Pressure vessels manufacturer since 1968
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DF Calderería Pesada

A Global Company

An international company with over 150 years of experience, specialized in turnkey projects for sectors undergoing major growth.

DF is a multinational company specializing in the execution of turnkey projects for the Energy, Mining & Handling and Oil & Gas sectors. The company also provides specialized services such as erection, commissioning, operation and maintenance for electrical and industrial facilities and has its own capital goods manufacturing workshops.

DF was set up in 1858 and has been quoted on the Madrid Stock Market since 1905. The headquarters are located in Gijón in the north of Spain and the company employs over 2,000 professionals.

It operates worldwide and is present in numerous countries in Europe, America, Oceania, Asia and Africa. It has permanent offices in Mexico, Brazil, Colombia, Venezuela, Argentina, Chile, Peru, India, China, Indonesia, Saudi Arabia, Dubai and Abu Dhabi.

1858
The company Duro y Cía. is set up to go into the business of manufacturing iron products in Asturias.

1900
Transformation into Sociedad Metalúrgica Duro Felguera (SMDF).

1905
The company starts trading on the Madrid stock exchange.

1966-1967
The company converts into an industrial equipment manufacturer.

1970
Start of international business and development towards industrial construction and assembly.

2009
Opening of the new headquarters in Gijón where the company’s registered address is transferred.
DF Calderería Pesada

Founded in 1968, DFCP has become one of the most reliable pressure vessels manufacturing companies in the world.

DF Calderería Pesada (DFCP) is located in Gijón (Asturias), by the northern coast of Spain. Backed up by its wide experience in the manufacturing of large complex pressure vessels, DFCP is capable of effectively meeting Customer’s needs, putting at their disposal its strong expertise.

Furthermore, DFCP is certified according to the main international Codes and standards and by mayor technologists, for both petrochemical and nuclear projects.

DFCP’s business activities include the following areas:

- Refining
- Oil&Gas
- Petrochemical
- Chemical
- Nuclear
- Energy
- Liquid gas storage (LPG, LNG)
- Iron and steel works
- Off-shore / On-shore

DFCP’s facilities in Gijón, Spain.
Facilities

Equipped with state-of-the-art manufacturing technology, DFCP is able to cope with the most demanding market requirements.

Our facilities over 76,000m² and only 1.5km from the Port of Gijón are equipped with state-of-the-art manufacturing technologies and provide direct access to the sea through their own dock.

Our main manufacturing capabilities can be summarized as follows:

- Plate bending machines up to 330mm thick
- Hydraulic presses up to 4,000 tons
- Narrow gap welding up to 350mm thick
- Roller beds supporting up to 1,200 tons
- Automatic flush grinding, edge preparation and back gouging
- Rotating tables supporting up to 120 tons
- High efficiency overlay welding processes (SAW/ESW)
- Vertical lathe up to 10m diameter
- Heat treatment facility and modular furnace (adaptable to any size) for PWHT, ISR, DHT
- Painting facility
- Self-Propelled Modular Transporters (SPMTs)
- Own dock and barge
Our in-house engineering capabilities include mechanical design and finite element analysis according to international Codes and standards (ASME Code Section VIII, Divisions 1 & 2; ASME Code Section III, Division 1; PD5500; CODAP; AD-Merkblätter, Stoomwezen, TEMA, GOST, EEMUA, ...).

DFCP is strongly committed to investing in Research & Development. The aim of our R&D activities is to continuously strengthen DFCP’s technological capabilities, and to anticipate market needs.

With more than 45 years developing projects worldwide, DFCP has gained a large experience in forming, welding and heat treating both conventional and alloyed steels, providing our Customers with the knowledge of our welding engineers, as well as the skills of our qualified welders and welding operators.

DFCP’s Quality and Environmental Management System ensures product quality from receipt of raw materials to the shipment of the finished product, while linking environmental management with day-to-day planning and operation.

Thus, DFCP’s management systems meet the highest quality standards specified by the most stringent international codes.

- ISO 9001:2008
- ISO 14001:2004
- OHSAS 18001:2007
- N Certificate (N-3646) ASME III (Nuclear)
- NPT Certificate (N-3758) ASME III (Nuclear)
- NS Certificate (N-3881) ASME III (Nuclear)
- U Certificate (U-20976) ASME VIII Div.1
- U2 Certificate (U2-25364) ASME VIII Div.2
- S Certificate (S-25363) ASME I
- NB (ID 5125) National Board
- R Certificate (R-2325) National Board
- PED 97/23/CE Mod H1

The use of off-line photogrammetric techniques specifically developed by DFCP for the dimensional control along the production process provides us with a complete record of the equipment dimensions in several manufacturing stages in a non-contact, flexible, and accurate way. This technique may also be used at site to determine equipment deformations during in-service life by comparison with records taken during shop manufacturing.

The extensive use by DFCP of the most up-to-date NDE methods, like TOFD and Phased Array ultrasonic inspection, allows us to provide our Customers with the highest quality and reliability delivered on time.
Assuming the highest market requirements

- LARGE EQUIPMENT
- STORAGE MOUNDED BULLETS
- HEAVY WALL & SPECIAL REACTORS
- COKE DRUMS
- FLUID CATALYTIC CRACKING UNITS (FCCs)
- UNIT PACKAGES
- MODULAR CONSTRUCTION
- NUCLEAR COMPONENTS

Business Lines
Large Equipment

- No size limitation

DFCP’s workshop capacities make possible the fabrication of large equipment in one piece without size limitations. In addition, the use of SPMTs eliminates height and load capacity restrictions, providing a safe and reliable alternative to the use of large cranes and enabling smooth deliveries through our dock and barge.

Thus, DFCP specializes in the manufacturing of fully dressed columns, including assembly of internals, external insulation, ladders and platforms, electric connections, instrumentation, etc., which substantially reduces field work.

For those projects where size limits are imposed by conditions such as road transport limitations to access inland locations, DFCP develops the necessary engineering and procedures to enable modularization and final completion at site.
Storage Mounded Bullets

- Proven experience in design, shop fabrication and site installation of Storage Mounded Bullets

Horizontal mounded bullets for storage of liquefied gases or combustible liquids provide an intrinsically passive and safe environment, eliminating risks such as high temperature in case of fire or dynamic pressure from nearby explosion.

DFCP has proven experience in carrying out mechanical design and shop fabrication of this type of equipment according to internationally recognised Codes and guides (PD 5500, ASME Section VIII, EEMUA, F. Mang,...), and delivering LPG mounded bullets ranging up to 8,500m³ as per Customers’ requirement, with more than 100m length and 10m diameter.

The scope of these projects usually includes mechanical design, engineering, supply, fabrication, testing, transportation, field erection and installation.
Heavy Wall & Special Reactors

- Long experience in Chrome-molybdenum Vanadium-enhanced heavy wall Reactors

This business line comprises reactors for refineries, chemical, petrochemical and fertilizers industry, such as HDT, HDC, Platforming, Aromax or Powerformer Reactors, Ammonia Converters, Urea Reactors, etc.

DFCP is able to provide the world-leading technologists and main Customers with the necessary capabilities for the successful design and completion of this kind of complex fabrications.

The use of innovative welding technologies and manufacturing processes developed by our engineers has enabled us to achieve excellence in the manufacturing of equipment in a wide variety of materials and thicknesses.

DFCP is one of the few companies in the world capable to successfully fabricate and deliver Chrome-molybdenum Vanadium-enhanced heavy wall Reactors. DFCP also holds references on the manufacturing of vessels over 180mm, with explosion bonded or roll bonded plate, and overlay welded with stainless steel or nickel-base alloys...
Coke Drums

More than 40 references in Coke Drums manufacturing with all different licensors

Coke Drums are critical components in refineries. Their severe operation conditions involve cyclic heating and cooling that cause thermal stresses to the drum walls and can lead to through-wall cracking.

DFCP is qualified by all different licensors for the design and manufacture of Coke Drums and has supplied more than 40 Coke Drums so far, which demonstrate the feasibility of DFCP’s in-house developed procedures and the reliability as manufacturer of this critical equipment.

DFCP provides wide experience in the fatigue analysis of Coke Drums under the severe thermal cycles to ascertain and optimize their life span, as well as in the development of reliable manufacturing processes to ensure shape control and the required quality of the weld.
Fluid Catalytic Cracking Units (FCCs)

More than 100 references in FCC reactors and regenerators, including revamps and site works

DFCP is one of the most experienced manufacturers of FCC units in the world. Over the years DFCP has gathered expertise not only in manufacturing reactors and regenerators in our facilities, including cyclones and refractory installation, but also in field erection, extensive revampings and specialized repair works during scheduled plant shutdowns.

DFCP is also wide experienced in stress analysis of these units under mechanical and thermal loads under design conditions, and also during transportation, handling and lifting operations, in order to evaluate eventual risks.
Unit Packages

- Process design, installation of internals
- and instrumentation

DFCP can provide process design, equipment fabrication as well as installation of internals and instrumentation. Holding the responsibility for the full scope of supply (design process, procurement of materials, manufacturing process and final inspection activities) provides considerable advantages to the project. Final site assembly of the Unit Package does not require additional trial fit up or provision of templates. The Unit Packages are ready for final connection at site.

This concept drastically reduces the necessary means and resources at site (manpower, ancillary equipment, etc.) and avoids interface problems, minimizing the project overall execution time.

DFCP has supplied more than 100 different units under this concept: Test, LP/HP or FWKO (Free Water Knock-Out) Separators, Electrostatic Coalescers, LP Expander Outlet Drums, Desalters, Degassers, Dehydrators,...
Modular Construction

- Design, fabrication and delivery of large-scale modules

The modularization approach is most indicated in order to gain cost and schedule advantages, and at the same time to reduce risks associated to site assembly and installation.

DFCP’s facilities with direct access to the sea, combined with the additional working areas available at the nearby Port of Gijón, provide our Customers with the necessary means to fabricate and deliver large-scale modules in Oil&Gas and other industrial segments.

Completed skids and modules are shipped to site fully installed, including insulation, cable trays, instruments, cabinets, junction boxes, heat tracing,...
Nuclear Components

- N-type Certificate Holder according to ASME Code Section III, Division 1

DFCP currently holds N, NPT and NS Certificates of Authorization of the American Society of Mechanical Engineers (ASME). This certification signifies DFCP capability to meet the highest quality requirements of the nuclear market.

Taking advantage of its extensive experience in the manufacturing of large and complex vessels, DFCP can provide its Customers with the skills and competences in both design and manufacturing required for the production of nuclear facility components, such as:

- Class 1, 2, 3 & MC Vessels
- Class 1, 2 & 3 Piping Systems
- Class 2 & 3 Storage Tanks
- Class CS Core Support structures
- Class 1, 2 & 3 Shop Assembly

Since the 1990s, DFCP has developed projects for several International Scientific Large Facilities involving the fabrication of large complex equipment. DFCP has available strong and diverse experience in the most advanced manufacturing and inspection techniques, applied to components in exotic materials and large sizes, allowing us to meet the requirements of such projects.
Health, Safety and Environment

Health and safety issues are fully integrated into DFCP’s day-to-day operations and management in order to develop and maintain a healthy and safe environment.

DFCP strives to eliminate any foreseeable hazards to prevent incidents. In order to achieve this goal, we conduct periodic reviews of the potential impact of our activities on the environment, as well as on the health and safety of our employees and visitors.

We are committed to the environmental sustainability of our manufacturing processes and actively pursue energy efficiency measures in production and consumption of energy as part of our overall strategy.

DFCP is focused on the development and integration in its production processes of high quality manufacturing technologies and advanced materials. The implementation of sustainable manufacturing tools and methodologies provides the capability of efficiently producing and delivering high quality products. Furthermore, the development of innovative manufacturing processes enables the use of new materials with enhanced mechanical properties, optimizing sizes and weights, and generating remarkable advantages in production, handling and installation of heavy equipment.

Energy audits are carried out to assess appropriate energy-saving measures and to develop our energy efficiency strategy. Special care is taken in conducting our business with respect for people and the environment, complying with all applicable regulatory requirements and industry best practices.

Geographical References

EUROPE
- Austria
- Belarus
- Belgium
- Bulgaria
- Croatia
- Czech Republic
- France
- Germany
- Ireland
- Lithuania
- Netherlands
- Norway
- Portugal
- Russia
- Serbia
- Spain
- Sweden
- Switzerland
- Turkey
- UK

NORTH AMERICA
- Canada
- Costa Rica
- Cuba
- Mexico
- Trinidad & Tobago
- USA
- Virgin Islands

SOUTH AMERICA
- Argentina
- Bolivia
- Brazil
- Chile
- Peru
- Venezuela

AFRICA
- Algeria
- Egypt
- Libya
- Nigeria
- South Africa

MIDDLE EAST
- Iran
- Israel
- Jordan
- Kuwait
- Oman
- Qatar
- Saudi Arabia
- UAE

ASIA & OCEANIA
- Australia
- Azerbaijan
- Bangladesh
- China
- India
- Indonesia
- Kazakhstan
- South Korea
- Thailand

Equipment manufactured and shipped to worldwide destinations

Health, Safety and Environment / Geographical References
DF Permanent Offices Worldwide

**SPAIN**
**Headquarters**
Parque Científico Tecnológico
C/ Ada Byron, 90
33203 Gijón, Asturias
Tel.: +34 985 199 000

dfcaldereria@durofelguera.com

**MEXICO**
**DURO FELGUERA, S.A.**
Moliere 13, piso 8°
Colonia Chapultepec Polanco
Delegación Miguel Hidalgo
México DF, CP 11560
Tel.: +52 55 36036570
dfmexico@durofelguera.com

**VENEZUELA**
**DURO FELGUERA, S.A.**
Av. Francisco de Miranda
Edif. Banco del Orinoco, piso 2
Oficina 2-D
Urb. La Floresta, Municipio Chacao
Caracas 1060
Tel.: +58 (0212) 285 0965
dfvenezuela@durofelguera.com

**BRAZIL**
**DURO FELGUERA, S.A.**
Rua da Quitanda nº 52, 11º andar
Rio de Janeiro, CEP: 20.011-030
Tel.: +55 21 2505 2600
dfbrasil@durofelguera.com

**ARGENTINA**
**DURO FELGUERA, S.A.**
Lola Mora 421, Torre I, Piso 7,
Oficina 701
Madero Harbour - Puerto Madero
C.A.B.A. C1107DDA
Buenos Aires
Tel.: +54 11 5245-8566
dfargentina@durofelguera.com

**COLOMBIA**
**DURO FELGUERA, S.A.**
Edificio Teleport Business Center
Calle 113 N°7-45 Torre B Ofic. 506
Bogotá
Tel.: +57-1-215-3752
dfcolombia@durofelguera.com

**CHINA**
**DURO FELGUERA, S.A.**
Suite 2001, Westgate Mall
1038 Nanjing Xi Lu
200041, Shanghai, P.R.
Tel.: +86 21 621 80301
dfchina@durofelguera.com

**INDONESIA**
**DURO FELGUERA, S.A.**
Ariobimo Sentral Building 3rd fl.
Jl. HR Rasuna Said Kav.X-2/5
Jakarta - 12950,
Tel.: +6221-5270737
dfindonesia@durofelguera.com

**MIDDLE EAST**
**SAUDI ARABIA**
**DURO FELGUERA SAUDI ARABIA LLC.**
GCH Business Centre at Fifth Floor,
AlFalak Building,
King Abdul Aziz Street
Al Khobar
dfksa@durofelguera.com

**UAE**
**DUBAI**
**DURO FELGUERA GULF GENERAL CONTRACTING, LLC. (ENERGY)**
Aspin Tower. Office 3504
Sheikh Zayed Road
dfuae@durofelguera.com

**ABU DHABI**
**DURO FELGUERA MIDDLE EAST GENERAL CONTRACTING LLC. (OIL & GAS)**
Gulf Business Center
Al Dharwish Building
dfuae@durofelguera.com

**PERU**
**DURO FELGUERA, S.A.**
Avenida Jorge Basadre 145
Edificio Basadre, Oficina 202
Distrito de San Isidro
CP: Lima 27
Tel.: +51 1242 1672
dfperu@durofelguera.com

**INDIA**
**DURO FELGUERA, S.A.**
3rd Floor, 10-50-24/A, Sravya Manor Siripuram, Visakhapatnam - 530 003
Andhra Pradesh
Tel.: +91 89 1255 8343/4
dfindia@durofelguera.com

**INDONESIA**
**DURO FELGUERA, S.A.**
Ariobimo Sentral Building 3rd fl.
Jl. HR Rasuna Said Kav.X-2/5
Jakarta - 12950,
Tel.: +6221-5270737
dfindonesia@durofelguera.com