# a global leader in engineering







**TECHNIP-COFLEXIP** 

technologies and construction services for oil and gas petrochemical and other industries

Annual Report 2001

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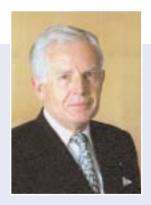
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## Message from the Chairman of the Supervisory Board

A great ambition presided over the formation of the group Technip-Coflexip at the end of 2001: the willingness, based on a strategy of growth, to unite the two "success stories" in the engineering and construction industry (particularly with regards to the oil service business). The pursuit of this goal, irrespective of the uncertainties of the markets served by the teams of the Group, will strengthen our shareholders in their resolve to support us.



Technip-Coflexip, of course, has the resources required by this ambition: a workforce with recognized know-how and dynamism, technologies constantly renewed and updated, assets that differentiate the Group's offering, regional bases corresponding to the specific needs of the clients.

The Group's fields of excellence are evolving rapidly. The competition leaves no room for complacency or mediocrity when carrying out the projects awarded to us. Under the leadership of the Management Board and its Chairman, the Group, as a whole, must demonstrate both imagination and rigor. It was in this spirit that the objectives for 2002, which you are aware of and which illustrate the ambition of this newly constituted Group, have been set. The Supervisory Board will fulfill its role in accompanying, within the framework of its supervisory responsibilities, the actions decided on by the Management Board.

We have accepted an exciting challenge. Backed by the traditions it has inherited and the image of efficiency and quality reflected in the recently completed projects throughout the world, the Group will be capable of meeting this challenge. On behalf of the Supervisory Board, I wish great success to the women and men who are at the core of our activities.

Pierre Marie VALENTIN

# Message from the Chairman of the Management Board

The year 2001 will remain as a turning point in the evolution of Technip, which became Technip-Coflexip at the end of the year following the merger with Coflexip, a world leader in deepwater construction. This merger, the fruitful outcome of the work carried out together with Pierre Marie Valentin over many months, has resulted in the formation of one of the foremost integrated groups in the fields of engineering, technologies and construction services for the oil industry. This Group ranks today as the number one in Europe and among the five world



leaders in its business, with recognized capabilities both in the oil and gas upstream sector (construction of platforms, pipelaying, subsea construction) and downstream sector (gas treatment, refining, onshore pipelines, petrochemicals), as well as in various industries not linked to the oil industry (chemicals, fertilizers, pharmaceuticals, electricity, hydrometallurgy, etc.).

Outstandingly, this merger took place without triggering cuts in the workforce, since it involved two companies that were not competitors, but rather remarkably complementary. This is, in my view, the best recipe for a successful merger, since the new Group offers to all its teams better prospects for development.

Nevertheless, we expect this merger to generate considerable synergies, first by achieving substantial savings on procurement costs and sales expenses, and then by opening the access to new markets, especially in deep water field developments in West Africa, Brazil and other regions in the world.

In financial terms, Technip-Coflexip recorded an increase in profits for the 10th consecutive year. From year to year, the Group's consolidated net income (before exceptional items and goodwill amortization) has increased 20%. There remains room for improvement in several areas: in addition to the mechanical effect which will result from the full consolidation of Coflexip on a full-year basis (compared to a single quarter in 2001), we are also targeting growth in the profitability of the Deepwater Division acquired from Aker Maritime early 2001, and in the profitability of the Industries Branch. Thus we have room to continue the growth recorded over these past years.

While the year 2002 appears for us as a year of transition and consolidation after our recent merger, the basic market trends remain favorable with, in the context of a strengthening of the world economic situation, an acceleration of developments in two of our principal markets: deep offshore and natural gas. During the first two months of the year 2002, the rhythm of order intake at Technip-Coflexip improved strongly compared to what we experienced in previous years, thus allowing us to look to the future with renewed confidence.

Please allow me to take this opportunity to thank the shareholders from Isis and Coflexip, who by their massive response to the share exchange offer last autumn made possible the constitution of the group Technip-Coflexip, as well as the shareholders from Technip who provided their support throughout the highs and lows of the oil and stock market situations. They can rest assured that the new group Technip-Coflexip will do everything possible to continue to meet their expectations.

Daniel VALOT

## Supervisory Board

Pierre Marie VALENTIN

Chairman

Michel LEVÊQUE

Vice Chairman

Roger CAIRNS
Miguel CAPARROS
Jean-Pierre CAPRON
Jacques DEYIRMENDJIAN
Jean-Pierre LAMOURE
Claude MANDIL
Roger MILGRIM
Rolf Erik ROLFSEN
Pierre VAILLAUD

#### Audit Committee

Pierre Marie VALENTIN

Chairman

Miguel CAPARROS Roger MILGRIM Bruno WEYMULLER

### Strategic Committee

Pierre Marie VALENTIN

**Bruno WEYMULLER** 

Chairman

Roger CAIRNS
Jean-Pierre CAPRON
Jacques DEYIRMENDJIAN
Jean-Pierre LAMOURE
Claude MANDIL
Pierre VAILLAUD

#### Remunerations and Nominations Committee

Jean-Pierre CAPRON

Chairman

Michel LEVÊQUE Rolf Erik ROLFSEN Pierre VAILLAUD Bruno WEYMULLER

## **Auditors**

Cabinet Barbier Frinault & Autres represented by: René PROGLIO

Titular auditor

Gilles PUISSOCHET

Alternate auditor

Claude CHARRON

Titular auditor

Laurent LEVESQUE

Alternate auditor

## Management Board



Jean DESEILLIGNY

Senior Executive Vice President, Business and Operations of the Onshore-Downstream Branch

#### Thomas EHRET

Vice Chairman of the Management Board and President of the Offshore Branch

#### **Daniel VALOT**

Chairman of the Management Board

#### **Daniel BURLIN**

President of the Onshore-Downstream Branch

## **Executive Committee**



Samson ALEV

Chairman and CEO of Technip France, Executive Vice President of West Europe - Russia - C.I.S. Onshore-Downstream Branch



Dave CASSIE

Executive Vice President North Sea Canada - Caspian, Offshore Branch



Anne DECRESSAC

Senior Vice President Human Resources and Communication



Svein EGGEN

Executive Vice President Atlantic Region, Offshore Branch



Nicola GRECO

C.E.O. of Technip Italy, Executive Vice President Southern Europe - Eastern Europe - Africa, Onshore-Downstream Branch



**Dominique HENRI** 

Senior Vice President, Strategy



Xavier JACOB Senior Vice President, Project Management/Technology



Leonello PARI Global Procurement Manager



Ivan RFPI UMA7 Senior Vice President,

Business and Operations of the Offshore Branch



Kevin WOOD

Executive Vice President, Alliances and Networks, Offshore Branch

## Management Committee



Frédéric DELORMEL Executive Vice President Brazil, Offshore Branch



Bruno de LESQUEN Managing Director of Technip France



Larry D.J. POPE

President and CEO of Technip USA, Executive Vice President Americas, Onshore-Downstream Branch



Bernard DITULLIO

President and CEO of Technip Malaysia Executive Vice President, Asia/Pacific,

Offshore and Onshore-Downstream Branches



Jean-Noël MEARY Chief Executive Officer, Industries Branch



Nello UCCELLETTI Executive Vice President Middle-East, Offshore and Onshore-Downstream Branches

## Profile





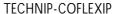
Resulting from the merger of two champions in their respective businesses, Technip-Coflexip is one of the most integrated groups providing engineering, technologies and construction services to the oil/gas and petrochemical industry worldwide. With over 40 years of experience in the design and construction of large industrial facilities, a wide range of state-of-the-art technologies and operational bases spread over the five continents, the Group is able to manage all aspects of major projects, from front end engineering design to turnkey delivery.

## For oil and gas, petrochemical and other industries

Technip-Coflexip's activity covers offshore and onshore field development, gas processing and liquefaction, refining, onshore pipelines and petrochemicals—which represent its core business. It is particularly well positioned in the offshore/deepwater area, backed by its own high-quality industrial assets dedicated to this business. It is also actively developing its activities in non-oil sectors such as fertilizers, chemicals, life sciences, power generation and other industries.

#### A world-class player

With a workforce of 18,000 people worldwide, and annual revenues of about 5 billion euros, Technip-Coflexip ranks among the 5 biggest full-service engineering and construction groups in the field of hydrocarbons and petrochemicals.



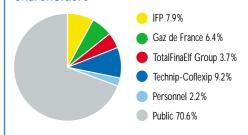
A limited company with a Management Board and a Supervisory Board

- Chairman of the Management Board Daniel VALOT
- Chairman of the Supervisory Board Pierre Marie VALENTIN

#### Listed on:

The New York Stock Exchange (NYSE:TKP)
The Paris Stock Exchange (EURONEXT: 13170)

#### **Shareholders**



- In-house workforce: 18,000 people worldwide
- Annual revenues: about 5 billion euros
- Main engineering centers: France, Italy, Germany, United Kingdom, Finland, Norway, The Netherlands, U.S.A., Brazil, Abu Dhabi, China, India, Malaysia and Australia.
- Manufacturing plants (flexible pipelines, umbilicals, R.O.V.s), construction yards and spoolbases:
   France, Brazil, United Kingdom, U.S.A., Norway, Finland and Azerbaijan.
- A fleet of 15 subsea construction and installation vessels.

#### Fields of activity

#### Offshore

- Field development in shallow and deep waters
- Manufacturing and supply of deepwater products (flexible and rigid pipelines, umbilicals, R.O.V.s, riser systems)
- Subsea pipelaying and construction
- Floaters, fixed platforms and topsides fabrication

#### Onshore and Downstream

- Gas treatment and liquefaction
- Oil refining (refining, hydrogen and sulfur units)
- Onshore pipelines
- Petrochemicals (ethylene, aromatics, olefins, polymers)

#### Industries and other

- Fertilizers
- · Chemicals, pyrotechnics
- Life sciences
- Metals
- Power generation
- Cement
- Manufacturing industries
- Buildings



## Full-range services from basic engineering to global solutions

Technip-Coflexip provides all or part of the services for basic and detail engineering, procurement, construction and project management, at optimized costs.

The Group has a long track record in implementing large turnkey contracts and arranging related international financing on behalf of its clients.

In particular, in the offshore segment, Technip-Coflexip is in a position to fulfill the expectations of operators wanting to entrust the largest possible range of services to a single contractor able to manage all aspects of a major field development.

The Group frequently works with partners of various nationalities and has developed an international shopping-around policy, notably through an e-procurement site (www.epc-business.com) which allows it to obtain the most competitive prices.

#### Strong technological expertise

Thanks to its highly-skilled process engineers and technicians, Technip-Coflexip has developed strong technological expertise, conceiving and implementing its own products, technologies and related proprietary equipment in the subsea and offshore areas (subsea pipelines, umbilicals, robotics, platforms), as well as in refining, gas, hydrogen, sulfur, ethylene, fertilizers and cement.

In addition, the Group has established close ties or exclusive alliances with major international licensors, notably in the field of petrochemicals.

## Quality, health, safety and the environment

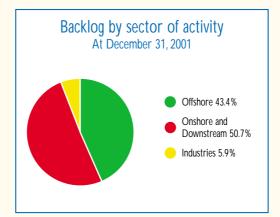
Quality, the health and safety of the personnel working on the job sites or in the industrial facilities built by Technip-Coflexip, as well as environmental protection are Technip-Coflexip's top priorities. These concerns are taken into account at the earliest stage when the facility is being designed and appropriate measures are applied strictly at each stage of project execution.



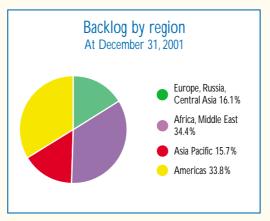
#### **Business** ethics

Technip-Coflexip's professional activities are ruled by a code of business ethics, which defines the principles regarding its teams' working relationship with all parties involved. The main guidelines of this code are a service-to-client oriented policy, backed by quality and professional excellence, the highest standards of honesty, integrity and fairness.









## Technip-Coflexip

## Financial Results





## The Group's financial results

The year 2001 was another very good year for Technip, which has become Technip-Coflexip. Its net income, before exceptional items and goodwill amortization charges, amounts to 176 million euros. This result, which consolidates Coflexip at 98.5% as of the 4th quarter of 2001, represents an increase of 19.7% compared to Technip's earnings in 2000. It is all the more outstanding since it reflects an increase in profits for the 10th consecutive year and it was achieved in what was quite a sluggish economic period for the whole of our industry.

Up by 19.3% compared to the previous year, revenues for 2001 amount to 3.546 billion euros. This increase comes mainly from the consolidation of Coflexip's revenues on a 98.5% basis in the 4th quarter of 2001.

The financial results are not directly comparable to 2000 earnings, mostly because of the significant change in scope of consolidation that occurred in October 2001 with the successful completion of Technip's friendly takeover of Coflexip. Prior to this takeover, the earnings of Coflexip were accounted for by Technip under the

equity method, reflecting the 29.4% stake held by Technip in Coflexip. Starting from the 4th quarter 2001, Coflexip is fully consolidated in the accounts of Technip, now called Technip-Coflexip.

For this reason, in the table on the following page:

- The first column displays the consolidated revenues and earnings of Technip-Coflexip, with Coflexip fully consolidated for the 4th quarter 2001.
- The next column refers to proforma Technip "standalone", that is as if Coflexip had remained accounted for at the 29.4% level using the equity method in the accounts of Technip during the full year 2001.
- The numbers in the Technip 2000 column include as of April 1, 2000, under the equity method, 29.7% of the net income of Coflexip.

In addition, no significant capital gain or loss was recorded in 2001, while both Technip and Coflexip had substantial capital gains in 2000, on the sale of stakes in, respectively, Cogema and Cal Dive.



#### Consolidated results

Amounts in millions of euros except per share data	Technip-Coflexip	Technip "stand- alone" Proforma	Technip
	2001		2000
Davanuas	2001	2001	2000
Revenues  Change compared to provious year (0/)	3,546.0	3,051.0	2,972.0
Change compared to previous year (%)	19.3 %	2.7%	6.8 %
Cost of Sales	(3,035.3)	(2,644.0)	(2,638.4)
SG & A	(226.3)	(184.0)	(134.7)
EBITDA (Earnings before interest, tax, depreciation	0044	0000	100.0
and amortization)	284.4	223.0	198.9
Change compared to previous year (%)	43.0 %	12.1 %	8.5 %
Fixed assets depreciation	(49.6)	(19.5)	(16.3)
EBITA (Earnings before interest, tax			
and amortization)	234.8	203.5	182.6
Change compared to previous year (%)	28.6 %	11.4 %	13.4 %
Goodwill amortization	(61.3)	(41.6)	(26.7)
EBIT (Earnings before interest and tax)	173.5	161.9	155.9
Change compared to previous year (%)	11.3 %	3.8%	2.9%
Net Financial Result	(6.5)	(0.5)	5.8
Exceptional Items	(6.6)	(6.6)	93.9
Equity Income of Investees	15.6	25.2	22.1
Minority Interest	(2.4)	(1.8)	(1.2)
Income taxes	(65.5)	(57.2)	(62.3)
Net Income	108.1	121.0	214.2
Exceptional Items	6.6	6.6	(93.9)
Goodwill amortization	61.3	41.6	26.7
Net Income (before exceptional items and goodwill	00	1110	2017
amortization charges)	176.0	169.2	147.0
Change compared to previous year (%)	19.7 %	15.1 %	20.3 %
Net Income Per Share (€)	4.26	N/A	12.85
Net Income Per ADS (1)	1.07	N/A	N/A
Net Income per share (before exceptional items and	6.93	N/A	8.82
goodwill amortization charges)	0.75	14//	0.02
Net Income per ADS (1) (before exceptional items and goodwill amortization charges)	1.73	N/A	N/A
Number of shares on a fully diluted basis at 31 December (2)	25,389,550	N/A	16,665,000



 <sup>(1)</sup> One ADS is equal to one fourth of one ordinary share.
 (2) Does not include the Technip shares held by ISIS (1,845,376), nor does it include the dilutive effect of the convertible bonds which were issued early 2002.

## Backlog (uncompleted part of contracts in force)

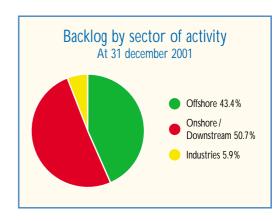
At December 31, 2001, the total backlog for Technip-Coflexip stood at 4,926 million euros, of which 1,887 million euros originated from Coflexip. At the end of 2000 the entities that make up today's Technip-Coflexip had together a backlog of 4,770 million euros, of which 3,410 million euros is attributable to Technip, 931 million euros to Coflexip, and 429 million euros to the Deepwater Division (acquired by Coflexip in early 2001).

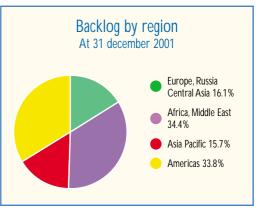
The backlog of the Onshore/Downstream and Industries Branch, at 31 December 2001, does not include several large projects for which contracts have been already signed but which, pending customary financing arrangements, have not yet entered into force, for a total value of 1.5 billion euros. The coming into force of these contracts is expected during 2002. This "pre-backlog" is significantly higher than in the two previous years, where it was limited to 0.7 billion euros to 0.8 billion euros.

For Coflexip, the backlog increase year on year was 22% for the SURF (Subsea, Umbilicals, Risers and Flowlines) business and 73% in the floaters business. This sharp increase in the floaters backlog was mainly driven by the upsurge of orders in new Spars in the Gulf of Mexico, which fully confirms the strategic interest of the floaters business acquired by Coflexip last year,

through the acquisition of the Deepwater Division.







#### Revenues

Revenues are up 19.3 % compared to 2000. This increase comes mainly from the consolidation of Coflexip on a 98.5 % basis for the 4th quarter of 2001.

For Technip on a stand-alone basis, growth in revenues was limited to 2.7 %: from 2,972 million euros in 2000 to 3,051 million euros in 2001. This moderate growth reflects the slowdown in order intake over the past two years, when the Company continued, in a highly competitive market, to focus on profits rather than volume.

Coflexip's revenues in 2001 amounted to 1,899 million euros, versus 1,065 million euros in 2000 (+78 %). This sharp increase comes primarily from the newly acquired Aker Maritime Deepwater Division (hereafter Deepwater Division). However, in the same period, the revenues of Coflexip excluding the Deepwater Division increased by 16%, demonstrating a solid increase in SURF (Subsea, Umbilicals, Risers and Flowlines) activities throughout the world, and more specifically in the Gulf of Mexico thanks to the successful introduction of the Deep Blue in that market and the synergies generated between the SURF business and the Deepwater Division.



## Operating income before depreciation / EBITDA

Consolidated earnings before interest, tax, depreciation and amortization (EBITDA) amounted to 284.4 million euros, up 43% compared to 2000.

EBITDA generated by Technip on a stand-alone basis grew from 198.9 million euros (6.7% of revenues) in 2000 to 223 million euros (7.3% of revenues) in 2001. This strong growth (up 12%, i.e. four times higher than the growth in revenues) is attributable to the successful completion of major contracts, such as SINCOR in Venezuela, MIDOR in Egypt or OGD-2 in Abu Dhabi, and to the continued turnaround of the business acquired from Mannesman in 1999.

EBITDA generated by Coflexip in 2001 amounted to 222.5 million euros (11.7% of revenues) compared to 203.8 million euros (19.1% of revenues) in 2000. This decrease in EBITDA margin is linked mainly to the Deepwater Division acquired early 2001, for which the EBITDA margin was negative (-0.5% of revenues) due notably to a non-recurring event described below, while the EBITDA margin of Coflexip excluding the Deepwater Division reached the level of 18.2%.

Two non-recurring items had a negative effect on Coflexip's earnings in 2001:

- A charge of 10.2 million euros (pre-tax) linked to specific expenses incurred by Coflexip in relation with the take-over bid launched by Technip in July 2001.

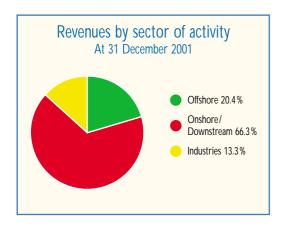
– A loss on the refurbishment of a drilling rig undertaken by the Finnish affiliate of the Deepwater Division. This loss comes to 27.3 million euros (pre-tax) as compared to the estimated amount, 30.7 million euros, indicated in the press release issued by Technip-Coflexip on 29 October 2001.

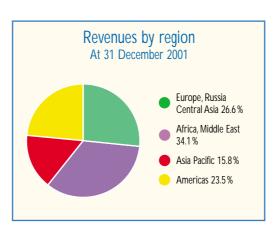
Without these two non-recurring items, EBITDA of Coflexip would have been about 260 million euros (13.7% of revenues).

For the full year 2001, the earnings of the Deepwater Division were affected not only by the above mentioned non-recurring loss, but also by the postponement of various floaters projects in the Gulf of Mexico and by a relatively low level of activity in its Newcastle and Corpus Christi yards.

Based on these facts, an exceptional amortization of 142.6 million euros has been recorded in the accounts of Coflexip in the fourth quarter on the goodwill of the Deepwater Division acquired early 2001. This item has no negative impact on Technip-Coflexip's income. As a result of purchase accounting mechanisms, the overall amount of acquisition goodwills in Technip-Coflexip remains unchanged at about 2.6 billion euros, which will generate an amortization charge of approximately 120 million euros per year on a full-year basis.







#### Financial Results

## Depreciation, capital expenditures and cash flow

• Depreciation charges came to 49.6 million euros i.e. 1.4% of revenues for 2001.

On a full year basis for Technip and Coflexip, combined capital expenditures came to 197.8 million euros, of which 178.8 million euros is attributable to Coflexip.

In 2002, management estimates that capital expenditures will total approximately 140 million euros. Capital expenditures for the Onshore/Downstream Branch and the Industries Branch should total 15 million euros to 20 million euros, whereas capital expenditures for the Offshore Branch are expected to come to 120 million euros.

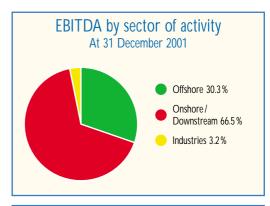
Cash flow generated in 2001 by Technip-Coflexip on a full year basis amounts to 320 million euros.

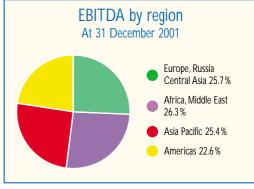
#### Goodwill amortization

In 2001, goodwill amortization charges amounted to 61.3 million euros.

#### Net financial result

For 2001, the financial result (net interest income plus foreign exchange gain/loss) amounted to a net charge of 6.5 million euros compared with a net income of 5.8 million euros for 2000. This is primarily due to the acquisition of Coflexip for which the company incurred new bank debt for which the interest payments came to 9.6 million euros for the period.





#### **Exceptional items**

No significant capital gains or losses were recorded in 2001.

In 2000 the following capital gains were recorded:

- A capital gain made on the sale of Cogema shares (69.9 million euros) and
- 29.7% of the capital gain made by Coflexip on the sale of Cal Dive shares in September 2000 (39.0 million euros).

#### **Taxes**

The effective tax rate for 2001 was 30%.

#### Net income

Net income of the Company, before exceptional items and goodwill amortization, is up by 19.7% over the previous year.

Had Technip continued to account for Coflexip under the equity method at the 29.4% level for the full year 2001, the net income of Technip (before exceptional items and goodwill amortization) would have amounted to 169.2 million euros, showing a progression of 15.1% over 2000. Without the impact of the non-recurring loss recorded by Coflexip on the drilling rig contract mentioned above, our target of 20% growth in earnings would have been met

Net income, after exceptional items and goodwill amortization, amounts to 108.1 million euros.



#### **Dividends**

The Management Board has proposed that the dividend be set at 3.30 euros per share, i.e. unchanged compared to last year. Given the significant increase in the number of shares, linked mainly to the exchange offers completed on Isis and Coflexip, and the fact that Coflexip was consolidated at 98.5% only in the fourth quarter, the pay-out ratio (the ratio of cash distribution to net income before extraordinary items and goodwill amortization) shows an exceptional increase to 48.9% compared to 34.6% in 2000.

In the future, it is the intention of the Management Board to set forth a dividend policy which will be a mix of the dividend policies followed by the former Technip and the former Coflexip.

#### Financial structure

Shareholders' equity of Technip-Coflexip amounts to some 2.2 billion euros at 31 December 2001, compared to 0.8 billion euros the year before. Total debt is 1.6 billion euros at the end of 2001, versus 0.2 billion euros at the end of 2000. The cash position of Technip-Coflexip stands at 0.8 billion euros at the end of 2001, compared to 0.6 billion euros at the end of 2000.

These changes are mostly related to the major acquisitions made during the past year (Coflexip's acquisition of the Deepwater Division early 2001, and Technip's acquisition of Coflexip and ISIS in October 2001).

At the end of 2001, the debt ratio of Technip-Coflexip (net debt/net debt  $_{+}$  shareholders' equity) stands at approximately 28 %.

## Parent company accounts at December 31, 2001

#### Income statement

At the year-end 2001, the net income of the company amounts to 95.7 million euros compared to 64 million euros at the year-end 2000. The main items are:

- A negative operating income of 3.4 million euros. This principally represents group management and administration expenses from which amounts reinvoiced to subsidiairies have been deducted.
- A positive financial income of 101.6 million euros. This mainly consists in dividends collected from subsidiaries for an amount of 138.6 million euros, from which have been deducted, on the one hand, the amortization of Coflexip's acquisition costs spread over 3 years for an amount of 5.4 million euros and, on the other hand, financial expenses linked to this acquisition for an amount of 33.5 million euros.

#### Balance sheet

Technip-Coflexip's shareholders' equity strongly increased during 2001, principally following the success of two public exchange offers on Coflexip and Isis, and one paid-in-cash offer.

Stock investments increased by 2,560.7 million euros following the purchase of Coflexip and Isis shares in October 2001. These acquisitions were financed by shareholders' capital for an amount of 32.2 million euros in capital, 1,531.4 million euros in premiums, and by a loan of 1,030 million euros (historical value).







## The year in review 2001



#### **JANUARY**

#### Corporate news

Coflexip Stena Offshore — in which Technip held nearly 30% of the capital at the time — finalizes the acquisition of Aker Maritime's Deepwater Division.

#### **FEBRUARY**

#### The Netherlands

DSM awards Technip the design and construction of a 300,000-ton-a-year polypropylene plant based on BP's gasphase Innovene technology, at Geleen.

#### **MARCH**

#### Irar

Technip wins a contract, worth 300 million euros, to design and build, using its proprietary technology, the world's largest ethylene steamcracker (1,400,000 tons/yr), which will be the core unit of the 10th Complex at Assaluyeh.

#### Brazil

Copebras awards Technip a turnkey contract, worth about \$100 million, for the design and construction of a phosphatic fertilizer plant at Catalao.

#### U.S.A.

Technip, in association with BE & K, is awarded, by Chevron Phillips Chemical and Solvay Polymers, the engineering, equipment supply and construction of a high-density polyethylene plant at Baytown, Texas.

#### France

EADS Airbus selects Technip, as leader of a consortium, to provide engineering services and project management of the Airbus superjumbo A380 assembly plant at Toulouse.

#### **APRIL**

#### Canada

Technip wins two contracts, valued together at \$125 million, for the design and construction of hydrogen units based on its own technology. The first unit, with a capacity of 200 MMSCFD (the world's largest single-train unit) will be built at Mildred Lake, Alberta, for Syncrude Canada. The second one, with a capacity of 40 MMSCFD, will be built at Regina, Saskatchewan, for Consumer's Cooperative Refineries.

#### MAY

#### Azerbaijan

BP awards Technip the front end engineering design (FEED) for the Shah Deniz offshore drilling and production facilities in the Caspian Sea. The design studies will carried out by Technip based on its TPG 500 concept for a self-installing fixed platform.

#### **JUNE**

#### Vietnam

Technip, in association with Samsung, is awarded, by Petrovietnam, a contract worth about 400 million euros for the turnkey design and construction of an ammonia/urea complex at Phu My.

#### rance

INCO selects the joint venture Technip/Bechtel to provide engineering, equipment and material procurement, construction supervision and project management for the nickel-cobalt complex at Goro, in New Caledonia.

#### Gulf of Mexico

Within the framework of the development of Nakika, SHELL awards Coflexip the leading-edge installation contract for infield flowlines and risers in the ultra deepwaters (1800 to 2100 meters) of the Mississipi Canyon.



#### JULY

#### Corporate news

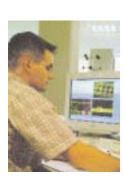
Technip launches two public purchase/ exchange offers on Coflexip and Isis. The Boards of Directors of Coflexip and Isis, voicing a favorable opinion on the offers, recommend that their shareholders subscribe to the offers.

#### Iran

Within the framework of their contract with SHELL Exploration for the development of Sorooz and Noroosh offshore oil fields (7 fixed platforms), NPCC/Naft Sazeh Qeshm select Technip as its partner to carry out the engineering and to participate in equipment procurement.

#### Norway

Norsk Hydro awards Coflexip an integrated project worth 80 million euros for flowlines and risers to be used in the development of Fram Vest (360 water depth) in the North Sea.



#### **AUGUST**

#### **United Arab Emirates**

Technip, in association with Al Jaber Energy Services, is awarded, by UAE Offsets Group, a turnkey project worth \$495 million for the construction of a 185-kilometer water pipeline from Fujaïrah to Abu Dhabi, a pipeline link to Sharjah, pumping stations, water storage tanks and associated facilities.

The new gas treatment facilities at Habshan, designed and constructed by Technip and Bechtel for Abu Dhabi National Oil Co, reach full capacity (one billion SCFD).

#### Nigeria

Coflexip is awarded a significant share of the mooring and installation package for the Bonga field (1100 meters waterdepth), operated by SHELL Nigeria Exploration and Production.

#### **SEPTEMBER**

#### Egypt

The MIDOR refinery at Alexandria—the biggest turnkey project ever designed and built entirely by Technip (\$1.2 billion) runs at more than 100% of it nominal capacity (100,000 barrels/day).



#### Gulf of Mexico

The new deepwater pipelay and subsea construction vessel "CSO Deep Blue" commences operations for the Williams Banjo/Seahawk project for the installation of the export pipelines, located in a waterdepth of 1100 meters, from the Boomvang and Nansen fields. Technip-Coflexip is awarded, by Williams, a major integrated contract for the export pipelines from Devils Tower field (1750 meters).

#### **OCTOBER**

#### Corporate news

Offers on Coflexip and Isis are successful: Technip, shareholder holding 98.36 % of Coflexip and 99.05 % of Isis, creates a world leader in engineering, technologies and implementation of oil and gas, petrochemical and industrial projects: "Technip-Coflexip".

#### Stock Exchange

Technip-Coflexip enters the Euronext 100 index, a market capitalization weighted index of the largest and most liquid stocks traded on the Paris, Amsterdam and Brussels Stock Exchanges. The Technip-Coflexip share is listed for the first time on the New York Stock Exchange on October 19.

#### Corporate news

Technip-Coflexip finalizes the acquisition of UTC Projetos y Consultoria (400 people), an engineering and construction firm based in Rio de Janeiro, specialized in the deepwater offshore sector.

Technip-Coflexip and the national oil and gas transportation company of Kazakhstan create a joint venture engineering and construction company "Technip Kazakhstan".

#### Qatar

Technip-Coflexip, in association with Chiyoda, is awarded by Qatargas a turnkey contract worth about 100 million euros for the expansion of the liquefied natural gas (LNG) plant at Ras Laffan.

#### **NOVEMBER**

#### Gulf of Mexico

Technip-Coflexip is awarded the engineering, supply and construction of the hull, mooring and riser systems of the Spar production platform for the Gunnison field, operated by Kerr-McGee.

#### Brunei

Brunei SHELL Petroleum awards Technip-Coflexip a turnkey contract for the first phase of development of the Egret offshore gas field.



#### **DECEMBER**

#### Iran

The 200-million-euro contract signed with NPC for the design and construction of the ethylene steamcracker for the 9th complex at Assaluyeh comes into force.

#### Venezuela

The construction of the extra-heavy crude processing facilities for the Sincor project—designed and built by Technip and its partners—is completed according to the contractual schedule, thus allowing TotalFinaElf to begin start-up operations at the complex, which will produce 184,000 barrels/day of light crude

#### Corporate news

Technip-Coflexip becomes a company with a Management Board and a Supervisory Board.





# Fields of activity Offshore

As a result of two successive acquisitions, that of Aker's Deepwater Division by Coflexip in January 2001 and of Coflexip by Technip in October 2001, Technip-Coflexip ranks as the number one in Europe and among the five world leaders for engineering, technologies and construction services to the oil industry. Combining the skills of these three components in the offshore sector broadened the offerings of the new group considerably and strengthened its industrial and construction assets. Today, Technip-Coflexip is one of the few groups able to provide at the lowest cost, either on an integrated or segmented basis, the near totality of services for offshore oil and gas production. Offshore activities represented approximately 43% of the Group's backlog on January 1, 2002.

Technip-Coflexip's Offshore Branch offers a wide range of products and technologies in the subsea area (subsea pipelines, umbilicals, riser systems and remotely operated vehicles). The Branch is equally well positioned to carry out subsea construction works, and it holds proprietary technologies for the fabrication of platforms, including the Spar, the type most commonly used in the Gulf of Mexico, and the TPG 500, a self-installed fixed platform suitable for shallow waters. In addition, Technip-Coflexip has the capabilities to design and construct FPSO units.

Technip-Coflexip has significant human and industrial resources of very high quality in the offshore area. The Group's industrial assets include flexible pipe manufacturing plants, umbilicals and remotely operated vehicles manufacturing units (in France, the United Kingdom, Brazil and the United States) as well as spoolbases and yards. Technip-Coflexip also has its own fleet of 15 vessels for pipelay and subsea construction.

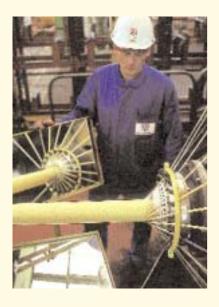




## The Offshore Branch's offerings

#### Flexible pipes

With almost 75 % of the market, Technip-Coflexip is the world leader in the field of flexible pipes. Production of flexible pipes in the Group's manufacturing plants in France and Brazil progressed by more than 30 % on average between 2000 and 2001. Manufacturing contracts today tend to be for smaller orders, but they are more numerous and have shorter deadlines for delivery.



#### Rigid reeled pipes

In the area of rigid reeled pipes, 2001 was marked by the start-up of Technip-Coflexip's new spoolbase at Mobile, Alabama in the United States and by sustained activity at the Norwegian and Scottish spoolbases with welding and spooling of almost 550 km of rigid reeled pipes. Rigid pipelay activity is expected to increase in 2002, particularly in the North Sea and in the Gulf of Mexico, thanks to the CSO Deep Blue, now in operation.

## Drilling, refining and onshore applications for flexible pipe (DRAPS)

This Technip-Coflexip product line includes drilling and servicing pipes, pipes for refineries (roof drains and fire protection systems), the Coflexlite® lines and reinforced thermoplastic lines (RTP), as well as very low temperature (-163°C) flexible pipelines used for loading LNG (liquefied natural gas).

The CSO Deep Blue at the Mobile spoolbase Alabama USA.

2. Flexible pipe manufacturing plant. Part France

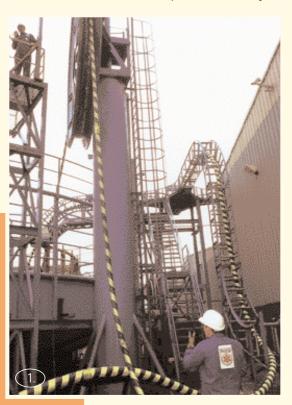
3. Sample of flexible pipe



## . . . The Offshore Branch's offerings

#### **Umbilicals**

DUCO, the world's leading manufacturer of umbilicals (steel and thermoplastic), based in Houston, Texas and in Newcastle Upon Tyne in the United Kingdom, is one of the pillars of Technip-Coflexip's deepwater strategy. Its experience and its proven technologies make it one of the main players in the market for umbilicals used in the development of subsea hydrocarbon fields.



## Fabrication of fixed and floating production platforms

Technip-Coflexip designs, constructs and installs in deep or shallow waters, fixed and floating platforms for the production and processing of oil or gas. The floating platforms are anchored at the offshore production site and are mainly of two types: those designed for developments with subsea trees, and those using dry trees.

In the deepwater area, Technip-Coflexip designs and builds Spars, a type of platform with dry trees, particularly appreciated in the Gulf of Mexico and for which the Group uses proprietary technology, as well as FPSOs and semi-submersible platforms like the DPS 2000 and the TPG 3300. For developments in shallow waters, the Group has designed fixed systems like the TPG 500 and the MOSS concept.

Manufacturing of umbilicals, Great Britain.

#### Robotics

Perry Slingsby Systems, an affiliate of Technip-Coflexip and the world's leading manufacturer of remotely operated vehicles, based in the United States (Florida) and in the United Kingdom, provides equipment for the installation of submarine cables for telecommunications and for developing offshore fields. In 2001, the Robotics Division provided TyCom with six trenching machines specially designed for the telecommunications market, and two remotely operated vehicles for heavy operations, designed to strengthen the capacities of the CSO Deep Blue, a multi-purpose vessel for rigid and flexible pipelay.





- Elgin-Franklin platform
- Nensen Spar,
  Gulf of Mexico USA
- 3. NKossa barge, West Africa.

#### **Engineering services**

Technip-Coflexip carries out basic and detail engineering for offshore operators. The Group's global studies are aimed at optimizing plans for developing fields (architecture and risk analysis). The Group also offers engineering services for anchoring and riser systems, as well as assessments of flow assurance.



The construction of the CSO Deep Blue took place in close cooperation with the Group's offshore personnel, and its rapid integration into the fleet enabled it to succeed in its first mission at sea, in the deep waters of the Gulf of Mexico on the Boomvang and Nansen fields for Williams.

The Group provides permanent training programs for personnel at sea to ensure their security and to see that each person's skills meet the needs of each project. Safety records were thus achieved by the CSO Deep Blue on her first contract with 150 days of operation without any incidents causing a work stoppage (Lost Time Incidents) and by the CSO Wellservicer with 1,315 days without lost time incidents.



#### Offshore resources

The Group operates a fleet of 15 diving support vessels for subsea construction and installation, making it a reference for the industry.

During the year 2001, the Group pursued its strategy of maintaining its fleet at the cutting edge of technology and reinforcing its position as market leader. The integration into the fleet of the CSO Deep Blue and the successful capacity expansions of the CSO Constructor and of the CSO Seawell in order to increase their deepwater capabilities helped strengthen Technip-Coflexip's offerings in the area of deepwater installations.



## Offshore projects

#### EUROPE

#### North Sea UK sector

The associated gas fields of Elgin and Franklin, located in the central part of the UK sector of the North Sea at a water depth of 93 meters, were brought on stream by TotalFinaElf in March and September, 2001. The central processing/utilities/accommodation platform was designed and built by Technip-Coflexip under an alliance contract with Elf Exploration UK, McDermott and Barmac. Modeled on the TPG 500 concept, which was developed by Technip, it is the largest self-elevating platform in the world (45,000 tons), able to produce 220,000 barrels of oil equivalent per day (140,000 bl/day of condensates and 13 million m<sup>3</sup> of gas), i.e. about 5.5 % of British production of liquids and 4.5 % of British gas production. Elgin and Franklin are high-pressure/hightemperature fields (1,100 bars and 200°C), whose development and exploitation required many technological innovations.





In a consortium with ABB Offshore Systems, Technip-Coflexip successfully completed ahead of schedule phases 1 and 3 of the **Nuggets** development, located east of the Shetland Islands at a water depth of about 120 meters. Phase 1 included the installation of a new manifold and its tie-back to the Alwyn North platform with 40 km of subsea pipelines and the installation and connection of two subsea wells.

Phase 3 comprised a second manifold, an adjacent well, an umbilical and 14.5 km of pipelines, tied back to the manifold installed during Phase 1.

Subsea pipelay and installation operations were carried out successfully at the end of 2001, by vessels from the Group's fleet, the CSO Apache and the CSO Constructor. Trenching operations were performed by the Normand Pioneer.

Technip-Coflexip executed two EPCI subsea construction contracts for the development of the **Otter** field operated by TotalFinaElf. The first contract, which was signed with TotalFinaElf, included the design, fabrication and installation of a 22-km subsea pipeline transportation system linking the field to the Eider production



platform at a water depth of 155 meters. Technip-Coflexip was also responsible for the design, fabrication and installation of a rigid production pipeline and a rigid water injection pipeline, both with a diameter of 10", and three 22-km submarine cables. The contract also included the installation of two rigid risers connected to the Eider platform, as well as their tie-in, testing and protection. The second contract, which was signed with FMC Kongsberg Subsea, included construction works required for the installation of the subsea production facility. All construction and installation operations were carried out by the Group's vessels CSO Apache and CSO Wellservicer, supported by the Normand Pioneer.

Technip-Coflexip executed for Exxon Mobil a subsea tie-back contract to link the Lewis 1 development to the Beryl Alpha platform, as well as tie-backs of the gas lift pipeline and control lines to the Nevis subsea distribution unit. In order to provide flow assurance, a "pipein-pipe" production line, using proprietary technology insulation material, was supplied and installed between the 8" production pipeline (12% chrome), fabricated at Evanton, and the 14" transport pipeline.

Within the framework of two fast-track contracts for BP. Technip-Coflexip provided subsea construction services at the Davy and Hoton fields. The first contract, concerning Davy, included the fabrication, installation, tests and commissioning of a 10-km, rigid reeled 8" pipeline, as well as a rigid riser, the burial of all pipelines and their tie-in to the Davy platform. The second contract, concerning the Hoton development, included the fabrication, installation, tests and commissioning of a 12-km, 8" reeled pipe and an umbilical; the delivery and installation of a "J" tube and associated structures at the West Sole Alpha platform, as well as burial operations for all the pipelines and their tie-in.

These two contracts, carried out simultaneously, were completed successfully under a tight schedule.





#### **EUROPE**

#### **British sector**

• The tie-back contracts were completed by inspection, repair and maintenance (IRM) activities, most of which were carried out under the THT (Texaco, Amerada Hess and Talisman Energy) frame agreement. In this connection, an important three-year contract was signed to provide a diving support vessel (DSV) and underwater services in the North Sea, the objective being to maximize uptime and production potential of the three operators' assets throughout the UK and Danish sectors of the North Sea. In addition, the contract has provision for executing EPCI projects: pipelay/trenching, wellservicing, decommissioning/abandonment and other construction services.

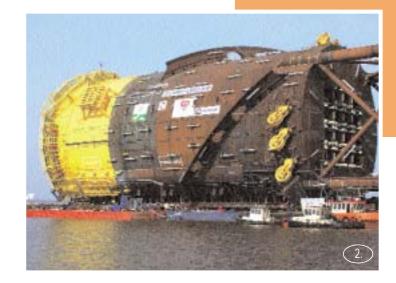
Wellservicing activities have been further strengthened by heavy utilization of the CSO Seawell, which was revamped in order to offer increased capacity for cleaning subsea wells.





Welding of rigid pipes

Horn Mountain Spar Mantyluoto, Finland.



#### Norwegian sector

In 2001, this sector was characterized by the execution of integrated contracts of medium size.

The **Visund** project for Norsk Hydro—comprising the installation of two 6" flexible risers, an 8" flexible riser and a dynamic service umbilical—called for the utilization during summer 2001 of the vertical pipelay system (VLS), patented by the Group, for a "Pliant wave" configuration.

Technip-Coflexip executed an integrated contract at the **Tambar** field for BP, comprising the delivery of flexible and rigid pipes, diverless subsea tie-ins and trenching. This operation demonstrated the Group's high-quality skills in the areas of rigid reeled pipe and pipelay technique.

In July 2001, Norsk Hydro entrusted Technip-Coflexip with an 80-million-euro contract for the fabrication, delivery and installation of static and dynamic pipelines for the development of the FramVest field. The contract includes fabrication, delivery and installation of two 10" flexible pipes, a multibore riser, a dynamic service umbilical, and two 12" and 13" rigid pipelines with a length of 50 km. In addition, the contract includes the installation of a 25-km static service umbilical.

#### **Finland**

In December 2000, BP entrusted Technip-Coflexip with the fabrication of topsides (by Gulf Marine Fabricators in the United States) and the hull (at the Mantyluoto yard in Finland) of a Spar floating platform for its **Horn Mountain** field, located at a water depth of 1,700 m in the Gulf of Mexico. Installation of the platform is expected during the second quarter of 2002.



Offshore Tarragona, Technip-Coflexip successfully executed a contract for REPSOL covering the engineering, fabrication, trenching and installation of 8.5 km of 5.5" flexible flowlines, two jumpers and a subsea electrohydraulic umbilical at the **Chipiron** field. The success of this operation doubled the production capacity of Spanish crude in the Mediterranean Sea.



#### NORTH AMERICA AND GULF OF MEXICO

#### Canada

Technip-Coflexip, a member of the Terra Nova alliance, successfully completed subsea operations at the Terra Nova field, offshore Newfoundland. The operations involved stabilization and tests of the flexible pipes installed in 2000, as well as diving operations performed from the CSO Marianos. These operations were completed ahead of schedule and contributed to the successful first oil from the field in January 2002.

#### **Gulf of Mexico**

During the summer of 2001, thanks to the CSO Deep Blue, Technip-Coflexip installed, at a water depth of approximately 1,100 meters, more than 160 km of rigid pipes and 12" to 18" diameter steel catenary risers (SCRs) and executed their tie-back to the Spar platforms at the **Boomvang** and **Nansen** fields. This first contract, for Williams, saw the first use of the pipelay and payload capacities of the CSO Deep Blue, and of the Group's new spoolbase in Mobile, Alabama. Fabrication of the hulls of the two "Truss" Spars, which was carried out in Finland, had been entrusted to CSO Aker Maritime in 2000.

The **Brutus** tension leg platform fabricated by an American affiliate of Technip-Coflexip (Gulf Marine Fabricators) in 2000 was delivered to Shell Exploration and Production Company (SEPCO) in mid-2001. This project, begun in 2000, mobilized more than 600 people at the Corpus Christi yard in Texas at the time for the integration of the hull (15,800 tons) and the five bridge modules, weighing almost 22,000 tons. This platform, located in the Gulf of Mexico at a water depth of more than 910 meters, will produce close to 200 million barrels of crude per year.

In November 2001, Technip-Coflexip was awarded by Kerr-McGee an engineering, procurement and construction contract for a Spar floating production platform hull, associated moorings and riser system for the **Gunnison** field located in the Gulf of Mexico's Blocks 667, 668 and 669 in 950m water depth.

The engineering of the hull will be performed by its affiliates CSO Aker Engineering in Houston and CSO Aker Rauma in Finland. CSO Aker Maritime in Houston will be in charge of the engineering and procurement of the riser system, while the mooring system will be engineered and procured by CSO Aker Rauma. The hull will be built at its Mäntyluoto fabrication facility in Finland. Delivery of the Spar hull is scheduled for the third quarter of 2003.

The hull for the Gunnison Spar will be the third Truss Spar delivered to Kerr-McGee and follows the Neptune, the first "Caisson" Spar installed in the Gulf of Mexico; the Nansen, recently installed in the Gulf of Mexico; and the Boomvang hull, currently being assembled in the Gulf of Mexico.

In January 2002, Gulf Marine Fabricators was entrusted by Atlantia with the fabrication of "TotalFinaElf Matterhorn" a tension leg production platform that will be installed in Mississippi Canyon Block 243 at a water depth of 850 meters. This contract includes procurement, fabrication and outfitting of a 6000-ton topsides facility, as well as the fabrication of 6 anchor piles, each 126 meters long.

The year 2001 also witnessed the delivery, in March 2001, of 3 platforms for Pemex's **Combisa** project. This project included fabrication of a booster compression platform, the second stage of a high-pressure compression platform, and a production platform. Their decks are among the largest single-piece topsides ever fabricated for the Gulf of Mexico.











n. Nansen Spar. Gulf of Mexico, USA.

Corpus Christi yard Texas, USA.

o. Mantyluoto yard Finland

#### ■ BRA7II

In order to develop its upstream oil and gas activities in Brazil, particularly in deep offshore, Technip-Coflexip finalized the acquisition and took 100% control of UTC Projetos y Consultoria, a 400-person, privately-owned Brazilian engineering and construction company based in Rio de Janeiro. UTC has a long track record in services and turnkey contracts for local operators, both offshore and onshore. It has notably a long-standing working relationship with Petrobras, who recently awarded the company the FEED (front end engineering design) of the floating facilities for the Albacora Leste field.

Technip-Coflexip delivered four crude export risers to Petrobras for the semi-submersible platforms P18 and P19 at the **Marlim** field offshore Brazil at a water depth of almost 1,000 meters. These risers, which were fabricated at the plant in Le Trait, Normandy, marked the first use in Brazil of Coflon®, a material with strong resistance to high temperatures.

In addition, Petrobras ordered two 4" production risers made of Coflon® for its **Coral** field, located in the Santos Basin in southern Brazil.

During the second quarter of 2001, Sunrise 2000, a vessel from the Group's fleet, installed at a water depth of 1,080 meters, two 9  $^{1/8}$ ' and 11  $^{1/8}$ ' oil and gas export lines at the **Marlim** field for platforms P38 and P40. These lines were fabricated by the plant at Le Trait in Normandy.

#### AFRICA

#### **Nigeria**

Technip-Coflexip with a major contract for the development of the Bonga field, which is operated by Shell offshore Nigeria at a water depth of 1,100 meters. The Offshore Branch of Technip-Coflexip will be in charge of project management, engineering, procurement, transport and installation of three 19" dynamic offloading risers (2.3 km long) between the field's FPSO and its offloading buoy — a world first in the utilization of a flexible pipe of such diameter and length as an export line between an FPSO and an offloading buoy. The risers will be fabricated at Technip-Coflexip's plant at Le Trait in Normandy in autumn 2002. Installation of these risers and of more than 55 km of gas lift risers and control lines, as well as the installation of five large 140-ton manifolds will take place during the summer of 2003.

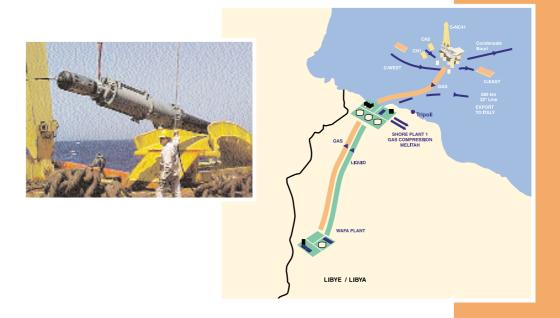
In August 2001, Single Buoy Mooring (SBM) entrusted

Technip-Coflexip and Saibos continued their joint execution of the \$330 million turnkey project awarded by ELF Petroleum Nigeria for the design, construction and installation of an offshore oil processing/production platform and related utilities for the Amenam field. This platform will treat oil from the two neighboring drilling platforms, which produce 130,000 barrels per day. Amenam is located 35 km off the coast of Nigeria at a water depth of 40 meters. Technip-Coflexip's services include the engineering, which today is almost completed, participation in the purchase of the equipment as well as supervision of the construction and installation. Construction of the topsides and the jacket for the production platform began in April 2001 at the McDermott yard at Jebel Ali in the United Arab Emirates and should be completed at the beginning of 2003.

Technip-Coflexip also carried out, for TotalFinaElf, the design and basic engineering for the development of the Akpo deepwater (1,400 m) oil field. The project includes an FPSO able to produce 70,000 barrels of oil per day and to store 1.75 million barrels, as well as subsea wellheads and pipes.







#### Angola

Technip-Coflexip executed for Cabinda Oil Company, an affiliate of Chevron, the design and basic engineering (FEED) for the development of the deepwater oil fields **Benguela-Belize** and **Tombocco**. The development of these fields will notably include a 42-slot drilling and production facility.



The **Girassol** field, located at a water depth of 1350 meters some 150 km offshore Angola, began production at the end of 2001. Technip-Coflexip had executed approximately one-third of the engineering for this development project, notably process studies for a floating treatment (200,000 barrels/day), storage (2 million barrels) and crude loading facility. With reserves estimated between 750 million and one billion barrels, Girassol, operated by TotalFinaElf, is the most important African deepwater development, and its FPSO (300 m long by 60 m wide) is the largest floating oil production facility in the world.

#### Libya

During the first quarter, Technip-Coflexip completed the basic engineering (FEED) for the Western Gas Libya project to develop several gas fields. The offshore part of the project had been executed by the Technip-Coflexip engineering center in Paris. That part of the project involves a fixed drilling/production platform equipped with subsea wellheads that will be installed 150 km offshore Tripoli at a water depth of 190 meters. Technip-Coflexip is also in charge of management of the whole project (onshore and offshore) and supervision of the construction. Works contracts are currently being attributed to subcontractors.



#### Tunisia

COPAREX Netherlands BV entrusted Technip-Coflexip with a contract to provide 9 km of flexible pipes, risers and jumpers, as well as 7 km of umbilical. This contract was completed on schedule to the satisfaction of the client.

#### South Africa

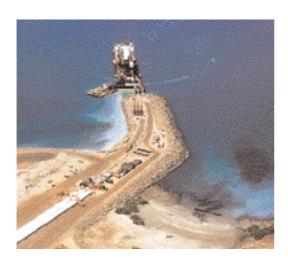
Technip-Coflexip was selected by Bluewater (UK) Ltd to carry out the integrated contract for the development of the Sable field of SOEKOR E&P (Pty) Ltd. This development includes the tie-in of six subsea wells to a floating production unit (FPSO) to be carried out during the third quarter of 2002. First oil is expected at the end of the year.

#### CASPIAN SFA

#### Azerbaijan

In May 2001, BP entrusted Technip-Coflexip with the basic engineering for the Shah Deniz offshore production and drilling facilities. This contract marks the first significant step in exploiting the large gas reserves of this field in the shallow waters of the Caspian Sea. The design study was carried out by Technip-Coflexip modeled on its self-installing fixed TPG 500 platform. The project should enter its construction phase during the second half of 2002.





#### ■ MIDDLE EAST

#### Iran

The joint venture NPCC/NAFT SAZEH QESHM awarded Technip-Coflexip an engineering and procurement contract for development of the **Soroosh** and **Nowrooz** oil fields operated by SHELL Exploration BV in Iranian waters. The project includes fixed production facilities comprising mainly: 3 production platforms, 2 living quarters platforms, 2 wellhead platforms, as well as pipelines and cables. The Soroosh and Nowrooz fields are located in the Persian Gulf at water depths ranging from 30 to 40 meters, at 80 km and 50 km, respectively, from Kharg Island. This integrated development aims to achieve output of 190,000 barrels per day as from 2003.

#### ASIA PACIFIC

#### Australia

Technip-Coflexip executed subsea tie-back operations for Woodside Petroleum's **Echo-Yodel** field. The work included the laying of a rigid reeled pipe, a caisson, an umbilical, as well as subsea tie-backs.

The contract covered project management, design and follow-up of construction operations, transport and installation of a 23 km-long, 12 inch-diameter export pipeline made of 13% chrome, an electrohydraulic subsea umbilical, and a riser caisson weighing approximately 160 tons on the Goodwyn Alpha gas production platform. Installation at sea was carried out by the CSO Apache, a specialized vessel for laying rigid reeled pipe, and the CSO Venturer, a dynamically positioned diving support vessel.

BHP Billiton entrusted Technip-Coflexip with a design and construction contract for the **Griffin 9** and **Scindian 1A/3** fields offshore Australia. Technip-Coflexip was in charge of project management, engineering, fabrication and installation of 6.6 km of 8" rigid pipe and associated equipment. The pipelay operations were performed by the CSO Apache while the CSO Venturer carried out the overall diving and subsea construction operations.



T. Cakerawala field platforms<sub>:</sub> Malavsia/Thailand.

#### Malaysia / Thailand

Technip-Coflexip, the leader of a consortium with Samsung and Saipem, continued execution of a turnkey contract, worth \$600 million, which was awarded in March 2000 by Carigali-Triton Operating Company (CTOC), for development of the Cakerawala gas field located in the Malaysia-Thailand Joint Development Area. The project included design and construction of a drilling and treatment complex comprising 3 drilling platforms (36 wellheads), a compression platform, a central processing platform, a power generation unit, as well as subsea pipelines, distributed control systems and a 500,000-barrel FSO. The Cakerawala field is located 180 km offshore at a water depth of 55 meters. Its gas reserves are estimated at 56 billion m<sup>3</sup>. The consortium led by Technip-Coflexip was entrusted with providing engineering, procurement of equipment and a flexible riser and anchoring system, construction, installation and hook-up, as well as start-up operations, which are currently underway, with

the goal of coming on stream in mid-2002. Within the consortium, the Technip-Coflexip engineering center based in Kuala Lumpur carried out the engineering for all the platforms, as well as procurement, and supervised the construction of the 3 drilling platforms and the compression platform. Technip-Coflexip also provided its proprietary float-over UNIDECK® concept for the central processing platform (7 billion m³ of gas/year and 15,000 barrels/day of condensates).

In June 2001, Lundin Malaysia Ltd entrusted Technip-Coflexip with the design and construction of a wellhead platform and the engineering of the jacket for a central processing platform for development of the **Bunga Raya** associated gas field, located offshore Malaysia and Vietnam.

At the end of the year, Brunei Shell Petroleum awarded Technip-Coflexip a turnkey contract, worth about \$22 million, for its **Egret** Phase 1 Gas Development Project offshore Brunei. The facilities include a fixed drilling platform, a multi-phase pipeline and a subsea cable. •









# Fields of activity Onshore and Downstream

Technip-Coflexip's Onshore and Downstream activity covers onshore facilities for processing and liquefaction of natural gas, oil refining units, hydrogen and sulfur units, petrochemical plants, as well as onshore pipelines and related utilities and offsites. With 51% of Technip-Coflexip's consolidated backlog at January 1, 2001, this branch remains the Group's primary area of activity and the one characterized by large turnkey contracts. The year 2001 saw the completion of several major projects: the commissioning of the MIDOR refinery in Egypt, the start-up of the OGD2 gas processing facilities in Abu Dhabi, the start-up of a coke calcining plant in Bahrain, as well as completion of construction of Sincor's extra-heavy crude processing complex in Venezuela.

Aside from a major ammonia/urea project in Vietnam, new contracts were obtained mainly in the Middle East: in the Emirates (Fujairah pipeline), in Qatar (LNG), in Saudi Arabia (Berri gas facilities) and in Iran (ethylene steam crackers at the 9th and 10th Complexes). In March 2002, Technip-Coflexip was also awarded, in a joint venture, a lump sum turnkey contract for trains 4 and 5 of the Bonny LNG complex in Nigeria.

In Europe and North America, Technip-Coflexip experienced very sustained activity in the hydrogen units sector, winning about a dozen projects representing cumulative production capacity of 800,000 m<sup>3</sup>/hour and won two significant projects in polyolefins.

#### EUROPE

In Italy, mechanical acceptance of the first three oil and gas collection and processing lines at Val d'Agri was issued in September by ENI Division Agip. Technip-Coflexip's engineering center in Rome continued the engineering and procurement for the 4th line, construction of which will begin in April 2002 and will be completed in November 2003. These four lines, for the development of the Viggiano field—the most important hydrocarbon reserve in southern Italy—will have a global processing capacity of 104,000 barrels/day.

The Group's Italian affiliate carried out the complete revamping of Enichem's LPG storage facilities in Cagliari, Sardinia, and was also entrusted with the revamping and automation of Enichem's ethylene plant in Porto Torres.

In France, the most significant project in the refining sector was the design study for expanding SARA's refinery in Martinique and bringing it into compliance with the new Auto Oil 2005 fuel standards. In the petrochemicals sector, Technip-Coflexip continued execution of the contract for a capacity increase (+35%) of the steamcracking line at Carling and delivered a GK6 furnace based on its in-house design to ATOFINA, mechanical acceptance of which was issued in February 2002.

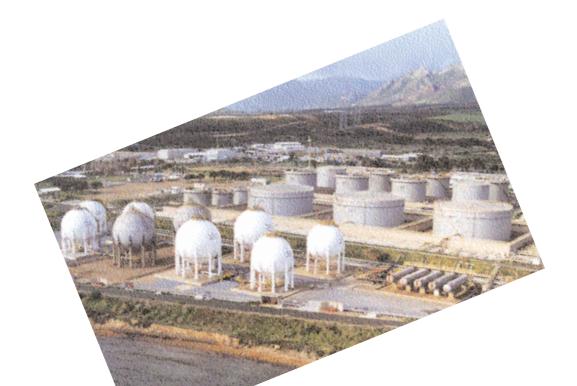


Via its affiliates in Paris and Lisbon, Technip-Coflexip successfully completed engineering and services projects for the revamping of Petrogal's three hydrodesulfurization units at Sines and Porto in Portugal. At Sines, the installation of a new reactor, new compressors and heat exchangers has increased capacity from 34,000 to 37,000 barrels per day. Modifications made on the Porto unit were aimed at reducing the sulfur content of gas oil (max. 30 ppm) and increasing capacity from 22,000 to 25,000 barrels/day.

The Group's affiliate based in Lisbon, was entrusted with the detail engineering and elaboration of "as-built" plans in the areas of civil works, electricity and communications for the LNG terminal to be built at Sines. Technip Portugal also participated in the engineering of the surface facilities for underground storage of LNG (80,000 m³) at Sines for Sigas, a Petrogal/BP/Borealis joint venture.



- Sincor extra-heavy crud refinery, Venezuela.
- 2. Val d'Agri. Ital



#### EUROPE

In September 2001, RepsolYPF awarded Technip-Coflexip a turnkey contract covering the modernization of nine steam-cracking furnaces at Repsol Quimca's ethylene plant located at Tarragona in Spain.

> awarded by Repsol in 2000 for the design and construction of offsites and utilities for the new hydrocracker at Tarragona. Under the terms of the contract, its Dutch affiliate will provide the engineering and procurement services for a 65,000-m<sup>3</sup>/hr hydrogen unit.

> center in Rome was awarded a contract for the instruplant at the Corinth refinery.

> Technip-Coflexip began executing the contract, worth about 50 million euros, awarded in December 2000 by Petkim for the design and construction of a 120,000ton-a-year low density polyethylene plant at Aliaga in Turkey. Commissioning of the plant is expected in 2004.

> The year 2001 was marked by the award of new projects involving hydrogen units in Europe. A turnkey contract worth 30 million euros was signed with PCK Refinery for the design and construction of a 35,000-m<sup>3</sup>/hr unit

on the site of the Schwedt refinery in Germany. Technip-Coflexip was also entrusted by OMV with the design and construction of a 30,000-m<sup>3</sup>/hr unit at Schwechat in Austria, as well as the expansion of the hydrogen unit feeding the hydrocracker of Total Raffinaderij Nederland's refinery at Vlissingen in the Netherlands.

In the petrochemicals sector, in the Netherlands, Technip-Coflexip won a major contract for the design and construction of a 300,000-ton-a-year polypropylene plant. This PPF6 plant, for the DSM group, will be built at Geleen and will use BP's Innovene gas-phase technology. It is the third project of this type entrusted to the Group by DSM, following PPF3 on the same site at Geleen and the plant at Gelsenkirchen in Germany.

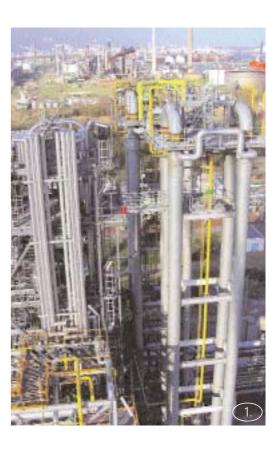
In August, Technip-Coflexip's engineering center in The Hague completed on schedule a contract with DOW Chemical for the revamping of 18 ethylene furnaces at Terneuzen and was awarded by the client the "Safety Incentive Award 2001".



The Group continued work on the services contract

In Greece, in the context of longstanding collaboration with Motor Oil Hellas, Technip-Coflexip's engineering mentation and automation revamping of its lube oil







In Belgium, the Group's engineering center based in Paris continued work on the engineering and services contract for the design and construction of a new 250,000-ton-a-year high density polyethylene line at Solvay's petrochemical site in Lillo. This project is now in the start-up phase. For its part, the Group's Italian affiliate completed its project for the debottlenecking and expansion of the PTA plant at Geel and was issued acceptance of that facility by BP last December.

Scanraff entrusted additional work to Technip-Italy under a contract signed in September 2000. This project, which involves the propylene recovery and storage unit at the Lysekil refinery in **Sweden**, will be completed in September 2002.



Within the framework of environmental programs for the reduction of nitrogen oxide (NOx) emissions, Technip USA, which has acquired great expertise in this area over the past twenty years, was awarded in 2001 an engineering contract for the reduction of NOx emissions from ExxonMobil's refinery and petrochemical complex at Baytown, Texas. Phillips Petroleum also awarded it an engineering and services procurement project concerning the reduction of NOx emissions from the refining complex at Sweeny, Texas.

In the petrochemical sector, Technip USA, in association with BE & K, won from Chevron Phillips Chemical Co. (CPC) and Solvay Polymers, a contract for the engineering, procurement and construction of a 318,000-ton-a-year high density polyethylene plant at CPC's complex at Cedar Bayou, Baytown, Texas.





#### NORTH AMERICA

In May 2001, Technip-Coflexip won two contracts, together worth 125 million dollars, for the design and construction of hydrogen plants in **Canada**. These two plants will use the Group's proprietary KTI Steam Methane Reformer Technology. The first plant will be constructed for Syncrude Canada at Fort McMurray in Alberta. With a capacity of 200 million SCFD of hydrogen, it will be the biggest single-train unit of this type in the world. The second plant, with a capacity of 40 million SCDF of hydrogen will be built at Regina, Saskatchewan, for Consumer's Cooperative Refineries. Execution of these projects has been entrusted to the Group's engineering center based in Los Angeles.



#### I ATIN AMFRICA

Construction of Sincor's extra-heavy crude processing facilities in **Venezuela** was completed at the end of 2001, in accordance with the contract schedule and to the satisfaction of the client.

Sincor, whose shareholders are TotalFinaElf (47%), PDVSA (38%) and Statoil (15%), had awarded this turnkey project to Contrina—a joint venture company made up of Technip-Coflexip, Kellogg Brown and Root, Parsons and the Venezuelan companies Proyecta and Dit-Harris—in September 1998.

This contract, worth about \$750 million, involved the grassroots design and construction of facilities to upgrade extra-heavy crude (8 to 8.5° API) in the Jose region, near Puerto La Cruz. The facilities principally comprise a vacuum distillation unit (284,000 barrels/day), a mild hydrocracker, a naphtha hydrotreater, utilities and offsites, as well as distributed control systems. They will allow the production of 180,000 barrels/day of high-

quality synthetic crude (32° API and very low sulfur content) from previously diluted extra-heavy crude from Zuata. The basic engineering for this project was performed entirely by Technip-Coflexip's engineering center in Paris. Construction (20 million manhours) was carried out without LTA (lost time accidents).

In the **Netherlands Antilles**, the Group's Italian affiliate pursued the execution of the contract for the expansion of the Curacao refinery for the company Isla, an affiliate of PDVSA. This \$190 million project consists of revamping certain units to increase their capacity and technical performance, and to treat atmospheric emissions. The engineering and procurement of equipment and materials have been completed. Completion of construction is expected in August 2002.









#### AFRICA

In Nigeria, construction of the third liquefied natural gas (LNG) train at Bonny, with a capacity of 2.95 million tons/year, progressed ahead of schedule and had achieved 75 % completion at the end of February 2002. Under the terms of a turnkey contract worth \$1.2 billion awarded by Nigeria LNG Ltd in December 1999, TSKJ—a consortium composed equally of Technip-Coflexip, Snamprogetti, KBR and JGC—is also currently designing and building a one-million-ton/year LPG recovery unit, as well as utilities and offsites. Delivery of the third LNG train and related facilities is expected during the first quarter of 2003.



In early 2001, TSKJ successfully won, in an international competitive tender process, the contract for the project specification for the NLNG *Plus* Project concerning two additional LNG trains at Bonny. This work was completed for the client in November 2001.

In March 2002, Nigeria LNG Ltd (NLNG) awarded the engineering, procurement and construction (EPC) contract for the design and construction of the NLNG *Plus* Project covering trains 4 and 5 of the Bonny complex.

Each of the two new trains and associated facilities will be able to process 4 million tonnes per year of LNG as of 2005, thus bringing overall production capacity to 16.8 million tons of LNG and 2 million tons of LPG per year.

In addition to train 3 now being built, TSKJ had already designed and built trains 1 and 2, brought on stream respectively in August 1999 and February 2000, together with their associated utilities and offsites. Furthermore, TSKJ has also recently provided NLNG with a price for an additional 4-million-ton-a-year LNG train (train 6). NLNG shareholders are Nigerian National Petroleum Company (49%), subsidiaries of Royal Dutch/Shell (25.6%), TotalFinaElf (15%) and Agip (10.4%).

Technip-Coflexip completed the basic engineering (FEED) phase of the project management contract for "Western Gas Libya" which concerns the development of several gas fields in Libya. The onshore portion of the project, awarded by Agip Gas BV, was carried out by the Group's affiliate based in Rome. It includes development of an onshore gas field located at Wafa (550 km southwest of Tripoli), design and construction of a 10 billion m³/year gas processing plant at Melitah on the Libyan coast west of Tripoli and of a network of onshore pipelines between Wafa and Melitah (500 km) consisting of 16" and 30" lines for transporting gas and liquids produced onshore to the treatment plant. Total cost of the investment is estimated at more than \$5 billion. During the execution phase, Technip-Coflexip will be in charge of supervising the subcontractors now being selected for the work.

I. Extra-heavy crude treatment unit, Sincor, Venezuela.

LNG train, Bonny, Nigeria.

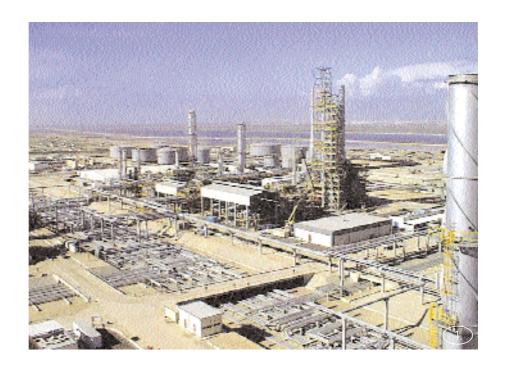
#### AFRICA

The MIDOR refinery in **Egypt** reached full production capacity in the summer of 2001. Performance tests, which began in August, were carried out successfully on each of the units: the atmospheric and vacuum distillation units, the naphtha hydrotreater, the hydrogen plant, the gas oil desulfurization unit, the reformer, the delayed coker, the LPG units and the hydrocracker. With a capacity of 100,000 barrels per day, this refinery is designed to convert heavy products into desulfurized distillates and to meet the European environmental standards to be applied as of 2005. Today it is the most modern and most sophisticated refinery and the one best adapted to the demands of the market in the whole Mediterranean Basin. For Technip-Coflexip, the MIDOR refinery is a first-class reference, all the more since it is the largest turnkey project (\$1.2 billion) entirely carried out within the Group. Engineering and supervision of construction represented 2 million manhours for the Group. Construction required 27 million manhours and the presence of 7,000 people on the site at peak time, 500 of whom were supervising construction.



Midor refinery, Egypt. 2. Hawiyah complex, Saudi Arabia.







#### ■ MIDDLF FAST

In March 2002, Technip-Coflexip won a major turnkey contract for the expansion of the gas complex at Berri in Saudi Arabia. The objective of this project awarded by Saudi Arabian Oil Company (Saudi Aramco) is to process additional quantities of sour gas from the Qatif field, which is under development. Technip-Coflexip will provide a low-pressure gas sweetening unit, two sulfur recovery units, a new feed gas compressor, and will revamp the existing units. These services will increase the capacity of the complex by 2.5 billion m³ of gas per year, while the sulfur recovery capacity will be increased by 1,330 tons per day. The contract will be executed by the Group's Italian affiliate, and its local affiliate Technip Saudi Arabia, will be in charge of construction.

Mechanical acceptance of the three sulfur production units (3 x 350 tons/day) and of the related utilities for the development of the Hawiyah gas field was issued by Saudi Aramco in December 2001. These facilities, whose design and construction were awarded to Technip-Coflexip's Italian affiliate in 1998, are now operational.

Technip-Coflexip carried on the turnkey contract which it was awarded by Saudi Aramco in December 2000 for the design and construction of facilities related to the development of the Haradh gas field. This contract covers utilities and offsites as well as a pipeline system required for operation of a new plant, which will be able to process 16.2 billion m³ of gas per year. Completion of the project is expected in 2003. The partners in this project are Technip Italy (utilities and offsites), Technip Germany (onshore pipeline system) and Technip Saudi Arabia (construction).



During recent years, Technip-Coflexip has played a significant role in the major gas developments carried out by Saudi Aramco. The turnkey contracts for Berri, Hawiyah and Haradh, to which Abqaiq—completed in 1998—can be added, together represent sales for the Group of over one billion dollars.

In the petrochemicals sector, SABIC entrusted Technip-Coflexip in March 2002 with the design and construction of an acetic acid plant at Yanbu, on the site of Arabian Industrial Fibers Company's complex. With a capacity of 30,000 tons/year, this plant will use ethane oxidation technology developed by SABIC. This turnkey project was entrusted to Technip-Coflexip's engineering center based in Rome, in association with Technip Saudi Arabia. Commissioning of the plant will take place during the second half of 2004.



#### MIDDLE EAST

In Qatar, the Technip-Coflexip / Chiyoda joint venture won a contract worth about 100 million euros for the expansion of the liquefied natural gas (LNG) facility at Ras Laffan. Under the terms of the contract signed with Qatar Liquefied Gas Company (Qatargas), the joint venture will carry out detail engineering, procurement and construction for debottlenecking the three LNG trains. The services and works involved will mainly consist in modifying or upgrading the process equipment in order to expand the capacity of each train from 2 to 3 million tons per year. This project will be executed by an integrated team pooling the expertise of both partners. The engineering center is located in Paris.

Technip Italy is currently completing the revamping and expansion of the sulfur recovery units at Ras Laffan, under a contract worth \$50 million awarded by Qatargas in 2000.

Acceptance of Qatar Vinyl Company's (QVC) complex, which was built grassroots inside the Qapco petrochemical complex at Mesaieed, was issued in August 2001 after the start-up of the dichloroethane (DCE), caustic

soda and vinyl chloride monomer (VCM) units, one month ahead of the contractual schedule. These facilities were designed and constructed by Technip-Coflexip in consortium with Krupp Uhde, under the terms of a turnkey contract awarded in December 1998 by QVC, a company owned by Qatar Petroleum, Qapco, Norsk Hydro and Elf Atochem.

Within the consortium, the Technip-Coflexip engineering center was in charge of designing and building the main utilities and offsites: a 122 MW power plant; 2 caustic soda storage tanks (2 x 30,000 m³); EDC, VCM and salt storage; transport and unloading facilities; water treatment and cooling units. Twenty million manhours without LTA (lost time for accidents) were achieved, a particularly notable performance considering that almost half of these hours were spent inside the plant while it was in operation.

Q-CHEM's (Qatar Petroleum/Phillips Petroleum) project for the design and construction of a new petrochemical complex at Mesaieed had progressed more than 90% at the end of February 2002. The turnkey project worth \$750 million had been awarded in October 1999 to Technip-Coflexip in a 50/50 joint venture with Kellogg Brown & Root (KBR). The facilities include an amine sweetening unit and a sulfur recovery unit using Technip-Coflexip processes, a 500,000-ton-a-year ethylene cracker using KBR technology with furnaces designed by Technip-Coflexip, a 450,000-ton-a-year high-density/ low-density polyethylene plant and a 45,000-ton-a-year hexene unit using the Phillips process, as well as utilities and offsites. Construction is expected to be completed in June and commissioning of the complex should take place in November 2002.







Q-Chem petrochemica complex, Qatar.

OGD2 gas treatmen complex, Abu Dhabi.

Qatar Petroleum also entrusted Technip-Coflexip's engineering center based in Abu Dhabi with a basic engineering contract for the installation of additional storage tanks at the Mesaieed site, notably 2 tanks, 100,000 m³ each, for storing butane.

In the United Arab Emirates, Technip-Coflexip, in partnership with Al Jaber Energy Services, won a contract worth almost 500 million euros to design and build a 185-km potable water transmission pipeline linking Fujairah to the city of Al Ain in Abu Dhabi, a 16-km pipeline link to Al Dhaid in the Emirate of Sharjah, pumping stations, as well as water storage tanks and associated facilities. This contract, signed last August with UAE Offsets Group, is part of a vast development program involving construction of a desalination plant and a power plant in Fujairah. Technip-Coflexip's engineering center in Dusseldorf will handle engineering, procurement and project management, with support from the Group's engineering center in Abu Dhabi. Al Jaber Energy Services, based in Abu Dhabi, will be in charge of construction and erection. Completion of the project is expected in 2003.

The new facilities for the gas treatment complex at Habshan in Abu Dhabi passed their performance tests satisfactorily, and were commissioned and brought on stream in April and reached their design capacity in July 2002. Designed and built by Technip-Coflexip/Bechtel (50/50), under a turnkey contract worth \$1.3 billion for Abu Dhabi National Oil Company (ADNOC), these facilities include 3 trains with a total treatment capacity of 10 billion m<sup>3</sup> of gas per year, LNG recovery units, condensates units, 3 sulfur recovery units, as well as all utilities and offsites to serve the process units. The basic engineering had been entirely performed by Technip-Coflexip's engineering center in Paris. This very large OGD2 (Onshore Gas Development Phase 2) project mobilized up to 10,000 people on the site and established a world safety record, with 33 million hours of construction without an accident. It is actually the second major expansion of the Habshan complex, following OGD1, which had also been handled by Technip-Coflexip/Bechtel between 1993 and 1996. This new project consolidated Technip-Coflexip's position as international leader in engineering and turnkey implementation of major onshore gas complexes.

Abu Dhabi Onshore Operations (ADCO) awarded Technip-Coflexip two major basic engineering contracts, one for the North East Abu Dhabi development, concerning the Rumaitha and Al Dabb'iya oil fields, the other concerning the Bab field.

#### Fields of activity Onshore and Downstream





### **■** MIDDLE EAST

The project to expand and revamp the fractionation plant at Ruwais was completed by teams from the Technip-Coflexip engineering center based in Abu Dhabi. This turnkey contract worth \$90 million, awarded by GASCO at the end of 1999, had the objective of treating gas from Habshan.

In the Emirates, the Group is considered the leader in the onshore oil and gas field development sectors. With a staff of more than 600 people, the Technip-Coflexip center in Abu Dhabi is the largest engineering center in the Middle East.

In Bahrain, Technip-Coflexip delivered two coke calcining lines (450,000 tons/year) and 4 seawater desalination lines (41,000 m³/day) to Alba, under a turnkey contract worth 220 million euros, signed by the Group's German affiliate at the beginning of 1999. Performance and reliability tests, carried out over 30 consecutive production days, were successfully completed on January 20, 2002, and the plant was inaugurated on the 30th of the same month. Alba (Aluminium Bahrain) is a major aluminum producer in the Middle East. The company is owned 77% by the Emirate of Bahrain and 20% by Saudi funds funds (SABIC). The green coke imported by ship



is calcinated in two 67-meter-long rotary furnaces, at temperatures reaching 1,300° C. The calcinated coke is mainly used for manufacturing anodes in the aluminum electrolysis lines. In addition to the furnaces and incinerators, Technip-Coflexip designed and built the cooling facilities required for the process and desalination units, as well as large-dimension storage facilities.

The year 2001 was marked by strong Group activity in the ethylene sector in Iran. In March, Technip-Coflexip, in association with the Iranian company Nargan, signed with JAM Petrochemical Company, a contract worth about 300 million euros for the design and construction of a steam cracker for production of 1,400,000 tons/year of ethylene. This plant, which will constitute the central unit of the gigantic 10th Complex at Assaluyeh, will use Technip-Coflexip's proprietary technologies, furnaces and processes and will be the largest steam cracker in the world and the only large-capacity steam cracker using both gas and liquid feedstocks to produce ethylene and propylene.

In December 2001, the 200-million-euro contract for the design and construction of the steam cracker at the 9th Complex—signed with National Petrochemical Company (NPC) in September 2000—came in force. This project consists in building a one-million-ton-a-year steam cracker at the Assaluyeh site. Technip-Coflexip, with its partner Nargan, will perform the same services as for the 10th Complex, i.e. basic and detail engineering, supply of equipment and materials, supervision during construction and commissioning and start-up, as well as supply of its proprietary ethylene production

technologies and furnaces. Financing of the project is based on export credit facilities from Italy, France and The Netherlands.

The contract signed with Arak Petrochemical Company in May 2001, for expansion of Arak's ethylene plant, became effective in March 2002. This project, worth about 50 million euros and covering engineering and supply of equipment, will increase the capacity of the existing plant from 247,000 to 306,000 tons per year. The work will be executed by the Group's Italian affiliate in partnership with Nargan. The Arak plant operates on naphtha and kerosene and uses Technip-Coflexip's proprietary technology for the production of ethylene.

Technip-Coflexip also continued work on the 100-million-euro contract, which became effective in September 2000, for the design and construction of a 300,000-ton/year linear low density polyethylene plant at Bandar Imam, whose commissioning is expected in 2003.

Alba's coke calciner
 and seawater desalination
 plant Bahrain

Inauguration of Alba's new facilities. Bahrain.

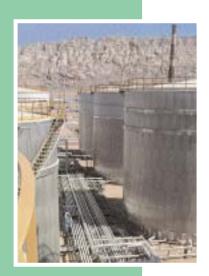




#### Fields of activity Onshore and Downstream



1. Lube oil plant, Turkmenbashi, Turkmenistan. 2. Petlin's polyethylene plant, Malaysia.



# ■ CENTRAL ASIA

In January 2002, Technip-Coflexip was awarded a new contract in **Turkmenistan** for the turnkey implementation of a diesel hydrotreatment plant on the site of the Turkmenbashi refinery. Under the terms of the contract, worth 130 million euros and signed with Turkmenneftegas, the new unit will produce 1,500,000 tons per year of hydrotreated diesel with less than 10 ppm of sulfur. The facilities will mainly include a hydrotreatment unit, a sulfur recovery unit based on Technip-Coflexip's proprietary technology, as well as associated utilities, storage tanks and control systems. The contract will come into force as soon as the financing of the project is arranged and secured through a multi-source financing scheme that is currently being set up.

The lube oil plant at Turkmenbashi came on stream during summer 2001, i.e. 24 months after the contract came into force. The project, worth 180 million euros, was carried out in close collaboration by several Technip-Coflexip engineering centers (Paris, The Hague and Saint Petersburg for the design work and Dusseldorf/Paris for procurement and construction supervision). The MSCC catalytic cracker at the Turkmenbashi refinery (1.8 million tons/year) started up in July 2001. It had been ordered under the terms of a 200-million-euro turnkey contract, signed shortly before the contract for the lube oil plant. This project had been entrusted to Technip-Coflexip's engineering center based in Paris.









#### ASIA

Mechanical acceptance of the new units at the Guhawati refinery in India was issued in January 2002. These facilities include a hydrotreatment unit using the UOP process and a hydrogen unit based on Technip-Coflexip 's proprietary technology. They were designed and built jointly by the Group's teams based in Rome and those of its affiliate KT India in New Delhi, under the terms of a turnkey contract worth about \$50 million.

In Southeast Asia, the most important project won in 2001 is the contract signed in June with Petrovietnam for the turnkey design and construction of an ammonia/ urea complex at Phu My in Baria Vung-Tau Province, in Vietnam. This project, worth about 400 million dollars, came into force in August 2001 and was entrusted to a Technip-Coflexip/Samsung Engineering consortium led by Technip-Coflexip's engineering center in Rome. The facilities will include a 1,350-ton-a-day ammonia plant based on Haldor Topsoe technology, a 2,200-ton-a-day urea plant based on Snamprogetti technology, as well as related utilities and offsites, including production and export of electric power. Start-up of the complex is expected in June 2004.

The Technip-Coflexip engineering center in Kuala Lumpur completed, during the first quarter of 2002, construction of offsites and infrastructures on the petrochemical site at Kerteh, in Malaysia, for Optimal Chemicals (Petronas/Union Carbide). On the same site, Technip Malaysia continued work on construction of a 225,000-ton-a-year high-pressure polyethylene plant for Petlin (DSM/Petronas/Polyfin).

In China, the Group developed its activity with the design and construction, for Sinopec, of a 200,000-ton-a-year polypropylene plant at Yangzi and the expansion of a polyethylene plant at Dushanzi.

Within the framework of its alliance with BP concerning PTA units, the Group's Italian affiliate continued the project for engineering, procurement of certain equipment and construction supervision of a 350,000-ton-a-year purified terephthalic acid (PTA) plant at Zhuhai, whose start-up is expected at the end of 2002.

Construction work for the 700,000-ton-a-year PTA plant at Taichung, **Taiwan**, began in May 2001. Under the terms of the contract, the Technip-Coflexip engineering center based in Rome was entrusted by CAPCO with the engineering, procurement and construction supervision. The plant will be based on BP's process.





# Fields of activity **Industries**

The Industries branch of Technip-Coflexip (Technip LCI) is in charge of all the Group's activities that are not directly linked to the oil sector, i.e. life sciences, chemicals and fertilizers, and other industries (agro-industry, metallurgy, cement, microelectronics, manufacturing industries), power generation and industrial or tertiary buildings. This sector, which represented nearly 10% of the yearly sales, is likely to reach 15% to 20% in the future thanks to its specific technological skills which have been reinforced by the integration in 2000 of the company Krebs-Speichim. In 2001, Technip LCI carried out engineering services or projects for most of the major groups operating in Europe in the pharmaceuticals and cosmetics sectors. The Industries Branch also won significant contracts in the fertilizers sector with Copebras in Brazil, in the chemicals sector with BASF and Bayer, in metallurgy with Inco and Péchiney and in industrial buildings with EADS Airbus.



### ■ LIFE SCIENCES

Technip-Coflexip successfully completed, for Aventis Pasteur, the engineering and project management services contract for the vaccine production units and the high-ceiling storage facilities at the Val de Reuil pharmaceuticals site in France. Aventis Pasteur entrusted the Group with the design of a pharmaceutical packaging unit (at Val de Reuil) and a pilot workshop (at Marcy l'Etoile), as well as the design and construction of cold rooms for these two sites.

The Group's engineering center in Paris completed the revamping and expansion of the pilot workshop at Aventis Pharma's research center in Vitry. This workshop includes 19 reactors for the production of clinical lots for testing medicines before they are put on the market. The Group was also awarded the design and construction of a unit for the production of active ingredients in Vitry.

The Group's engineering center in Lyon was also awarded, by Merck Sharp & Dohme, a project for the design and construction of a quality control laboratory at Mirabel, near Riom.



Technip LCI was also awarded, in France, several design contracts by the Servier group, a project to expand the dry forms workshop plant for Fournier in Dijon, and the revamping of Isochem's pharmaceutical synthesis workshop in Toulouse.

The Group's engineering center based in Rome designed and built, for BMS-Indena, a unit for extracting and purifying a pharmaceutical active ingredient in Settala in Italy. Technip-Italy also completed, for Bristol-Myers Squibb (BMS), the engineering and equipment supply of the gas and liquid waste treatment facilities for a pharmaceutical plant in Ireland.

Technip Iberia participated, on behalf of Biochimie of the Novartis group, in a major project involving the expansion of an antibiotics plant in Les Francesques del Vallés, near Barcelona in **Spain**. Technip Iberia was involved in all phases of the project, including basic engineering, detailed engineering, project management and construction supervision. The expansion involved the synthesizing zones and the utilities, including notably two new reactor lines, loading facilities for solids and liquids, centrifuges, cooling systems, and a solvent recovery and recycling unit. These facilities started up during the second half of 2001.

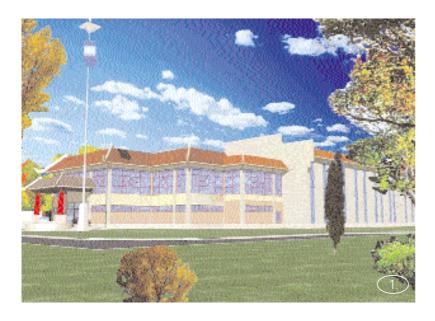




 Sulfuric acid storage and phosphoric acid unit, Senegal.

2. BMS project. Indena, Italy.

#### Fields of activity Industries





Technip-Coflexip carried out the expansion of L'Oréal's cosmetics plant near Warsaw in Poland. The project consisted of integrating into the existing plant a processing unit and packaging facilities, as well as utilities and storage, to be used mainly in the production of shampoos. In 2001, the Group's engineering center based in Paris, which successfully executed this project, was entrusted by L'Oréal with the revamping and expansion of its plant at Caudry in France.

The Group's engineering center which opened a short time ago in **Thailand**, and which was certified ISO 9001 in October, successfully completed its project for the design and construction of a human vaccine plant near Bangkok. This plant, built for GPO-MBP, a joint venture between Aventis Pasteur and Government Organization of Thailand, will produce 25 million doses of vaccine per year and will be commissioned shortly.

The new finished-form pharmaceutical unit at Tianjin, China, was delivered to Servier by Technip Tianchen, the local affiliate of Technip-Coflexip. The design study had been carried out earlier by the Group in Paris. Technip-Coflexip was awarded, by Aventis Crop, a contract, worth about US \$25 million, for the engineering, equipment supply and supervision of construction of a pesticides plant at Hangzou. This project is being jointly carried out by the engineering center of the Group in Lyon and Technip Tianchen's teams.

Lastly, Krebs Enghenaria, one of the Brazilian affiliates of Technip-Coflexip, won a contract with Servier for the engineering and project management of a finished-form pharmaceutical plant at Rio de Janeiro, in **Brazil**.

3-D view of pharmaceutical plant.
Tianjin, China.

2. Overall view of fertilizer complex. Darou-Koudoss, Senegal.



#### ■ FERTILIZERS

In March 2001, Technip-Coflexip's Brazilian affiliate, Krebs Engenharia, was awarded by Copebras a turnkey contract, worth about 100 million dollars, for the design and construction of a phosphatic fertilizer plant at Catalão, Goias State, in Brazil. The new facilities, which are scheduled to come on stream at the end of 2002, will include a sulfuric acid unit (1,350 tons/day), a phosphoric acid unit (370 tons/day), a 1,200-ton-a-day simple superphosphate (SSP) unit and a triple superphosphate (TSP) unit, as well as a granulation unit.

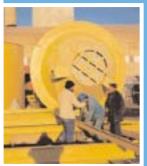
Krebs Engenharia successfully completed another turnkey project, worth 20 million dollars, at Catalão for Fosfertil. This contract included the design and construction of a 350,000-ton/year SSP production unit, an SSP granulation unit and related utilities and offsites. Performance tests were carried out successfully at the beginning of 2002.





In Senegal, construction works to double the capacity of a sulfuric/phosphoric acid complex for Industries Chimiques du Sénégal (ICS), at Darou Koudoss, was completed in August 2001. This project was designed to increase the capacity of the existing complex by 3,000 tons/day of sulfuric acid and 1,015 tons/day of phosphoric acid. Start-up and performance tests are scheduled to be carried out in the near future.

In addition, Technip-Coflexip continued executing a turnkey contract awarded by Kemapco for a 350-ton/day nitric acid unit at Aqaba in Jordan, with start-up expected in 2002.



#### Fields of activity **Industries**

#### CHEMICALS

In March 2002, BASF awarded Technip-Coflexip a contract, worth about 50 million euros, concerning the conversion of a **chlorine** production unit at Ludwigshafen in Germany. This project will allow use of a membrane technology.

Barcelona, in Spain was completed in January and the new facilities came on stream during the first half of 2001. The contract, awarded to Technip-Coflexip in September 1999 by Hispavic (Solvay group), involved a capacity expansion of 120,000 tons/year and the revamping of existing units. Within the framework of this project, the Group's engineering centers based in Barcelona, Lyon and Paris worked in close collaboration to carry out the engineering, procurement and construction supervision.

Technip-Coflexip continued work on the projects concerning sodium chlorate production units for Albchem in Canada and for Atisholz in Switzerland.

Proyecto

PVC 2001

The turnkey project for the design and construction in Finland of a plant producing a chemical additive for binding paper pulp has been carried out in accordance with the contractual schedule and should be completed in June 2002. Execution of the contract had been entrusted by BASF, in December 2000, to a joint venture made up of Technip-Coflexip's engineering center in Dusseldorf and the Finnish engineering company Rintekno Oy, in which Technip-Coflexip holds a 28.6 % share. The plant, which will have a capacity of 140,000 tons/year, is being constructed at Hamina.

In June 2001, Technip-Coflexip was issued the mechanical reception certificate for the hydrocyanic acid unit built for Butachimie (Rhodia/Du Pont) at Chalampé in France.

Technip-Coflexip's Industries Branch was entrusted in 2001 with engineering for the expansion of the boosters plant for the Ariane 5 satellites launcher. This **propellant** 

plant is located in French Guyana, within the Kourou space center.



Construction of a PVC suspension unit at Martorell, near

Technip-Coflexip's Industries Branch designed and built, for Aragonesas, a hydrogen peroxide unit at Sabinanigo, and provided the engineering for the construction of two solid chlorine units of different types (ATCC and DCCNa) at the same site. The Group also worked for Aragonesas on the expansion of its PVC suspension units at Vilaseca and Monzon.

Technip Iberia carried out basic engineering, detailed engineering (not including civil works), equipment procurement and project management for an aroma chemicals plant built for Kao Corporation, at Olesa de Montserrat, near Barcelona.





The year 2001 saw the start-up of the 120,000-ton/year acrylic acid unit built at Bayport, Texas, in the United States for American Acryl, a joint venture between Nippon Shokubai and ELF Atochem North America. This turnkey project, worth 150 million dollars, was executed by the Group's teams from Technip USA in Houston and from Paris, in partnership with Parsons, which carried out the construction. The facilities include an acrylic acid unit, a butyl acrylate unit, as well as offsites and utilities.

In Malaysia, the 150,000-ton/year PVC plant at Kerteh, designed and built for Vinyl Chloride Malasia by Technip-Coflexip's engineering center based in Kuala Lumpur, was brought on stream.

The Group's affiliate in China, Technip Tianchen was selected by Bayer, in November 2001, to carry out the engineering, equipment supply and construction of the infrastructures for the new chemical complex at Caojing, near Shanghai, in **China**. Under the terms of this project, Technip Tianchen will provide the utilities needed for operating the complex's two units: a polycarbonate plant and a polyisocyanate plant, whose design and construction had also been entrusted to it in April 2001. These facilities are expected to come on stream in 2003.







#### AGRO-INDUSTRIFS

In January 2002, the company SOGB, of the Bolloré group, entrusted Technip-Coflexip's Industries Branch with providing the technology, design and construction of a palm oil plant at its site at Grand Béribi, 400 km west of Abidjan, in Ivory Coast. The plant will produce 30,000 tons of crude palm and 6,000 tons of palm kernels per year. It will be the seventh palm oil plant built by the Group in Ivory Coast, based on its own technology.

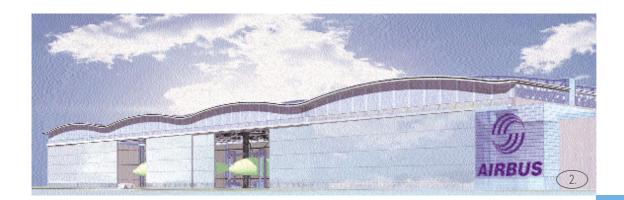
Two months earlier in the same country, Technip-Coflexip had been issued acceptance certificate for the Gbapet palm oil plant (20,000 tons of oil per year), whose turnkey construction had been entrusted to it by the company Palmci in November 1999.

Vietnam National Alcohol Corporation awarded Technip-Coflexip a contract for the design and construction of a 60,000-hl/year ethanol production unit. This unit will be built near Ho Chi Minh City, **Vietnam** on the site of a distillery already provided by the Group, and will be based on its proprietary technology. Commissioning of this unit is expected in June 2003.

### ■ METALLURGY

In June 2001, the Canadian group INCO selected Technip-Coflexip and Bechtel — with Hatch as subcontractor — to provide engineering, procurement and construction supervision as well as project management of the whole Goro nickel-cobalt project in the south of New Caledonia. The Goro complex will produce 54,000 tons of nickel and 5,400 tons of cobalt per year. It will include a hydrometallurgical processing plant, mining facilities, a power plant, chemical units, as well as infrastructures. Total investment is estimated at 1.4 billion dollars. Technip-Coflexip and Bechtel have already executed basic studies, and, notably, an environmental impact study, thus allowing the opening of a public inquiry, which is necessary in order to obtain a construction and operating permit for the facilities. The EPC contract is expected to be awarded shortly.

Technip-Coflexip won, as a subcontractor for Péchiney, an engineering, procurement and construction contract to revamp and optimize the bauxite and aluminum production plant belonging to Corporation of Guyana, in Venezuela.



#### MICROFI FCTRONICS

In France, acceptance of Atmel's new semi-conductors manufacturing facility at Rousset was issued in June 2001. This project was executed on a very tight schedule (13 months) by a Technip-Coflexip team from Lyon working on the site. Services included basic and detailed engineering, subcontracting enquiries and finalization, as well as coordination and supervision of construction. The new facility will include 4,300 m² of clean rooms, 2,000 m² of which are class ISO 2.

# ■ INDUSTRIAL BUILDINGS

Technip-Coflexip, as leader of a consortium also including Aéroport de Paris Ingénierie and the architectural firm Cardete & Huet, was selected, in March 2001, by EADS Airbus to carry out engineering services and project management of the assembly plant for the A 380 super-jumbo, to be built at Toulouse, France. This plant will include about twenty 120-meter-span assembly halls.



## ELECTRICITY

The expansion and revamping of the power plants at Abqaiq, in Saudi Arabia, were completed in February 2002, one month ahead of the contractual schedule. This turnkey project was performed by the Technip-Coflexip engineering center based in Rome, for Saudi Aramco. The new facilities include three 40 MW gas turbines, a steam boiler, two electrical substations and a distributed control system.

In May 2001, two months ahead of the contractual schedule, Technip Italy also completed for Motor Oil Hellas the capacity expansion of the power plant at the Corinth refinery in **Greece**.

In Germany, the Group's affiliate based in Dusseldorf continued, for RWE, construction of a thermal waste treatment unit which will be integrated with the power plant at Hamm, near Dortmund. Construction will be completed during the first half of 2002.

The contract for delivery of a high-pressure piping system for RWE's lignite-fired power plant at Niederhaussem near Cologne will be completed in October 2002 in accordance with the contractual schedule.

- 1.3-D view of nickel/cobalt project.Goro, New Caledonia.
- 2. Airbus assembly plant, EADS. Toulouse, France.



# Human Resources

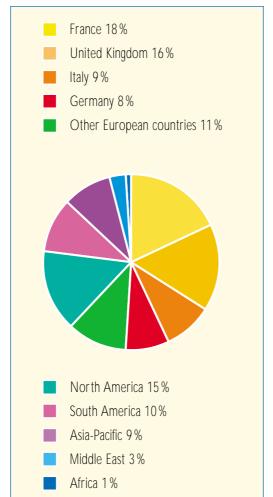




### Staff

The merger in 2001 of Technip and Coflexip led to the creation of a new Group of 18,000 people in 52 countries.

The Human Resources policy evolves along with the growth of Technip-Coflexip, while facilitating the integration of the teams, the development of their skills and the implementation of the synergies within the Group.



# Integration

2001 was the year of the integration of Technip and Coflexip.

The great complementarity of the two Groups, the sharing of strong common values and the qualities of adaptability and openness that characterize the teams enabled this integration to take place rapidly and effectively.

A certain number of communication actions accompanied the integration: the diffusion within the Group of a general brochure giving an overview of Technip-Coflexip, a videocassette in which Top Management presents the Group's strategy, and the design of a new visual identity.

The Corporate teams were regrouped at Paris La Défense just a few weeks after the creation of Technip-Coflexip, thus allowing the departments concerned to operate most effectively.

Joint training programs and seminars for the personnel of the three Branches also multiplied the occasions for meeting and exchanging ideas, thus contributing to the development of a feeling of belonging to the new Group.







# Development of skills

The new Group Technip-Coflexip offers new opportunities for each member of the 18,000-person workforce to develop his or her skills, as well as offering expanded horizons.

The creation of an Experts network facilitates identification of the many Experts within the Group, allows a specific management program to be established for these people and contributes to a better utilization and valorization of the expertise found in the three Branches. A code of expertise has been developed and distributed throughout the Group.

The best tools and practices used at Technip and Coflexip to retain and develop talent have begun to see general usage throughout the Group: notably specific follow-up of young newly-hired employees to facilitate their integration and career orientation, the identification and management of those with high potential, and mentoring.

The goal is to enable each employee to evolve within the Group by developing his or her skills to meet the short and long-term needs of Technip-Coflexip.

# Team mobility and internationalization

Technip-Coflexip's teams are present today in 52 countries on the five continents.

The growing internationalization of the teams enables members to enhance their skills in all fields, to exchange complementary experience and know-how, and to build a common culture. More than 800 people today work outside their country of origin.

Projected plans for transfers are in place to organize these exchanges.

An Intranet site "Technip-Coflexip Mobility" progressively enlarged throughout the Group, provides every employee with access to available positions.









# Technip-Coflexip worldwide Main operational bases





# **TECHNIP-COFLEXIP**

Date of creation: 1958
A limited company with a Management Board and a Supervisory Board capitalized at 81,476,016.40 euros.

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# **TECHNIP-COFLEXIP**







**HEADQUARTERS**