



2

Port technical characteristic

2.1. GENERAL CONDITIONS

2.1.1. LOCATION

PORT OF FERROL

Inner harbour

Length	8° 15' W
latitude	43° 28' N

Outer harbour

Length	8° 20' W
latitude	43° 27,5' N

2.1.2. WIND CONDITIONS

Prevailing	NW
Dominant	NE

2.1.3. DOCK GALE CONDITIONS

Based on recorded data: Significant wave height with 50 year return period

2.1.4. TIDES

Maximum tidal range	4,67 m
LLW height against port zero	0,00 m
HHW height against port zero	4,67 m

2.1.5. HARBOUR ENTRANCE**2.1.5.1. ENTRANCE CHANNEL****Inner harbour**

Position	SW
Width	160 m
Length	4.000 m
LLW depth	11,30 m
Sea bed	Cascajo y roca

2.1.5.2. PORT ENTRANCE

Position	SW
Width	900 m
LLW depth	20 m
Maximum recorded current	4 nudos

2.1.5.3. TUGBOAT ASSISTANCE FOR HARBOUR ENTRY AND EXIT

Vessel lengths

2.1.5.4. LARGEST SHIP TO ENTER DURING THE YEAR

Características	Mayor eslora		Mayor calado	
	Zona 1	Zona 2	Zona 1	Zona 2
Name	BAI AN HAI		VOGECARRIER	
Nationality	China		Liberia	
G.T.	91.205		85.706	
T.P.M.	178.022		162.430	
Length	292,00		289,00	
Draft	17,50		18,00	
Type	G. sólido		G. sólido	
Real draft on entry or exit	17,50		18,00	

2.1. GENERAL CONDITIONS

2.1.1. LOCATION

PORT OF SAN CIBRAO

Length	7° 27' W
latitude	43° 42' N

2.1.2. RÉGIMEN DE VIENTOS

Prevailing	NE-NW
Dominant	NE-SW

2.1.3. RÉGIMEN DE TEMPORALES EN AGUAS PROFUNDAS O TEMPORALES TEÓRICOS

Based on recorded data: Significant wave height with 50 year return period

2.1.4. TIDES

Maximum tidal range	4,59m
LLW height against port zero	0,00m
HHW height against port zero	4,59m

2.1.5. HARBOUR ENTRANCE**2.1.5.1. ENTRANCE CHANNEL**

Position	E
Width	200 m
Length	2300 m
LLW depth	17 m
Sea bed	Arena

2.1.5.2. PORT ENTRANCE

Position	EW
Width	270 m
LLW depth	20 m
Maximum recorded current	4,5 nudos

2.1.5.3. TUGBOAT ASSISTANCE FOR HARBOUR ENTRY AND EXIT

Vessel lengths

2.1.5.4. LARGEST SHIP TO ENTER DURING THE YEAR

Características	Mayor eslora		Mayor calado	
	Zona 1	Zona 2	Zona 1	Zona 2
Name	IRON BRANDYN		IRON BRANDYN	
Nationality	I. Marshall		I. Marshall	
G.T.	42.887		42.887	
T.P.M.	82.769		82.769	
Length	228.99		228.99	
Draft	14.43		14.43	
Type	G. solido		G. solido	
Real draft on entry or exit	14.43		14.43	

2.1.6. WATER AREAS (Hectares)

2.1.6.1. ZONE 1

Situation	Outer harbour (Ha)	QUAYS			Total (Ha)
		Commercial	Fishing	Others	
Port of Ferrol	0,00	126,72	-	1.856,21	1982,93
Port of San Cibrao		42,00	-	-	42,00
TOTAL ZONE 1	0	168,72	0	1856,21	2024,93

2.1.6.2. ZONE 2

Situation	Entrande	Anchorage	Others	Total
Port of Ferrol	290,54	0,00	466,80	757,34
Port of San Cibrao	-	-	-	-
TOTAL ZONE 2	290,54	0	466,80	757,34

2.2. TRADE FACILITIES**2.2.1. QUAYS AND BERTHS****2.2.1.1. QUAY CLASSIFICATION**

Nome	Length (m)	Soaked (m)	Depth (m)	Employments
Service				
Nuevo Muelle dock	271	14	25	Solid bulk special facilities
Espigñón Exterior dock	229,2	9	40	General cargo
Dock head	47,4	6,5	12,7	Misc.
Interior dock head	109,9	6,5	9,7	Misc.
Fernández Ladreda	454,5	12,5	75	Polyvalent
Fernández Ladreda	273,1	8	70	Polyvalent
Fernández Ladreda	85	6	42	Polyvalent
Cerramiento Norte dock	216	10	165	Polyvalent
Dock head Ro-Ro ramp	12	9	30	Ro-Ro traffic
Dock head Ro-Ro ramp	12	10	27,1	Ro-Ro traffic
Exterior Principal port	49,8	Variable	94,5	Solid bulks
Exterior Principal port	154,4	20	94,5	Solid bulks
Exterior Principal port	206	20	451,5	Solid bulks
Exterior Principal port	795,2	20	451,5	Polyvalent
Exterior Principal port	303,6	20	235,2	Polyvalent
Exterior port Auxiliary Wharf	73,7	17,5	60	Polyvalent
Exterior port Auxiliary Wharf	74,1	10	60	Polyvalent
Exterior port I Hammer	70	15	11	Boats and you will help
Exterior port I Hammer	37,5	Variable	11	Boats and you will help
Fishing docks	145,9	3,5	6	Fishing
Passenger docks	71,1	2,5	10	Passengers
Others	700,2	0-3,5	6	Smaller vessels
Darsena Curuxeiras floating jetties				
Leisure and recreation	636	1,0-3,5	6,0-8,0	Sports and leisure vessels
Fishing	316	1,0-3,5	6,0-8,0	Fishing vessels
A Graña floating jetties	552	2,5-8,0	6,0-8,0	Sports and leisure vessels
TOTAL SERVICE	5.895,60			
Private				
Navantia Fene n 2	220	5	-	
Navantia Fene n 2	55	5	-	Metal sheeting unloading quaySmall
Navantia F pantalán	245	7	-	vessels
Navantia Fene n 4	160	5	-	Fittings
Navantia Fene n 5	145	3	-	Repairs
Navantia Fene n 6	300	7	-	Wharf of coat. Boats
Navantia Fene n 7	150	7	-	Fittings
Navantia Fene n 8	30	5	-	Fittings
Navantia Fene n 9	400	7	-	Dock. Smaller vessels
Navantia Fene n 10	555	7	-	Fittings
Navantia Fene n 11	300	11,2	-	Liquid bulk quay
Navantia Fene n 12	540	14	-	Liquid bulk quay
Forestal del Atlántico Regasificadora del Noroeste	255	14	-	Reganosa quay
Navantia Ferrol. M-9	270	11	30	Repairs and fittings
Navantia Ferrol. M-10	480	11	30	Repairs and fittings
Navantia Ferrol. M-11	396	11	30	Repairs and fittings
Navantia Ferrol. M-12	480	11	30	Repairs and fittings
Navantia Ferrol. M-12	120	11	25	Repairs and fittings
Navantia Ferrol. M-13	400	12	30	Repairs and fittings
Navantia Ferrol. M-14	125	16	-	Liquid bulk quay
SAN CIBRAO				
Principal quay	234	17/14	0	Bulk and general cargo
Auxiliary quay	88	7	0	Bulk and general cargo
TOTAL PRIVATE	5.948,00			
TOTAL	11.843,60			

Atraques ro-ro	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Graneles Sólidos sin inst. esp.	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Graneles Sólidos por inst. esp.	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Graneles líquidos	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Polivalentes	234,00	0,00	0,00	88,00	0,00	322,00	0,00
Pasajeros	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Other quays							
Pesca	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Armamento, reparación y desguace	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Varios	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Total private	234,00	0,00	0,00	88,00	0,00	322,00	0,00
Total del Servicio más de particulares	234,00	0,00	0,00	88,00	0,00	322,00	0,00
Total Port Authority							
Total service	2.415,70	302,10	514,30	794,30	0,00	4.026,40	1.869,20
Total private	1.554,00	2.046,00	0,00	1.738,00	465,00	5.803,00	145,00
Total del Servicio más de particulares	3.969,70	2.348,10	514,30	2.532,30	465,00	9.829,40	2.014,20

2.2.2. LAND AND STORAGE AREAS (sq. m)

Dock	Classification	Storage units			Road	Others	Total
		Outdoor	Covered and open	Enclosed			
Port of Ferrol							
Service							
Espigón Exterior dock	Quay	4.168,00			7.359,00	6.455,00	17.982,00
Fernández Ladreda quay	Quay	43.583,00			7.359,00	31.017,00	81.959,00
Muelle Cerramiento Norte del Fernández Ladreda	Quay	52.640,00		6.766,00		16.699,00	69.339,00
New Quay	Quay	16.087,00			24.338,00	10.541,00	50.966,00
Fernández Ladreda interior					17.695,00	11.483,00	29.178,00
Curuxeiras Dock					7.684,00	16.442,00	24.126,00
Port enclosure exterior		1.658,00			15.265,00	71.602,00	88.525,00
Private							
Fernández Ladreda quay	Quay	1.172,00		21.484,00			21.484,00
New Quay	Quay	19.015,00				5.250,00	24.265,00
Outther harbour							
Service							
Quay	Quay	508.671,00			80.174,00	304.443,00	893.288,00
Control of accesses					8.293,00		8.293,00
Private							
In quay	Quay	199.344,00		9.217,00			208.561,00
In Dike	Quay	4872,00					4.872,00
Ría de Ferrol							
Service							
A Graña						27.414,00	27.414,00
A Cabana						27.090,00	27.090,00
A Malata						35.158,00	35.158,00
Caranza						42.611,00	42.611,00
Perlió-Fene						30.927,00	30.927,00
Xubia-Narón						40.543,00	40.543,00
Prioriño Chico-Cariño						173.624,00	173.624,00
As Pías						3.582,00	3.582,00
Private							
A Cabana						12.323,00	12.323,00
A Malata						175.188,00	175.188,00
Caranza						6.063,00	6.063,00
Perlió-Fene						706.165,00	706.165,00
Mugardos						130.736,00	130.736,00
Narón						97.675,00	97.675,00
Port of San Cibrao							
						765.483,00	765.483,00
TOTAL		850.038,00		30.701,00	168.167,00	2.748.514,00	3.797.420,00

2.2.3. STORAGE UNITS, COLD STORE AND ICE FACTORIES

No data

2.2.4. PASSENGER TERMINALS

No data

2.2.5. FISHING FACILITIES

Type of facilities	Location	Surface area (m ²)
FERROL'S INLET		
Fish warehouses	Jetty Dock	426
Fishing industry facilities	Jetty Dock	570
PORT OF SAN CIBRAO	No data	

2.2.6. BUILDING AND FACILITIES FOR PUBLIC USAGE

Location	Owner	Usage	Characteristics
Port of Ferrol			
Curuxeiras dock	Port Authority	Offices	4 plantas. 839,16 m ²
Curuxeiras dock	Port Authority	Extensión of the office forecast	3 plantas, 625 m ²
Curuxeiras dock	Port Authority	Nuevo Yate Café Bar	1 planta. 178,43 m ²
Curuxeiras dock P	Port Authority	Caseta Café Bar	1 planta. 92,65 m ²
Curuxeiras dock	Port Authority	Tourist Information Point	1 planta. 49 m ²
Curuxeiras dock	Repsol	Diesel pump	1 planta. 12,53 m ²
Road No. 1	Dir. Gral. Marina Mercante	Capitanía Marítima	2 plantas, 1.173 m ²
Alta del Puerto Road	Instituto Social de La Marina	Casa del Mar	2 plantas. 987 m ²
Port Entrance	Port Authority	Huts (2 Units)	1 planta. 2x16 m ²
Main Road	Antón Martín Shipping, S. L.	Weighbridge	1 planta. 6,30 m ²
Main Road	Port Authority	Storage unit	1 planta. 77,93 m ²
Road No. 3	Port Authority	Workshops	1 planta. 814,11 m ²
Road No. 3	Port Authority	Garage	1 planta. 195,13 m ²
Road No. 3	Port Authority	Staff social centre	1 planta. 141,53 m ²
Road No. 3	Port Authority	Car park	748,67 m ²
Main Road	Port Authority	Harbour Master's Office/Stevedores Office	3 plantas. 556,48 m ²
Main Road	Pérez Torres y Cía.	Offices	2 plantas. 500,00 m ²
calle N ^o 1	Dirección General de la Marina Mercante	Capitanía Marítima	2 plantas, 1.173 m ²
Road No. 4	Port Authority	Miscellaneous and Civil Guard	3 plantas. 953,61 m ²
Road No. 1	Port Authority	Exhibition room, changing rooms and Border Police	1 planta. 392,00 m ²
Espigón Exterior dock	Port Authority	Service Coordination Centre	3 plantas. 763,37 m ²
Fernández Ladreda dock	Port Authority	Transformation Centre 1	1 planta. 62,94 m ²
Fernández Ladreda dock	Port Authority	Transformation Centre 2	1 planta. 26,21 m ²
Nuevo Muelle dock	Port Authority	Transformation Centre	1 planta. 22,90 m ²
Nuevo Muelle dock	Endesa	Weighbridge	1 planta. 30,40 m ²
Outer Harbour	Port Authority	Center of Coordination of Services	4 plantas, 920,85 m ²
Outer Harbour	Port Authority	Control of accesses	1 planta 179,90 m ²
Prioriño	Port Authority	Interpretive Center and building Multiuses	2 plantas 571,47 m ²
Outer Harbour	Chamber of Trade	Building of Multiple Uses	3 plantas 3.546 m ²
Port of San Cibrao			
Port	Economy Ministry	Customs and excise	40 m ²
Port	Alumina Española, S. A.	Offices	80 m ²
Port	Alumina Española, S. A.	Changing rooms	100 m ²
Port	Alumina Española, S. A.	Storeroom	50 m ²
Port	Alumina Española, S. A.	Workshop	100 m ²
Puerto Exterior			
Cabo Prioriño	Port Authority	Interpretative Center	2 plantas, 571,47 m ²
Dique de Abrigo	Port Authority	Center of Coordination of Services	4 plantas, 920,85 m ²
Acceso	Port Authority	Control of accesses	1 planta 179,90 m ²
Cabo Prioriño	Port Authority	Interpretive Center and building Multiuses	2 plantas 571,47 m ²
Explanada 2 ^a Fase	Cámara de Comercio	Building of Multiple Uses	3 plantas 3.546 m ²
Cabo Prioriño	Port Authority	Batería Punta Viñas	1.109,41 m ²
Cabo Prioriño	Port Authority	Batería Cabo Prioriño	2.393,86 m ²

2.2.7. BREAKWATERS AND SEA WALLS

Denomination	Length (m)	Characteristics
FERROL INLET Outer Harbour Breakwater	1.067	Wall with protective layer of blocks
PORT OF SAN CIBRAO North Wall	935	Wall with protective layer of dolos and blocks
South Wall	1.130	Wall with protective layer of dolos and blocks

2.2.8. MAP SHOWING LOCATION OF LIGHTHOUSES AND BEACONS

[No data]

2.2.9. LIST OF LIGHTHOUSES AND BEACONS

Nº in lighthouse register	Name and position	Description	Colour	Characteristics	Range in miles
RIBADEO INLET					
02725	Isla Pancha.(Siren)	White cylindrical tower. Black bands	White	Gp D (3+1) B 20s	21
02750	2nd approach buoy 205º (pre)	White tower. Red diamond	Red	Rp R 0,6 s	3
02751	2nd approach buoy 205º (post)	White rectangular base	Red	Oc R 2 s	3
02753	Castrelius Headland	Green cylindrical tower	Green and White	Gp D (4) BV	5
02754	Los Santos Bridge Pillar (port)	Port bridge pillar	Red	Gp D (4) R 11 s	4
02756	Los Santos Bridge Pillar (port)	Starboard bridge pillar	Green	Gp D (2) V 7s	4
02762	Porcillan Quay. Starboard side	Green post on white and green column	Green	DV 5s	3
02764	Porcillan Quay. Port side	Red post on W/G cylindrical column	Red	DR 5s	1
02766	Mirasol Quay. Starboard side	Green post on W/G column	Green	Gp D (2) V 7s	1
02770	02770 Porcillan Quay. Port side	Red post on W/R cylindrical column	Red	Gp D (2) R 7 s	1
02772	North end of Mirasol Quay	Green post on W/G column	Green	Gp D (3) V9s	1
RINLO					
02775	Wall end	Green post on W/G column	Green	GpD(3) V 9s	3
FOZ INLET					
02810	End of sand contentionbreakwater	Post	Green	Ct V 1s	3
BURELA					
02830	Piedra Burela	Black tower with yellow band (East)	White	Gp Ct (3) B 10 s	10
02840	End of sea wall	Green column	Red and green	Gp D (2) Rv	5
02850	End of hammer section	Green tower	Green	Gp D (3) V	3
02852	Commercial Dock, exterior	Green tower with central red band	Green	GpD(2+1)V 15s	1
02855	Contradique. Extr. SE	Post red white	Red	GpD(3)R 9s	1
02857	Martillo. Ang. Interior	Post red white	Red	GpD(4)R 11s	1
02859	Dique. Muelle. Tacón	Post green white	Green	DV 5s	1
SAN CIBRAO					
02870	Atalaya Point	White cylindrical tower with black rim	White	Gp D (5) B 20s	20
02880	Direction light	White turret. Red diamond	Red and white	Dir Ct RB	5
02890	Anxuela Island. Far wall	White column with green band	Green	DV 3s	3
02900	Angulo Quay	Red column	Red	Gp D (2) R	3
ALUMINIA ESPAÑOLA PORT					
02910	N203º55' navigation channel	White cylindrical tower with red bands	White	Gp D (2) B 6s	3
02911	N203º55'.P.A 475	White cylindrical tower with red bands	White	Oc B 6s	3
02920	Buoy under Baixa	Card. S	White	Gp Ct (6) B+DL 15s	2
02925	Buoy to NW	Card. W.	White	Gp Ct (9) B15s	3
02930	E273º14' approach channe	White cylindrical tower with red bands	White	Gp D (2) B 6s	3
02931	E273º 14' Post.A275m. approach channel	White cylindrical tower with red bands	White	Oc B 6s	3
02940	End of north wall	Pyramid structure on octagonal prism	Green and white	Gp D (2) VB 8s	6
02942	End of south wall	Exterior side cone	Green and white	DV 4s	5
02945	End of south wall	Metal turret on grey column	Red	Gp D (3) R 8s	6
02947	Buoy	Port side cylinder	Red	DR 4s	5
02955	L-1 Buoy	Mc Esp. spike	Yellow	DA	2
02965	L-5 Buoy	Mc Esp. spike	Yellow	DA	2
02970	Sea faarm buoy	Mc Esp. spike	Yellow	Ct A	1
02975	Submerged buoy	Mc Esp. turret	Yellow	DA 10s	2
02990	Punta Roncadoira	White cylindrical tower	White	D8 7,5s	21

VIVERO INLET					
03010	Lighthouse point	Red turret	Red	DR 5s	7
03020	Socastro Point	Green turret	Green	DV 5s	7
CILLERO					
03030	Puntal Point. End of sea wall	Red port side column	Red	Gp D (2) R 7s	5
03032	End of hammer section	Red port side column	Red	Gp D (3) R 9s	1
03034	End of southern hammer sections	Cylinder	Green	Gp D (2+1) V 21s	3
03036	River Landrove channel	Green starboard column	Green	Gp D (2) V 7s	1
VIVERO					
03038	End of sea wall	Green starboard column	Green	Gp D (3) V 9s	1
03038.5	Bocana. A babor	red post	Red	GpD(4)R 11s	1
03040	ODAS 7003 buoy	Yellow lenticular with superstructure	Yellow	Gp Ct (5) A 20s	3
BARQUERO PORT					
03060	Coelleira Island	Cone shaped grey stone tower	White	Gp D (4) B 24s	7
PUERTO DE BARES					
03065	End of sea wall	Green point	Green	Gp D (2) V 7s	3
03070	Punta del Castro	Tower troncocone white	White	GpD(2)B 7s	5
03080	Punta de la Barra	Tower troncocone white	w/r/g	DBRV 3s	5
VICEDO					
03085	North end of wall	Red post on R/W turret	Red	Gp D (4) R 11 s	5
03087	South end of wall	Green post of W/G turret	Green	Gp D (4) V 11 s	3
03087.5	End of floating jetty	Red metal post	Red	DR 5 s	1
BARQUERO PORT					
03088	End of sea wall	Red metal post	Red	Gp D (3) R	5
03089	E Outer harbour wall	Green metal post	Green	Gp D (3) V	3
03090	W Outer harbour wall	Green metal post	Green	Gp D (4) V	1
03100	Estaca de Bares Headland	Octagonal tower and building	White	Gp D (2) B 7,5 s	25
03110	Siren, A 150 m al 345º de la 03100 DGPS	-	-	Mo (B) 60 s	10
ESPASANTE					
03125	Piedras Lixeiras buoy	W turret	White	Gp Ct (9) B 15 s	5
03130	End of sea wall	Red turret	Red	DR 5 s	3
03135	End of outer harbour wall	Green turret	Green	DV 5 s	3
SANTA MARTA DE ORTIGUEIRA PORT					
03138	Muelle pesquero. Extremo S	Red tower	Red	CtR 1s	1
03140	Extreme counter dike	Red cylindrical tower	Red	Gp D (4) R 11s	3
03142	Dike I Shelter End	Green cylindrical tower	Green	Gp D (4) V 11s	5
CARIÑO					
03150	End of breakwater	Green and white cylindrical tower	Green	DV 2 s	3
03151	SW end of wall	Green metal post	Green	Gp D (3) V	3
03153	N. angle of quay attached to sea wall	Green metal post	Green	DV 6s	1
03160	Cape Ortegal	Red and white cylindrical tower	White	OcB 8 s	18
03170	Candelaria Point	Octagonal tower and building	White	Gp D (3+1) B 24s	21

FALTA LA TRADUCCIÓN DE LOS APARTADOS 03038.5, 03070, 03080 Y 03138

CEDEIRA INLET					
03190	Punta Promontorio	white hexagonal tower	White	Gp OC (4) B 10 s	10
03192	Punta Sarridal	red cylindrical tower	white and red	Oc BR 6 s	10
03195	Piedra de Media Mar	white truncated cone tower	White	Gp D (2) B 5 s	5
CEDEIRA PORT					
03200	End of sea wall.	Red cylindrical tower	Red	Gp D (2) R 7 s	4
03201	Quay attached to sea wall	Post	Red	Gp D (3) R	1
03210	Frouxeira Point	Concrete prism tower	White	Gp D (5) B 15 s	20
03220	Cape Prior	Hexagonal stone tower and building	White	Gp D (1+2) B 15 s	22
03225	Boya ODAS	yellow buoy	Yellow	GpCt(5)A 20 s	-
03235	Castro Point	White hexagonal tower	White	Gp D (2) B 7 s	8
FERROL INLET					
03240	Cape Prioriño Chico	White octagonal tower and building	White	DB 5 s	23
03241.5	Boya ODAS	yellow buoy	Yellow	GpD(5)A 20s	3
03242	End of sea wall	Red tower with hut	Red	Gp Ct (9) B 15 s	5
03245	End of sea wall hammer section	Red tower with hut	Red	DR 5s	7
03245.1	End of sea wall hammer section	Red tower with hut	Red	Gp D (2) R 7s	3
03250	San Cristóbal Defence Batteries	White trococonical tower	White and Red	FVBR	5
03260	085° 25' approach at S Martin Point	White tower	White	DB 1,5 s	3
03261	085° 25' approach at S.Martin point	White tower	White	Oc B 4 s	3
03270	Muela del Segañó buoy	Starboard turret	Green	DV 2 s	5
03272	San Carlos buoy	Port turret.	Red	Gp D (3) R 9 s	3
03274	San Martin buoy	Starboard turret	Green	Gp D (2) V 7 s	3
03280	San Felipe buoy	Port turret.	Red	Gp D (4) R 10 s	3
03290	La Palma buoy	Starboard turret.	Green	Gp D (3) V 9 s	3
03300	La Palma Castle	Stone tower and building	White	Gp Oc (1+2) B 7 s	5
03305	Redonda point buoy	Starboard turret	Green	Gp D(4) V 10 s	3
03310	Pereiro buoy	Port turret	Red	DR 5 s	3
03320	Vispon buoy	Port turret	Red	Gp D (2) R 7 s	3
03330	Piteira Point breakwater buoy	Starboard spike	Green	DV 5 s	3
MUGARDOS PORT					
03335	Eastern end of sea wall quay	Green and white tower	Green	CtV 1 s	3
03335.5	Dique flotante. Extremo	red and white post	Red	CtR 1s	1
03337	Far end of Levante quay	Red and white tower	Red	CtR 1 s	1
03338	Dique flotante. Extremo E	green and white post	Green	CtV 1s	1
LA GRAÑA					
03340	NE Berth. La Graña Oil Quay	Metal post	Red	Gp D (3) R 9 s	1
03345	SW. Berth La Graña Oil Quay	Metal post	Red	Gp d(4) R 11 s	1
03355	South end. La Graña breakwater	Red column	Red	DR 5 s	1
03359	SW angle. New Quay	Red column	Red	Gp D (2+1) R 12 s	3
03360	SE angle. New Quay	Red column	Red	Gp D (3) R 9 s	1
03363	End of F. Ladreda. Quay	Green column	Green	DV 5 s	3
03365	Duque de Alba	White pyramid	White	Gp D(2)B 7 s	1
03375	W end of Desgasification Plant	Green post	Green	Ct V	1
03385	E end of Desgasification	Green post	Green	Ct V	1
03395	Concepción Arenal Quay	Red column	Red	Gp D (4) R 11 s	3
03400	Arsenal at Asta del Parque	Port cylinder	Red	Gp D (2+1) R 12 s	3
03410	Arsenal at Martillo Point	Red column	Red	DR 5 s	1
03420	End of breakwater. Quay no. 1	Green column	Green	Oc V 2,5 s	1
03430	End of quay no. 2	Green trococonical tower/red band	Green	Gp D (2+1) V 12 s	3
03450	End of Commercial Dock	Trococonical tower	Green	Gp D (2) V 7 s	1
03452	Far end of Caranza breakwater	Green cylindrical tower	Green	CtV 1 s	1
03455	Buoy 1 Izar Fener Shipyards	De Espeque La. Er.	Green	Gp D (4) V 10 s	1
03457	Buoy 2 Izar Fener Shipyards	De Espeque La. Br.	Red	Gp D (2) R 7 s	1

03460	Buoy 3 Izar Fener Shipyards	De Espeque Mc. Esp.	Yellow	Gp D (4) A 11 s	1
03462	Buoy 4 Izar Fener Shipyards	De Espeque La. Br.	Red	Gp D (3) R 9 s	1
03470	Quay no. 7 (End of hammer section)	Grey lattice tower	Green	Gp D (2) V 7 s	3
03475	Quay no. 10	Grey lattice tower	Green	Gp D (2+1) V 12 s	3
03485	Quay nº11 (Penedo) N. Angle	Grey lattice tower	Green	DV 5 s	3
ARES-BETANZOS INGLET					
03488	End of sea wall	Red cylindrical tower	Red	Gp D (3) R 9 s	5
03488.1	Muelle espigón. Extr.	post red and white	Red	GpD(4)R 11s	3
03488.2	Dique flotante. Extremo E	post green with red band	Green	GpD(2+1)V 15s	3
03488.21	Dique flotante. Extremo W	post red and white	Red	DR 5s	1
03488.3	Límite canal dragado. Boya E	green cone buoy	Green	GpD(4)R 11s	1
03488.4	Límite canal dragado. Boya W	green cone buoy	Green	DV 5s	1
03488.8	Pantalán de hormigón. Extr.	yellow post	Yellow	DA 5s	1
FISH-PONDS FERROL B MOURON					
03489	Shellfish bed Vertex C buoy	Yellow buoy	Yellow	DA	3
03489.1	Shellfish bed Vertex C buoy	Yellow buoy	Yellow	DA	3
03528	Cabañas Beach Breakwater	Octagonal turret	Red	Gp D (3) R 9 s	3

2.3. INDIRECT SERVICES (technical-nautical)

2.3.1. TUG SERVICES

No data

2.3.2. VESSEL MOORING AND UNMOORING

No data

2.3.3. PILOTAGE

No data

2.4. VESSEL FACILITIES**2.4.1. DOCKS****2.4.1.1. DRY DOCKS**

Location	Ownere	Length (m)	Width (m)	Depth with Reference to Port zero	Capacity (Tm)
FERROL					
Ferrol	Arsenal militar (D1)	145	16/27	10,85	15.000
Ferrol	Navantia R. Ferrol (D2)	205	26	10,99	25.000
Ferrol	Navantia R. Ferrol (D3)	335	52	13,87	230.000
Fene	Navantia R. Ferrol (D4)	155	24	7,50	20.000
Fene	Navantia R. Ferrol (D5)	265	38	10,50	80.000
S. CIBRAO					

2.4.1.2. FLOATING DOCKS

No data

2.4.2. SLIPWAYS

Location	Owner	Nº of equal ramps	Ramp length (m)	Width (m)	Gradient %	Max. Depth (m)	Max. Vessel Tonnage
FERROL							
La Graña	Astafersa	1	150	28	5%	4,00	300
La Graña	Cocimar	2	85	11,50			
S. CIBRAO							

2.4.3. SHIPYARDS

Location	Owner	Nº of slips	Slip lengths	Slip widths (m)
FERROL				
Ferrol	Navantia Ferrol	1	201	33
Ferrol	Navantia Ferrol	1	230	43
Ferrol	Navantia Ferrol	1	320	53
Perlio-fene	Navantia Fene	1	338	58
Perlio-Fene	Navantia Fene	1	338	49
La Graña	Astafersa	3	80	12
SAN CIBRAO				

2.4.4. VESSEL SUPPLY SERVICES

Supply type	Location	Nº of supply pnts	Capacity per point and hour	Quay capacity per hour	Supplier
FERROL					
Service quay					
Water	F. Ladreda quay	28	20 t - 30 t	70 t	Autor. Port.
Water	Dock	8	20 t - 30 t	70 t	Autor. Port.
Water	Cerramiento Norte F. Ladreda dock	8	20 t - 30 t	70 t	Autor. Port.
Water	Breakwater head	8	15 t - 20 t	60 t	Autor. Port.
Water	Morro del Espigón	1	15 t - 20 t	60 t	Autor. Port.
Water	Curuxeiras dock	19	15 t - 20 t	60 t	Autor. Port.
Water	Outer Harbour	24	20 t - 30 t	80 t	Autor. Port.
Electricity	Breakwater head	8	80 kw/380v	3.200 kw a 380 v	Autor. Port.
Electricity	F. Ladreda dock	37	80 kw/380v	3.200 kw a 380 v	Autor. Port.
Electricity	Cerramiento norte Fernández Ladreda dock	6	80 kw/380v	3.200 kw a 380 v	Autor. Port.
Electricity	Outer Harbour	10	80kw/400v	3.200 kw a 400 v	Autor. Port.
Private quays					
Water	Mooring jetty	1	15 t	15 t	Forest. Atlá.
Gasoil	Mooring jetty	1	300 t	300 t	Forest. Atlá.
Fuel oil	Mooring jetty	1	1.000 t	1.000 t	Forest. Atlá.
S. CIBRAO					
Water	Quays	5	30 t	100 t	

2.5. DOCKSIDE CARGO HANDLING EQUIPMENT

2.5.1. CRANES

2.5.1.1. QUAYS CRANES

Location	Owner	Nº	Type	Make	Energy	Strength	Height	Load capacity	Year
FERROL									
Service Docks									
Ladreda	P.T.Maritima	1	Portico	LHM1080VG		19 tn			
Ladreda	P.T.Maritima	2	Portico	Macosa	Elect	12 tn	25,60	40/150	1981
Ladreda	P.T.Maritima	1	Portico	Macosa	Elect	16 tn	28,60	40/250	1988
Ladreda	P.T.Maritima	1	Portico	Macosa	Elect	20/30tn	28,60	40/250	1988
Esp. Ext	COP	2	Autopropul	Macosa	Elect	12,00	25,60	40/150	1981
Private Docks									
Muelle 2	Navantia	1	Cigüeña	Elyma	Elect	25,00	49,50		
M. 7 y 8	Navantia	2	Cigüeña	Erandio	Elect	60,00	41,50		
M. 10	Navantia	1	Cigüeña	Elyma	Elect	100,00	57,50		
M. 11	Navantia	1	Cigüeña	Elyma	Elect	80,00	55,20		
M. 12	Navantia	1	Cigüeña	Macosa	Elect	25,00	49,00		
Dique 1	Navantia	1	Cigüeña	Macosa	Elect	10,00	35,00		
Dique 2	Navantia	1	Cigüeña	Macosa	Elect	25,00	39,00		
Muelle 12	Forestal	1	Torre	Imenasa	Elect	3/125	17,00		
M. 9	Navantia	2	Cigüeña	Elyma/Man		60/30	44		1976
M. 10	Navantia	2	Cigüeña	Elyma/Man		25/4	44		1976
M. 11	Navantia	1	Cigüeña	Elyma/Man		25/4	44		1976
M. 12	Navantia	2	Cigüeña	Elyma/Man		25/4	44		1976
M. 14	Navantia	2	Cigüeña	Elyma/Man		25/5	44		1976
CIBRAO									
Auxiliar	Alumina E.	1		Imenasa	Elect	5,00	20,00	100	1980

2.5.1.2. VEHICLE CRANES

Location	Owner	Nº	Type	Make	Energy	Strenght	Height	Load capacity	year
Ladreda	P.T.Maritima	1	Automovil	LHM400		104,00			
Ladreda	TMGA	2	Autopropul	Gottwald					
Pto. Ext	COP	1	Automovil	LHM500					
Pto.Ext.	P.T.Maritima	1	Automovil	LHM500					

2.5.1.3. NUMBER OF CRANES. SUMMARY

Type	Service	Privately owned	Total
FERROL OF PORT			
Portal:			
Up to 6 Tm		0	0
Between 7 and 12 Tm		4	4
Between 13 and 16 Tm		1	1
Over 16 Tm		2	2
Total no. of portal cranes		7	7
Vehicle cranes		5	5
Other crane types		18	18
TOTAL		30	30
SAN CIBRAO OF PORT			
Portal:			
Up to 6 Tm			
Between 7 and 12 Tm			
Between 13 and 16 Tm			
Over 16 Tm			
Total no. of portal cranes			
Vehicle cranes		1	1
Other crane types		1	1
TOTAL			

2.5.2. SPECIAL LOADING AND UNLOADING FACILITIES

Location	Owner	Year of construction	Characteristic
FERROL OF PORT			
New Dock	ENDESA	1994	Continuous coal unloader. Designed for vessels with a load capacity between 60.000 t 100.000 dwt Maximum unloading capacity of 2.300 t/h.
Fdez. Ladreda Quay	Tudela Veguín	1965	Cement pipe unloading. Silo capacity 4.000 t. Efficiency: 200 t/h. (according to vessel)
Fdez. Ladreda Quay	Tudela Veguín	1966	Cement pipe unloading. Silo capacity 2.800t. Efficiency: 200 t/h. (according to vessel)
Loading/unloading jetty	Forestal del Atlántico	1977-2002	Installation of pipes, valves and pumps for loading/unloading
SAN CIBRAO OF PORT			
Main Berth	Alúmina Aluminio		Mobile unloading of Bauxite and Cook. Rate 1.350 t/h.
Main Berth	Alúmina Aluminio		Mobile unloading of Alumina. Rate 1.200 t/h.
Main Berth	Alúmina Aluminio		Unloading arm and 16" pipes for fuel-oil
Auxiliary Berth	Alúmina Aluminio		Fixed Alumina loader. Rate 600 t/h.
Auxiliary Berth	Alúmina Aluminio		8" pipe for unloading caustic soda.

2.5.3. RAILWAY ROLLING STOCK

{No data}

2.5.4. AUXILIARY LOADING, UNLOADING AND TRANSPORT MATERIAL

Clase de material	Propietario	Nº	Energía que emplea	Características
FERROL				
Grip trucks	P.T. Maritima	5		(tug-mater)
Conveyor belt	P.T. Maritima	2	Electricity	400/1500 t/h.
Carretilla	P.T. Maritima	1	Mechanical	Hyster
Fork lift truck	O. Portuarias Ferrol	1		Lancerboss G2512 - 25tm
Fork lift truck	O.P. Ferrol	1		4.500 kg
Fork lift truck	O.P. Ferrol	1		LINDE 4.500 kg
Fork lift truck	O.P. Ferrol	1		KOMATSU 2500 kg
Fork lift truck	TMGA	1		KALMAR DB-52-1.200
Fork lift truck	TMGA	1		HYSTER H50
Fork lift truck	TMGA	1		HYSTER 4.00 XL
Bulk stacker crane	Autoridad Portuaria	1		25.000 , 5.000 y 3.000 kgs
Bulk stacker crane	O.P. Ferrol	2		
Tractor trailer	O.P. Ferrol	1		
Semi-trailer	O.P. Ferrol	1		
Semi-trailer platform	O.P. Ferrol	1		
Loading belt	O.P. Ferrol	1		
Conveyor belt	P.T. Maritima	1	Electricity	400/1500 tn/hr
Elevators	P.T. Maritima	1	Mechanical	Grua de 32 tons
Cabeza tractora	P.T. Maritima	2	Mechanical	Peromax
Semi-trailer	A. Maritima Finisterre		Mechanical	Capacidad 1.000 l.
Buckets	P.T. Maritima	1	Mechanical	10,5 m ³
Buckets	P.T. Maritima	2	Mechanical	8,5 m ³
Buckets	P.T. Maritima	2	Mechanical	9,5 m ³
Buckets	P.T. Maritima	1	Mechanical	25 m ³
Buckets	P.T. Maritima	1	Mechanical	34 m ³
Elevators	P.T. Maritima	1	Gas oil	Linde H-40
Elevators	P.T. Maritima	14	Gas oil	Linde H-45
Elevators	P.T. Maritima	3	Gas oil	Linde H-50
Elevators	P.T. Maritima	1	Gas oil	Linde H-70
Elevators	P.T. Maritima	5	Gas oil	Linde H-80
Elevators	P.T. Maritima	1	Gas oil	Hyter 3t
Elevators	C.O.P.	4	Gas oil	Linde H-45
Elevators	C.O.P.	1	Gas oil	Linde H-60
Elevators	C.O.P.	1	Gas oil	Hyster 3.00
Elevators	C.O.P.	1	Gas oil	Linde H7D
Mafi Trailers	P.T. Maritima	7		
Loading shovel	O.P. Ferrol	1	Gas oil	Cartepillar 950
Loading shovel	O.P. Ferrol	1	Gas oil	Case W-30
Loading shovel	P.T. Maritima	3	Gas oil	Cartepillar 950
Loading shovel	P.T. Maritima	1	Gas oil	Cartepillar 950 B
Loading shovel	P.T. Maritima	1	Gas oil	Cartepillar 966E
Loading shovel	P.T. Maritima	1	Gas oil	Cartepillar 970 F
Loading shovel	P.T. Maritima	1	Gas oil	Cartepillar 966 D

Loading shovel	P.T. Maritima	2	Gas oil	Carterpillar 980H
Loading shovel	P.T. Maritima	2	Gas oil	Carterpillar 980G
Loading shovel	P.T. Maritima	2	Gas oil	Volvo 180 E
Loading shovel	P.T. Maritima	1	Gas oil	Volvo 220 E
Loading shovel	P.T. Maritima	1	Gas oil	Cat 972H
Loading shovel	P.T. Maritima	1	Gas oil	Carterpillar 936F
			Gas oil	
Loading shovel	Fernández Aguilar	2		Carterpillar 930
Loading shovel	Fernández Aguilar	6	Mechanical	Carterpillar 966 D
Loading shovel	Fernández Aguilar	3	Elec-Hidr	Carterpillar 980
			Mechanical	
Digger	P.T. Maritima	1	-	MH6
Digger	P.T. Maritima	2	Gas oil	FUCHS
			Gas oil	
Reach-Stacker	P.T. Maritima	1		Linde
Reach Stacker	P.T. Maritima	3	Gas oil	Kalmar
			Gas oil	
Wood loader	P.T. Maritima	34	Mechanical	
Loading robot	P.T. Maritima	3	Elect-Hidra	3 m ³
Loading robot	P.T. Maritima	4	Mechanical	8,5 m ³
Loading robot	P.T. Maritima	1	Mechanical	17 m ³
Hooper	O.P. Ferrol	1		100 m ³ ,
Hooper	A. M. Finisterre	1		100m ³
SAN CIBRAO				
Fork lift trucks	Alúmina Española	9		4/6 t
Loading shovels	Varios	3		4 m
Portable belt	Varios	1		150 t/h
Trucks	O.P. Ferrol	6		Plataformas 25 t

2.5.5. OTHER AUXILIARY MATERIALS

Material type	Owner	Nº	Type of energy used	Characteristics
FERROL				
Aspirator	P.T. Maritima	2		Tennat
Sweeper / Aspirator	P.T. Maritima	2	Electricity	Piqueria
Sweeper	P.T. Maritima	1	Gas oil	Dulevo 120DL
Weighbridge	Antón Martín	1	Electricity	60 t
Weighbridge	ENDESA	2	Electricity	60 t / 60 t
Fork lift truck	Port Authority	1	Gas oil	Komatsu. 3 t
Fork lift trucks	Port Authority	4	Electricity	Fenwick. Carga 3
Bagging belt	P.T. Maritima	1	Electricity	7 mts.
Dumper/ Hopper	Port Authority	1	Gas oil	-
Sweeper box	P.T. Maritima	1	Hidraulic	Aplec
SAN CIBRAO				
Sin contenido				

FALTA TRADUCIR Cajón barredor E hidráulico

2.6. FLOATING EQUIPMENT

2.6.1. DREDGES

{No data}

2.6.4. FLOATING CRANES

Nome	Owner	Energy used	Vessel characteristics	Operating characteristics			Year of construction
				Load capacity (tm)	Scope (m)	Height above Sea level	
FERROL Y-382	Navy	Gas-oil	Eslora 22,50m. Manga 15,20m. Puntual 1,60m.	30 tp	-	-	1954
Frouxeira	Renosa	Diésel-eléctrica	Eslora 25m. Manga 15m. Puntual 2,3m. Calado 1,8m.	90 t	5	18,90	1976
S. CIBRAO No data							

2.6.5. OTHER AUXILIARY FLOATING EQUIPMENT

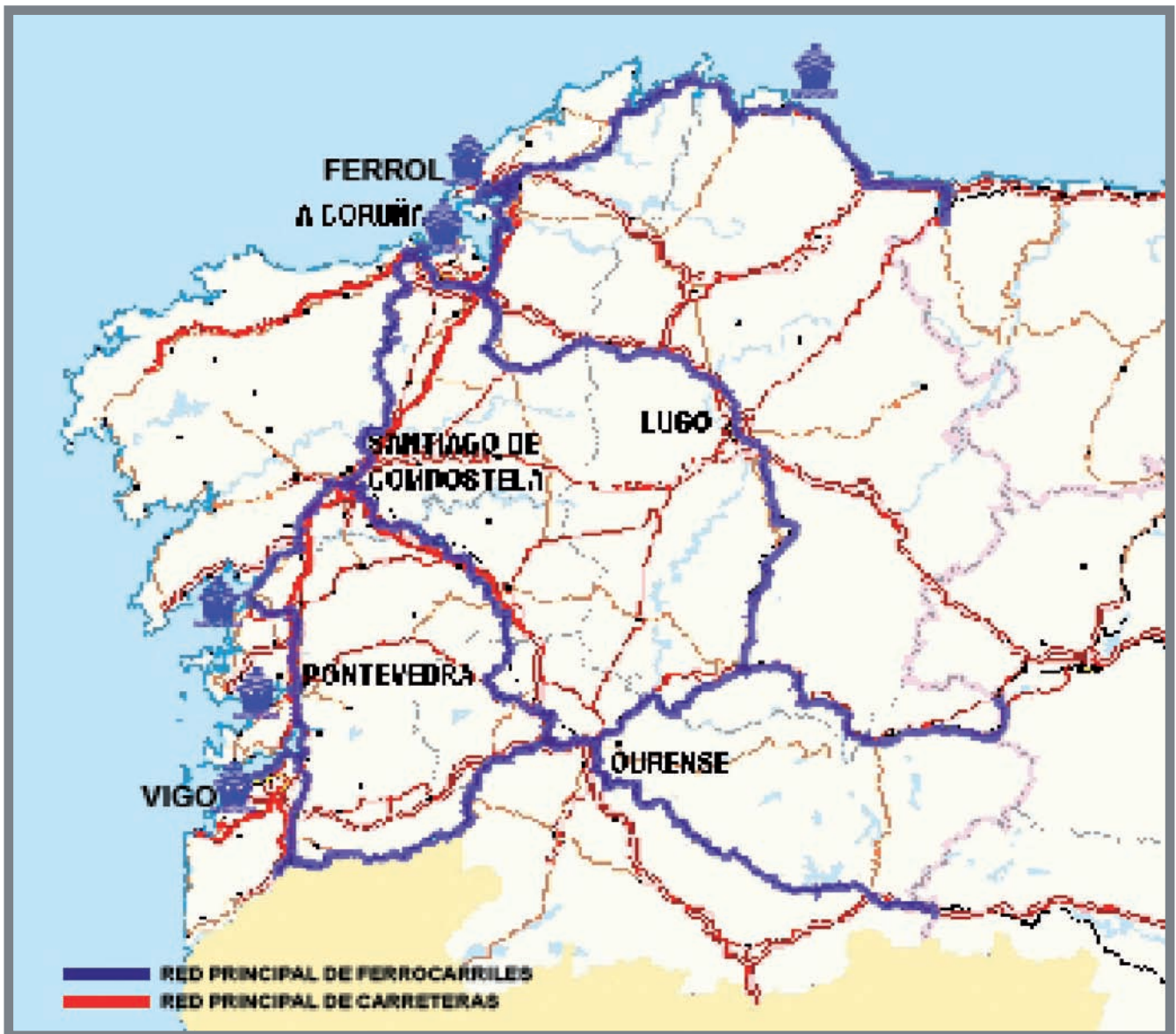
Nombre	Owner	Energy used	Characteristic			Year of const.
FERROL Tankers						
Y-251	Navy	500 t	Length 46,7 m.	Width 8,4	Draft 3,1	1980
Y-254	Navy	100 t	Length 27,2 m.	Width 6,2m	Draft 2,2	1981
Asunción Nieves	Port Authority	Motor	Length 8,06	Width 2,80	Draft 1,49	2004
S. CIBRAO No data	-					-

2.7. LAND ACCESS AND COMMUNICATIONS

2.7.1. LAND ACCESS AND INTERIOR COMMUNICATIONS



2.7.2. INTERNAL COMMUNICATIONS MAP



2.8. BRIEF DESCRIPTION OF FACILITIES FOR SPECIFIC TRAFFIC

PUERTO DE FERROL

The following facilities for specific traffic detailed below are available:

ENDESA

Continuous unloader for unloading coal for the electric power plant in As Pontes, designed for vessels with capacity between 6,000 and 100,000 dwt.

Its maximum unload capacity is 2,300 t/h and a daily 30,000 tonne discharge, an average laytime of 1,250 t/h.

Coal, handled by this unloader in appropriate environmental conditions, is evacuated from the hold by a bucket elevator which feeds a spiral chute located 35m over the coal collection level. The spiral chute unloads the material at the top of the boom. The hopper central system of the unloader, which receives the material from the boom conveyor, discharges it from the portal conveyor, where it passes through a chute system to the stacker belt, which unloads the cargo into a coal stockyard.

TUDELA VEGUÍN, S.A.

Total storage capacity in silos is 6,800 tonnes. Cement discharge is made through a pipe with a time performance of 200 tonnes according to ship.

FORESTAL DEL ATLÁNTICO, S.A.

Charging/Discharging of chemical products and hydrocarbons is carried out in the liquid bulk dock. The link between vessel and shore pipe is made of flexible hoses of different diameters placed in a three-tonne tower crane located on the central platform of the dock.

Facilities include the following pipes for charging /discharging products: Glues 6", Methanol 8", Diesel 8"-10",

Gasoline 8", Fuel Oil 24", Slops 8", Bunker Diesel 6", Bunker Fuel-Oil 10", Air 3", Drinking Water 2" and Water P.C.I.4".

PUERTO DE SAN CIBRAO

ALUMINA ESPAÑOLA, S.A.

BAUXITE AND PETROLEUM COKE DISCHARGE

It takes place in the main berth via a mobile unloader with a discharge capacity of 1,350 tonnes/hour with a conveyor belt to the bauxite warehouse or to the petroleum coke silos. Hoisting capacity is 36 t and work cycle is 45 seconds.

DISCHARGE OF LIQUIDS

Fuel-oil is discharged in the main berth by means of a discharge arm with a 8" line and a 16" pipe. Facilities are provided with a Booster pump which engages on its own if discharge pressure falls below 2,5 Kg/cm². Caustic soda is discharged in the auxiliary berth through a 6" hose and a 8" pipe that connects to the storage tanks.

ALUMINA LOADING

It takes place in the berths. In the main one, it is carried out through a mobile loader with a load capacity of 1,200 t/hour and in the auxiliary berth, via a fixed loader with a capacity of 800 t/hour for special ships. Transport system is performed by conveyor belts from the storage silos.

ALUMINA HYDRATE LOADING

It is carried out with a mobile conveyor belt. Loading rate is approximately 120 t/hour.

ALUMINUM LOADING

It takes place in the auxiliary berth via two gantry cranes with a maximum hoisting capacity of 6t. In addition, there are mobile cranes and forklifts of various capacities.