardecks

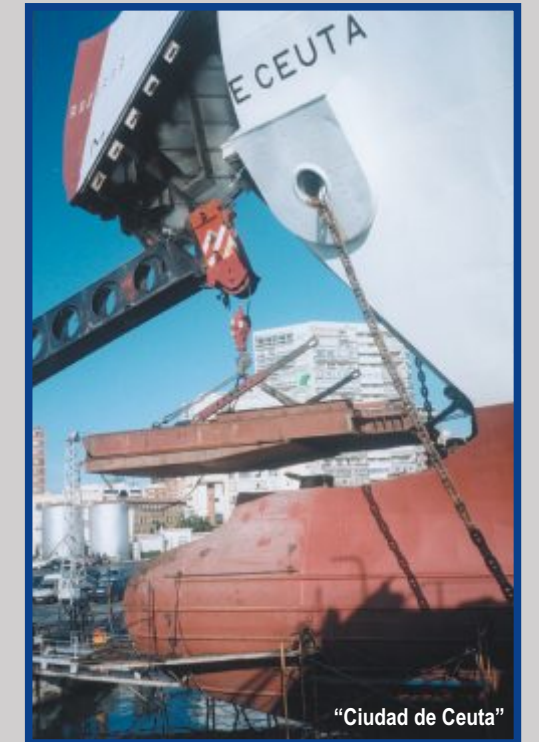


Cargo lift 50 t SWL.



"Volcán de Tindaya"

Design and supply of the bow visor operation.-Bow ramp



"Ciudad de Ceuta"

New and longer bow door/ramp fitted to comply to SOLAS



"Villa de Agaete"

Modification of the stern ramp to connect to link span



"Ciudad de Alicante"

New internal ramp fitted

The SP department which looks after other activities apart from newbuildings (repair, conversions, spare parts, inspections, etc) has been given an important technical content. A profound study of the problems and needs of the customers results in efficient solutions, both in terms of cost and stand-by time.

SP offers a wide range of services: overhaul of pieces of equipment, on-board (at port or sea-going) repairs, supply of spare parts and, finally, "turn-key" supply of complete systems. At this point, all the company's potential is used to work on the ship in record time, in order to complete the modification or substitution of the piece of equipment involved.