

REFERENCE LIST

AERONAUTICS

Sails trial bench
Sailing elements forming presses
Press pots

E D F (Board of the French Electricity)

Dam diversion gallery sluice gate
Dam gates
Sluice gates lifting
Servomotors for the control of turbines vanning
Wagon sluice gates
Hydraulic Cylinders for wagon sluice gates
Pylon test benches

STEEL WORKS

Arc Furnaces (Arc Cylinders 600. 800. 900)
Beam furnaces
Continuous casting
Universal train cold saw bar tightening
6 Thread twisters
Binder bundler
Compacters
Tubes expanding machine
Iron sheet straightening bench
Surfacing lines
Ore bin
Gantry

S N C F (Board of the French Railways)

Suspension dynamic test bench
Axle box trial bench
Handling and jacking cylinder for the setting of a railway bridge
including 2 pieces of 100 meter length and 1,000 tons weight spans

INDUSTRY

Trial benches - Chain test benches
Hexaedral press
Presses for the automobile and aeronautics industries
Marine -Cardboard manufacture
Molding - Fixing - Threading - Folding - Blocking - Stamping
presses
Woll bale presses
Scrap iron packing presses
Coiling and uncoiling hoists
Agglomerate machines
Mixers
Tubes binding machines

MARINE

Bridge handling devices
Gantry handling
Lifting bridges
Rising bridges
Turning bridges
Turning bridges locking
Auomotor bridges
Car Ferries gangways
Convoing boarding tables
Hold pannels cylinders
Boarded fixed cranes
Periscope cylinders
Non magnetic Cylinders
Rigged Cylinders
Anti rolling stabilizers
Hydraulic rippler
Hoist reducer

CIVIL WORKS

Telescopic Cylinders long strokes for 60 tons voussoirs
Drilling rig
Dredges
Fire fighting ships
Water adduction gates
Dam gates
Locks

MINES

Shield support for mines
Continuous miner
Drilling Jumbos

HANDLING

Lifts
Cranes
Hydraulic shovel wheels
Special trailer millepede type

ROAD VEHICLES

Rubbish buckets
Truck tipper
Dumpers
Agricultural tippers
Tipping trailers

METALLIC CONSTRUCTIONS & BUILDINGS

Framing
Premanufacturing tables and molds

SPORT EQUIPMENT

Swimming Pool (Driving Board with hydraulic cylinders)

ARMAMENT

Automotor bridges cylinders
Lifting station for N 500 hovercraft

OFF SHORE

Drilling rig
Loading rig
Connecting bolt articulated column
Liners
Lifts
Hydraulic gantry

REFERENCE LIST

WATER EQUIPMENTS

SLUICE GATE OF CUSTINES ON THE MOSELLE (France)

4 Hydraulic Cylinders 180 x 130, Stroke 2600
5 Hydraulic Cylinders 180 x 130, Stroke 2350

SLUICE GATE OF METZ NORTH AND OF TALANGE ON THE MOSELLE (France)

2 Hydraulic Cylinders DE 180 x 120, Stroke 2530

SLUICE GATE OF BLENOD LES PONT A MOUSSON -54700 - (Meurthe et Moselle / France)

4 Hydraulic Cylinders 180 x 130, Stroke 2600
4 Hydraulic Cylinders 270 x 160, Stroke 3125

SLUICE GATE OF BORDEAUX - 33000 - (Gironde / France)

4 Hydraulic Cylinders 200 x 140, Stroke 3100
8 Hydraulic Cylinders 200 x 120, Stroke 1500
15 Hydraulic Cylinders SE 130, Stroke 100
4 Hydraulic Cylinders SE 130, Stroke 2000

SLUICE GATE OF RECHICOURT - 55230 - (Meuse / France)

Hydraulic Cylinders DE 210 x 90, Stroke 2700

LORIENT DRAWBRIDGE - 56100 - (Morbihan / France)

DAM OF COUESNON

DA 200 x 110, Stroke 1500

HYDRAULIC CYLINDERS FOR THE LOCKING OF THE NEW SLUICE GATE OF LE HAVRE - 76600 - (Seine Maritime / France)

4 Hydraulic Cylinders 420 x 300, Stroke 550
4 Hydraulic Cylinders 420 x 300, Stroke 700

DAM OF VILLENEUVE-LES-AVIGNON (France)

Hydraulic Cylinders (30400) GARD
5 Hydraulic Cylinders 350 x 160, Stroke 2350

E.D.F. (Board of the French Electricity) - 38000 - GRENOBLE (ISERE / France)

Gate of the derivation gallery of the BOURNILLON factory high dam fall
1 Hydraulic Cylinder SA 270 x 160, Stroke 2300
1 Hydraulic Cylinder SA 180 x 110, Stroke 2250

E.D.F. (Board of the French Electricity) - 34500 BEZIERS (Hérault / France)

Aménagement d'ESCOULOUBRE - Gate of the dam of PUYVALADOR
1 Hydraulic cylinder SE 250 x 110, Stroke 2400
1 Hydraulic cylinder SE 100 X 90, Stroke 2400

E.D.F. (Board of the French Electricity) - 08500 REVIN (Ardennes / France)

Hydraulic cylinder DA IGate lifting
1 Hydraulic cylinder SA 180 x 110, Stroke 2250
For many applications, we have supplied many Hydraulic Cylinders servo-motor of gating drive for turbine.

WHARF FOR CAR FERRIES - BRIDGE OF TANGER (Marocco)

Hydraulic Cylinders DA 225 x 110, Stroke 4100 and 5000

Modernisation of the Sluice gates of TANCARVILLE - 76430 - (Seine Maritime / France)

Hydraulic Cylinder DA 200 x 130, Stroke 1800

Hydraulic Cylinders for Lifting - Dam of BROU - REGREG (MAROCCO)

5 Hydraulic Cylinders SA 390 x 110, Stroke 3000

Hydraulic Cylinders for Lifting - Dam of RIO BAYANO (PANAMA)

2 DA 340 x 130, Stroke 2500

Dam of SISTERON - 04200 - (Alpes de Haute Provence / France)

2 Servo-motors 400 x 100, Stroke 7262

Dam of PAGNY France)

6 Hydraulic Cylinders SA pulling 250 x 130 Stroke 4150

FALL OF GOLFECH - REH - (Massif Central/Pyrénées / France)

1 SA pulling 520 x 130, Stroke 3480

Dam of MOULAY YOUSSEF (Marocco)

1 DA 360 x 160, Stroke 5100

1 DA 280 x 125, Stroke 3700

Dam of Greffier - (Sarthe) Le Mans (France)

2 SA 225 x 110, Stroke 1350

Shear-Wagon - EDF – (France)

1 DA working as SA in pulling 125 x 70, Stroke 1550

Dam of la Queueille - EDF – (France)

1 DA 160 x 110, Stroke 1200
1 DA Double Rod 200 x 110 x 30, Stroke 2100

SLUICE GATE of ECUELLES and SEURRE (France)

9 DA 140 x 100, Stroke 2600
9 DA 160 x 110, Stroke 2550

REH - RHONE - BOURG DE STROD - EDF – (France)

1 DA 100 x 55, Stroke 2700
1 DA 160 x 110, Stroke 1060

Harnessing of la DURANCE - WATERFALLS of SISTERON – EDF (France)

4 DA 200 x 100, Stroke 3010
4 DA 160 x 100, Stroke 3130
2 DA 200 x 140, Stroke 1850
4 DA 300 x 140, Stroke 2850

Harnessing of SALIGNAC - Dam of St LAZARE – EDF (France)

8 DA 320 x 140, Stroke 3500
2 DA 280 x 180, Stroke 2380

Central Power Station of VIGOTAN – EDF (France)

1 DA 100 x 70, Stroke 3100
1 DA 160 x 110, Stroke 4300

Dam of Chambon (France)

4 Hydraulic Cylinders DA 520 x 190, Stroke 4630
2 Hydraulic Cylinders SA 500 x 140, Stroke 4100

Harnessing of la COCHE - Tapping of BELLEVILLES (France)

2 DA 125 x 85, Stroke 2270

Canal of BRUSSELS - CHARLEROI (Belgien)

19 Hydraulic Cylinders 160 x 90, Stroke 1750

19 Hydraulic Cylinders 180 x 80, Stroke 2430

10 Hydraulic Cylinders 160 x 70, Stroke 4330

SLUICE GATE of TALANGE ET D'ARS on MOSELLE (France)

4 DA 176 x 125, Stroke 2570

4 DA 200 x 140, Stroke 2600

4 DA 240 x 120, Stroke 2420

Operating of the up-stream cut-water of the linkspan ROLL ON ROLL OFF OF THE WEST PORT OF DUNKIRK (France)

2 DA 140 x 85, Stroke 2000

RO-RO EMBARCATION Bridge of Verdon BORDEAUX (France)

2 DA 275 x 130, Stroke 10 000

Terminal Linkspan in ROUEN (France)

2 DA 320 x 160, Stroke 6050

LINKSPAN IN LE HAVRE (France)

2 DA 260 x 130, Stroke 8500

Telescopic masts

2 DA 260 x 240 x 190, Stroke 8000

Dam of MORNAGHIA

1 Hydraulic cylinder SA Force 22 tons - 200 x 80, Stroke 2250
3 Hydraulic Cylinders SA Force 10 tons - 150 x 80, Stroke 1450

Dam of MONTEZIC (France)

2 Hydraulic Cylinders SA pulling - 320 x 80, Stroke 6700

Dam LACROUX (France)

2 Hydraulic Cylinders DA 240 x 80, Stroke 5400
2 Hydraulic Cylinders SA 320 x 150, Stroke 2750

Servo - Motor for Gates -

4 Hydraulic Cylinders Servo-Motor - DA Double rod 320 x 120, Stroke 246
2 Sets of Locking Devices

OVIDE BRIDGE IN CALAIS (France)

1 Hydraulic cylinder 280 x 200, Stroke 1650
1 Power Pack

BUSINESS HAINAUT SAMBRE (France)

6 Hydraulic Cylinders DA 100 x 70, Stroke 250
6 Hydraulic Cylinders DA 125 x 90, Stroke 250

POWER STATION E.D.F. of LOIRE SUR RHONE (France)

82 Hydraulic Cylinders DA 80 x 56, Stroke 380
82 Plungers Lg 745

Hydraulic Cylinders for operating water-valves

2 Hydraulic Cylinders DA 140 x 60, Stroke 360

Lifting Bridge LE GRAU DU ROI (GARD / France)

For the operating of the bridge SCHERZER wight movement checking at the lifting and descent

1 DA 275 x 130, Stroke 1800

Linkspan DIEPPE FERRY (SEINE MARITIME / France)

Re-building of the Linkspan HENRI IV

2 DA 275 x 140, Stroke 8500

SLUICE GATE of CHERBOURG (Manche / France)

2 DA 180 x 130, Stroke 3600

Water-Falls of EAUX BONNES on the VALENTIN (Pyr. Atlantiques / France)

1 DA 140 x 85, Stroke 1700

Linkspan of ROUEN (SEINE MARITIME / France)

2 DA 320 x 160, Stroke 6050

SLUICE GATE of CARENTAN (Manche / France)

1 DA 180 x 110, Stroke 1750

Mobile Bridge of HENNUIN (Pas de Calais / France)

1 DA 180 x 110, Stroke 1950

Dam LA VALIERE (Ile et Vilaine / France)

1 DA 100 x 70, Stroke 1250

Dam of PETIT SAUT (GUYANA)

6 Hydraulic Cylinders SA 500 x 140, Stroke 7300

DAM (17 888)

2 Hydraulic Cylinders 430 x 150 x 10 200

Dam of PINET (France/71 139)

12 Hydraulic Cylinders 440 x 320 x 5050

Dam of GRAFENHOF –69641 - (AUSTRIA)

Hydraulic Cylinders 300 x 120 x 4549

Dam of SONG LOULOU in Ivory Coast (67138)

4 Hydraulic Cylinders 300 x 100 x 7020

Dam of "AL MOUSTAKBAL"

3 Hydraulic Cylinders SA 275 x 75, Stroke 3100
1 Hydraulic cylinder DA 150 x 85, Stroke 1265
1 Hydraulic cylinder DA 360 x 100, Stroke 2950
1 Hydraulic cylinder DA 300 x 140, Stroke 1840

Dam of FOUM-GLEITA - MAURITANIA

2 DA 160 x 80, Stroke 1800
1 DA 110 x 60, Stroke 2650
1 DA 125 x 70, Stroke 1900
1 DA 100 x 56, Stroke 1800
1 Power Pack capacity 65 1 for Hydraulic cylinder 160
x 80, Stroke 1800
1 Power Pack for Hydraulic cylinder DA 100 x 56, Stroke 1800
1 Power Pack for Hydraulic cylinder DA 125 x 70, Stroke 1900

MOBILE BRIDGE and SLUICE GATE of HONFLEUR (Calvados/France)

Hydraulic cylinder - 1 DA 300 x 130, Stroke 2100
Hydraulic Cylinders - 2 DA 180 x 100, Stroke 2300
Hydraulic Cylinders - 4 DA 80 x 45, Stroke 600

Mobile Bridge of Port de LEUCATE (Aude/France)

1 DA 125 x 85, Stroke 1700

Valve of Arles A Bouc (Dam against salt) (Bouches du Rhône/France)

1 DA 140 x 90, Stroke 2900

SLUICE GATE of CADEROUSSE (Vaucluse/France)

4 DA Double Rod 350 x 160, Stroke 1400

SLUICE GATE of St Vaast la Hougue (France)

2 DA 180 x 130, Stroke 3650

Sluice gate of Le Tréport (France)

2 DA 300 x 200, Stroke 3150
2 DA 80 x 55, Stroke 400
1 Power Pack 2 x 18,5 kw
Tank capacity 500 l

Sluice gate of DIEPPE (France)

4 Hydraulic Cylinders 270 x 160 x 3125
4 Hydraulic Cylinders 200 x 140 x 3100
Hydraulic Cylinders 210 x 40 x 2700
Hydraulic Cylinders 180 x 130, Stroke 2000

Sluice gate of LE TREPORT (France)

2 Hydraulic Cylinders DA 340 x 200, Stroke 4400
3 Hydraulic Cylinders DA 80 x 56, Stroke 1250
2 Hydraulic Cylinders DA 100 x 70, Stroke 2050
2 Hydraulic Cylinders DA 180 x 90, Stroke 3000
2 Hydraulic Cylinders DA 110 x 56, Stroke 400
1 Hydraulic cylinder DA 100 x 70, Stroke 2450
1 Hydraulic cylinder DA 100 x 70, Stroke 1750

Ro Ro Linkspan of ROUEN (France)

Hydraulic Cylinders 300 x 120 x 8700
Hydraulic Cylinders 320 x 200, Stroke 2100
Hydraulic Cylinders 160 x 90 x 1850
Power Packs

Linkspan of CHERBOURG (France)

12 Hydraulic Cylinders DA 110 x 63, Stroke 600

Linkspan of CAEN – OUISTREHAM (France)

2 Hydraulic Cylinders DA 600 x 260, Stroke 9865
2 Hydraulic Cylinders DA 360 x 220, Stroke 2985
12 Hydraulic Cylinders DA 140 x 100, Stroke 600
2 Hydraulic Cylinders DA 50 x 36, Stroke 300
2 Hydraulic Cylinders DA 50 x 36, Stroke 300
1 Power Pack

Turning Bridge Henri Hénon in CALAIS (France / 68050)

2 Hydraulic Cylinders 225 x 160 x 2950 + many other Hydraulic Cylinders
Power Pack, Piping

Sluice gates on the Rhone River (Pierre Bénite, Beauchastel /France 67510)

Hydraulic Cylinders 250 x 130 x 1350
Hydraulic Cylinders 140 x 63 x 1650
Power Pack, Piping

Lifting Bridge Sluice gate in Dunkirk (France / 66300)

1 Hydraulic cylinder 275 x 160 x 3300

Pontoon at the Port of Rouen (France / 65204)

2 Hydraulic Cylinders 455 x 260 x 6670

Linkspan of CHERBOURG 4 – France

12 Hydraulic Cylinders DA 110 x 63, Stroke 600
4 Hydraulic Cylinders SA 400 x 160, Stroke 11300

Sluice gate of TRYSTRAM (Dunkirk / France)

4 Hydraulic Cylinders DA 480 x 320, Stroke 10700
8 Hydraulic Cylinders DA 125 x 70, Stroke 490

Motorway Mobile Bridge of the A29 (France)

5 Hydraulic Cylinders 510 x 370, Stroke 5050
5 Hydraulic Cylinders 340 x 220, Stroke 1250
4 Hydraulic Cylinders 100 x 70, Stroke 150
4 Hydraulic Cylinders 140 x 100, Stroke 430

Linkspan Ro-Ro of the Port of Le Havre (France)

2 Hydraulic Cylinders DA 430 x 230, Stroke 8644
2 Hydraulic Cylinders DA 430 x 230, Stroke 8393
2 Hydraulic Cylinders DA 390 x 200, Stroke 8386
2 Hydraulic Cylinders DA 390 x 200, Stroke 8142

Dam in Sungai Sarawak (Malaysia)

6 Hydraulic Cylinders DA 540 x 240, Stroke 3350 equipped with Encoders
8 Hydraulic Cylinders DA 480 x 180, Stroke 4050 equipped with Encoders

Dam ST MAURICE (France)

4 + 1 Hydraulic Cylinders DA 400 x 160, Stroke 4125

LIFTING BRIDGE of PORT ST LOUIS DU RHONE (France) – Rods with KERADOUCE® coating

2 Hydraulic Cylinders DA 250 x 200, Stroke 5760

DAM PORCE II - Columbia

6 Hydraulic Cylinders SA 360 x 150, Stroke 1868

PAL DANG DAM - KOREA

4 Hydraulic Cylinders DA 260 x 80, Stroke 8600

DAM FOR SWITZERLAND RUPPOLDINGEN - Rods with KERADOUCE® coating

8 Hydraulic Cylinders DA 280 x 125, Stroke 3 150

4 Hydraulic Cylinders SA 180, Stroke 1 850

PROJECT TARRAGONA - SPAIN

4 Hydraulic cylinder 500 x 300, Stroke 400

4 Hydraulic cylinder 125 x 70, Stroke 710

2 Hydraulic cylinder 180 x 90, Stroke 560

DAM DAMIETTA – EGYPT

4 Hydraulic cylinders SA 100 x 50, Stroke 2 700 with sensors

2 + 2 Hydraulic cylinders DA 250 x 140, Stroke 2 665 with sensors

DAM OF LA RANCE - EDF FRANCE - Rods with KERADOUCE® coating

3 + 3 Servomotor 670 x 170, c 10 150 (Rod length 12 900 mm)

PROJECT LAMTAKHONG - THAILAND

8 Hydraulic Cylinders DA 440 x 210, Stroke 2701

ESTESPERRWERK (HAMBURG/Germany) – Rods with KERADOUCE® coating

2 Hydraulic cylinders 500 x 360, Stroke 10600
4 Hydraulic cylinders 460 x 280, Stroke 7700
2 Hydraulic cylinders 63 x 36, Stroke 320
4 Hydraulic cylinders 100 x 70, Stroke 500
4 Hydraulic cylinders 100 x 70, Stroke 1600

DAM MASJED SULEYMAN – IRAN – Rods with KERADOUCE® coating

10 Hydraulic cylinders 400 x 160, Stroke 17500
2 Hydraulic cylinders 400 x 160, Stroke 5600
2 Hydraulic cylinders 520 x 160, Stroke 3330
2 Hydraulic cylinders 340 x 160, Stroke 3900
2 Hydraulic cylinders 110 x 70, Stroke 148

BRIDGE TRAVEMÜNDE – (GERMANY) – Rods with KERADOUCE® coating

2 Hydraulic cylinders DA 620 x 220, Stroke 2900
2 Hydraulic cylinders DA 480 x 180, Stroke 3550
2 Hydraulic cylinders DA 300 x 200, Stroke 2350

PROJECT BILLWERDER BUCHT - (GERMANY) – Rods with KERADOUCE® coating

8 + 8 Hydraulic cylinders DA 560 x 220, Stroke 8400

Sluice Gate of SABLONS(France) - Rods with KERADOUCE® coating

2 Hydraulic cylinders DA 150 x 50, Stroke 3400

BRIDGE on LA LOIRE (France)

Rods with KERADOUCE® coating

4 Hydraulic cylinders DA 320 x 250, Stroke 4000 with rod locking device
1 Power pack

HANDLING - LIFTING

E D F

Hydraulic cylinders 160 x 90, Stroke 1500

Improvement of the operating devices - Bridge QUINETTE of Rochemont (France)

Hydraulic Cylinders DA 320 x 180, Stroke 2300
Cranes 35 T - Brest - (Finistère)
Hydraulic Cylinders DA 210 x 140, Stroke 4250

Operating of the Gantry - LA ROCHELLE - 17000 (Charente Maritime/Fance)

Hydraulic Cylinders DA 320 x 180, Stroke 2000

STACKER YOUSOUFIA (Marocco)

1 Power Pack for the drive of the Hydraulic Cylinders
2 Hydraulic Cylinders 100 x 55, Stroke 90

STACKER YOUSOUFIA (Marocco)

Boom Lifting Equipment with :

- * 1 Hydraulic cylinder DA 250 x 180, Stroke 2300
- * 1 Power Pack
- * 2 Hydraulic Cylinders DA 80 x 45, Stroke 300
- * 1 Power Pack

Equipment for Stacker in DUNKIRK - France

Hydraulic Equipment of Boom Lifting :
1 Hydraulic cylinder DA 280 x 160, Stroke 3200
1 Power Pack with capacity 350 liters - power 22 KW
1 Hydraulic Device of stabilization
2 Hydraulic Cylinders DA 80 x 45, Stroke 685
1 Power Pack for Feeding of 2 Hydraulic Cylinders
1 Hydraulic Device of Tension

Business DRAVO MEXICO

Hydraulic Equipment with :

- 1 Hydraulic cylinder DA 160 x 110, Stroke 1680 for Boom Lifting
- 1 Hydraulic cylinder DA 100 x 56, Stroke 100 for orientation locking
- 2 Hydraulic Cylinders DA 125 x 70, Stroke 86
- 1 Power Pack

Hydraulic Equipment with :

- 2 Hydraulic Cylinders DA 100 x 56, Stroke 100 for Feeding Locking
- 2 Hydraulic Cylinders DA 300 x 180, Stroke 180 for boggies lifting
- 4 Hydraulic Cylinders DA 63 x 45, Stroke 850 for boggies rotating
- 2 Hydraulic Cylinders SA 90, Stroke 300
- 2 Hydraulic Cylinders DA 125 x 70, Stroke 86 for Rail-Tongs
- 1 Power Pack

SUGAR-WORKS OF ZEMAMRA -MAROCCO

Truck Bump with :

- 6 Hydraulic Cylinders Telescopic SA 170 x 205, Stroke 3100
- 3 Hydraulic Cylinders DA 63 x 36, Stroke 300
- 3 Hydraulic Cylinders DA 80 x 56, Stroke 850
- 3 Power Packs

Reclaimer OCP Khouribga - MAROCCO

- 8 Hydraulic Cylinders DA 160 x 110, Stroke 750
- 8 Hydraulic Cylinders DA 160 x 110, Stroke 600
- 4 Hydraulic Cylinders DA 125 x 85, Stroke 450
- 8 Hydraulic Cylinders DA 125 x 70, Stroke 1250
- 4 Hydraulic Cylinders DA 125 x 70, Stroke 1250
- 4 Power Packs capacity 120 l

Reclaimer OMARSKA - YOUGOSLAVIA

- 2 Hydraulic Cylinders for boom Lifting DA 225 x 160, Stroke 1120
- 1 Power Pack capacity 250 l
- 1 Set of hydraulic device for stabilization
- 2 Hydraulic Cylinders DA 80 x 45, Stroke 220
- 1 Power Pack
- 1 Hydraulic Equipment for boom lifting
- 2 Auto-Hydraulic Cylinders 125 x 85, Stroke 1310, Capacity 25 l

Reclaimer MARITSA – BULGARIA

4 Hydraulic Cylinders DA 180 x 100, Stroke 770
4 Power packs
8 Hydraulic Cylinders DA 80 x 45, Stroke 90

Reclaimer NANTES - France

2 Auto-Hydraulic Cylinders for boom lifting
250 x 125, Stroke 1600, Capacity 65 l
2 Hydraulic devices for stabilization
2 Pumps with manual drive
8 Hydraulic Cylinders 63 x 50, Stroke 320

Business KOREA

4 Power Packs
4 Hydraulic Cylinders DA 180 x 100, Stroke 2850
4 Hydraulic Cylinders DA 200 x 110, Stroke 1000
4 Hydraulic Cylinders DA 125 x 90, Stroke 520
4 Hydraulic Cylinders DA 250 x 160, Stroke 100

Reclaimer El Dikheila – Egypt

2 Hydraulic cylinders DA 225 x 130, Stroke 2100
1 Groupe moto-pompe

Port Crane of NANTES - France

1 Hydraulic cylinder DA 360 x 180, Stroke 2345
1 Hydraulic cylinder DA 360 x 180, Stroke 2315
1 Hydraulic cylinder DA 320 x 160, Stroke 2930

Equipment for Automotive see port cranes (Germany and Italy) –

Rods with **KERADOUCE®** coating

5 + 4 + 4 Hydraulic cylinders DA 210 x 180, Stroke 4700
20 + 16 + 16 Hydraulic cylinders DA 130 x 120, Stroke 500

CIVIL WORKS

VIADUCT of CHALIFERT (France)

- 4 Hydraulic sets with :
 - 1 Hydraulic cylinder SA 530, Stroke 70
 - 2 Hydraulic Cylinders DA 250 x 180, Stroke 250
 - 1 Mecanical Set
 - 2 Hydraulic Cylinders DA 110 x 75, Stroke 1000

HYDRAULIC HAMMER, Holland

- 1 Hydraulic cylinder DA Double Rod 80 x 50 x 50, Stroke 1450

BRIDGE A 19 (FRANCE)

- 5 Hydraulic cylinders DA 510 x 370, Stroke 5050
- 5 Hydraulic cylinders DA 340 x 220, Stroke 1250
- 4 Hydraulic cylinders DA 100 x 70, Stroke 150
- 4 Hydraulic cylinders DA 140 x 100, Stroke 430

STEEL WORKS

CRUSHER

4 Hydraulic Cylinders SA 80, Stroke 450
9 Hydraulic Cylinders SA 80, Stroke 350
2 Hydraulic Cylinders SA 63, Stroke 450

WHIRL - Lifting Ladle -

2 Hydraulic Cylinders DA 450 x 250, Stroke 500
1 Hydraulic cylinder DA 630 x 500, Stroke 600
1 Hydraulic cylinder DA 400 x 320, Stroke 450

Gauging line Neck-Holder

1 Hydraulic cylinder DA 140 x 85 x 36, Stroke 130
1 Hydraulic cylinder DA 250 x 20, Stroke 65
1 Hydraulic cylinder DA 630 x 620, Stroke 400

CENTROZAP BUSINESS - POLAND

8 Hydraulic Cylinders DA 140 x 100, Stroke 800
16 Hydraulic Cylinders DA 250 x 180, Stroke 250
8 Hydraulic Cylinders DA 250 x 180, Stroke 700
8 Hydraulic Cylinders DA 160 x 110, Stroke 2600

ACESITA BUSINESS - BRAZIL

4 Hydraulic Cylinders DA 320 x 200, Stroke 730
8 Hydraulic Cylinders DA 300 x 140, Stroke 175
8 Hydraulic Cylinders DA 250 x 125, Stroke 175
4 Hydraulic Cylinders DA 200 x 110, Stroke 870

HUTA - KATOWICE BUSINESS - POLAND

8 Hydraulic Cylinders DA 40 x 28, Stroke 150
5 Hydraulic Cylinders DA 160 x 110, Stroke 1750
2 Hydraulic Cylinders DA 100 x 70, Stroke 350
5 Hydraulic Cylinders DA 125 x 90, Stroke 500

Continuous Casting for Slabs

4 Hydraulic Cylinders DA 100 x 70, Stroke 220
3 Hydraulic Cylinders DA 180 x 110, Stroke 370
2 Hydraulic Cylinders DA 125 x 90, Stroke 600

WISCO BUSINESS (CHINA)

17 Hydraulic Cylinders DA 220 x 125, Stroke 370
with measuring sensor
9 Hydraulic Cylinders DA 125 x 90, Stroke 500
2 measuring sensors

Steel Works Press in INDIA

4 Hydraulic Cylinders DA 390 x 250, Stroke 1500

Arc Furnace (for lifting of the arch)

1 Hydraulic cylinder dia. 800, Stroke 1640 with rotating system of
the piston
Mass 32 T, Force 200 T
1 Hydraulic cylinder dia. 900, Stroke 1200
Mass 57 T, Force 260 T

HOOGOEVENS BUSINESS - HOLLAND

2 + 2 Hydraulic Cylinders DA 250 x 160, Stroke 1400
1 Hydraulic cylinder DA 180 x 110, Stroke 1630
1 Hydraulic cylinder DA 100 x 70, Stroke 80
2 Hydraulic Cylinders DA 40 x 28, Stroke 505
1 Hydraulic cylinder DA 63 x 45, Stroke 545

NEDAL BUSINESS, HOLLAND

2 Hydraulic Cylinders DA 240 x 240, Stroke 1700
1 Hydraulic cylinder DA 260 x 220, Stroke 950
1 Hydraulic cylinder Telescop. 240 x 210 x 175 x 120, Stroke 2340
1 Hydraulic cylinder DA 80 x 56, Stroke 1000
2 Hydraulic Cylinders DA 115 x 90, Stroke 100
4 Hydraulic Cylinders DA 340 x 240, Stroke 1700

EREDI GNUTTI BUSINESS - ITALY

- 1 Hydraulic cylinder telescopic 3 rods, Stroke 1940
- 2 Hydraulic cylinder SA 340 x 220, Stroke 540
- 1 Hydraulic cylinder DA 140 x 100, Stroke 1330
- 1 Hydraulic cylinder DA 450 x 280, Stroke 2530

ELECTRICAL FURNACE - FRANCE

- 3 Hydraulic cylinder SA 230, 6100 Stroke
- 2 Hydraulic cylinder SA 420, 900 Stroke
- 2 Hydraulic cylinder DA 250 x 180, 2250 Stroke
- 3 Hydraulic cylinder DA 200 x 125, 1150 Stroke

ELECTRICAL FURNACE ARBED - LUXEMBURG (1993)

- 3 Hydraulic cylinder SA 230, 6100 Stroke
- 2 Hydraulic cylinder SA 420, 900 Stroke
- 2 Hydraulic cylinder DA 250 x 180, 2250 Stroke
- 3 Hydraulic cylinder DA 200 x 125, 1150 Stroke

ELECTRICAL FURNACE DOFASCO - CANADA (1996)

- 2 Hydraulic cylinder DA 250 x 180, 2500 Stroke
- 3 Hydraulic cylinder SA 230, 6000 Stroke
- 2 Hydraulic cylinder DA 420 x 400, 1050 Stroke
- 4 Hydraulic cylinder DA 100 x 56, 100 Stroke
- 2 Hydraulic cylinder DA 100 x 56, 220 Stroke
- 2 Hydraulic cylinder SA 150, 400 Stroke
- 3 Hydrozylinder SA 100, 3600 Stroke
- 2 Hydraulic cylinder DA 100 x 50, 550 Stroke
- 2 Hydraulic cylinder DA 63 x 45, 250 Stroke
- 1 Hydraulic cylinder DA 125 x 90, 600 Stroke
- 3 Hydraulic cylinder DA 100 x 70, 650 Stroke
- 2 Hydraulic cylinder DA 50 x 36, 200 Stroke

ELECTRIC FURNACE

- 2 Hydraulic cylinder DA 160 x 90, 740 Stroke
- 2 Hydraulic cylinder DA 125 x 70, 960 Stroke
- 2 Hydraulic cylinder DA 100 x 56, 670 Stroke
- 2 Hydraulic cylinder DA 250 x 140, 1530 Stroke

2 Hydraulic cylinder DA 180 x 125, 560 Stroke
5 Hydraulic cylinder DA 140 x 100, 300 Stroke

DILLINGER Business – GERMANY (1976 - 1977)

1 Hydraulic cylinder DA 280 x 160 Stroke 950
1 Hydraulic cylinder DA 63 x 36 Stroke 100
2 Hydraulic cylinder DA 125 x 70 Stroke 500
1 Hydraulic cylinder DA 125 x 70 Stroke 600
1 Hydraulic cylinder DA 220 x 160 Stroke 800
1 Hydraulic cylinder DA 125 x 70 Stroke 120
1 Hydraulic cylinder DA 360 x 200 Stroke 2200
1 Hydraulic cylinder DA 400 x 220 Stroke 950
1 Hydraulic cylinder DA 360 x 200 Stroke 850
2 Hydraulic cylinder DA 450 x 220 Stroke 800
2 Hydraulic cylinder DA 450 x 220 Stroke 950

Continuous Casting PECHINEY VOREPPE FRANCE(1997)

4 Hydraulic cylinder SA 650 Stroke 70
4 Hydraulic cylinder DA 63 x 45 Stroke 380
4 Hydraulic cylinder DA 180 x 10 Stroke 220
2 Hydraulic cylinder DA 63 x 45 Stroke 500
4 Hydraulic cylinder DA 100 x 70 Stroke 200
4 Hydraulic cylinder DA 125 x 90 Stroke 1030
2 Hydraulic cylinder DA 100 x 70 Stroke 800
2 Hydraulic cylinder DA 125 x 90 Stroke 3225
2 Hydraulic cylinder DA 125 x 90 Stroke 2400

UGINE ARDOISE Business FRANCE (1974)

1 Hydraulic cylinder SA 800 Stroke 1695

SAM MONTEREAU Business FRANCE (1974)

2 Hydraulic cylinder SA 800 Stroke 1845
1 Hydraulic cylinder SA 900 Stroke 1260

Continuous Casting SOLLAC FOS - FRANCE (1991)

4 Hydraulic cylinder DA 80 x 56 Stroke 60
4 Hydraulic cylinder DA 80 x 56 Stroke 930
8 Hydraulic cylinder DA 63 x 45 Stroke 440
8 Hydraulic cylinder DA 100 x 70 Stroke 680
4 Hydraulic cylinder DA 63 x 45 Stroke 60
4 Hydraulic cylinder DA 160 x 110 Stroke 150

Continuous Casting SOLLAC FLORANGE - FRANCE (1978)

6 Hydraulic cylinder DA 100 x 70 Stroke 220
9 Hydraulic cylinder DA 125 x 90 Stroke 220
10 Hydraulic cylinder DA 160 x 110 Stroke 220
5 Hydraulic cylinder DA 180 x 110 Stroke 370
5 Hydraulic cylinder DA 180 x 110 Stroke 570

UGINE Business - FRANCE (1997)

1 Hydraulic cylinder DA 160 x 110 Stroke 3600
1 Hydraulic cylinder DA 63 x 45 Stroke 500
1 Hydraulic cylinder DA 100 x 70 Stroke 70
4 Hydraulic cylinder DA 63 x 45 Stroke 200
2 Hydraulic cylinder DA 80 x 56 Stroke 250
2 Hydraulic cylinder DA 50 x 36 Stroke 110
1 Hydraulic cylinder DA 360 x 200 Stroke 300
1 Hydraulic cylinder DA 63 x 45 Stroke 310
2 Hydraulic cylinder DA 200 x 140 Stroke 1150
1 Hydraulic cylinder DA 100 x 70 Stroke 425
1 Hydraulic cylinder DA 80 x 56 Stroke 1000
1 Hydraulic cylinder DA 100 x 70 Stroke 1930
2 Hydraulic cylinder DA 80 x 56 Stroke 140
4 Hydraulic cylinder DA 140 X 90 Stroke 120
6 Hydraulic cylinder DA 80 x 56 Stroke 100
3 Hydraulic cylinder DA 360 x 200 Stroke 300
7 Hydraulic cylinder DA 63 x 45 Stroke 400
4 Hydraulic cylinder DA 63 x 45 Stroke 170
4 Hydraulic cylinder DA 200 x 140 Stroke 300
4 Hydraulic cylinder DA 80 x 56 Stroke 1800
43 Hydraulic cylinder DA 80 x 45 Stroke 160
8 Hydraulic cylinder DA 140 x 90 Stroke 120
12 Hydraulic cylinder DA 63 x 36 Stroke 70
4 Hydraulic cylinder DA 32 x 22 Stroke 30
2 Hydraulic cylinder DA 50 x 36 Stroke 280

8 Hydraulic cylinder DA 63 x 36 Stroke 140
12 Hydraulic cylinder DA 100 x 56 Stroke 280
6 Hydraulic cylinder DA 100 x 70 Stroke 400
4 Hydraulic cylinder DA 160 x 110 Stroke 480
4 Hydraulic cylinder DA 63 x 45 Stroke 600
4 Hydraulic cylinder DA 63 x 45 Stroke 150
2 Hydraulic cylinder DA 50 x 36 Stroke 730
1 Hydraulic cylinder DA 200 x 140 Stroke 6200
4 Hydraulic cylinder DA 160 x 110 Stroke 1500
4 Hydraulic cylinder DA 50 x 36 Stroke 50
4 Hydraulic cylinder DA 80 x 56 Stroke 160
1 Hydraulic cylinder DA 63 x 45 Stroke 2750
6 Hydraulic cylinder DA 50 x 36 Stroke 1800
8 Hydraulic cylinder DA 40 x 22 Stroke 20
16 Hydraulic cylinder DA 80 x 45 Stroke 16
2 Hydraulic cylinder DA 50 x 36 Stroke 270
1 Hydraulic cylinder DA 200 x 140 Stroke 6000
4 Hydraulic cylinder DA 50 x 36 Stroke 900
2 Hydraulic cylinder DA 160 x 110 Stroke 800
1 Hydraulic cylinder DA 50 x 36 Stroke 550
2 Hydraulic cylinder DA 80 x 56 Stroke 250
2 Hydraulic cylinder DA 160 x 90 Stroke 510
2 Hydraulic cylinder DA 80 x 45 Stroke 470
2 Hydraulic cylinder DA 100 x 70 Stroke 160
1 Hydraulic cylinder DA 50 x 36 Stroke 715
4 Hydraulic cylinder DA 63 x 36 Stroke 70
4 Hydraulic cylinder DA 63 x 45 Stroke 215
8 Hydraulic cylinder DA 50 x 28 Stroke 370
2 Hydraulic cylinder DA 160 x 110 Stroke 220

Hydraulic cylinders for furnace (France) – Rods with KERADOUCE® coating

3 Hydraulic cylinders SA 600, Stroke 1500

Fundry – Abrasiv environment and silica deposit (France) - Rods with KERADOUCE® coating

1 Hydraulic cylinder DA 125 x 90, Stroke 2050

Vérin Plongeur pour Coulée Continue Verticale

Pour couler des plaques d'aluminium de 650 mm d'épaisseur
Tige avec revêtement **KERADOUCE**®

1 Vérin SE 790, Course 9700

MARINE

Sailing Vessel

8 Hydraulic Cylinders DA 220 x 90, Stroke 450
2 Hydraulic Cylinders DA 140 x 56, Stroke 450
Hydraulic Cylinders DA 250 x 150, Stroke 1440

Sub-marine Appliance of Locking

Hydraulic Cylinders DA 120 x 70, Stroke 260
Hydraulic Cylinders DA 120 x 70, Stroke 400

Antiroulling Stabilizator

Hydraulic Cylinders Double Rod 140 - 115, Stroke 2120

VESSEL TCD 90 "FOUDRE"

2 Hydraulic Cylinders DA 375 x 250, Stroke 3150
2 Hydraulic Cylinders DA 80 x 45, Stroke 180
2 Hydraulic Cylinders DA 100 x 55, Stroke 285
1 Hydraulic cylinder SA 320 x 250, Stroke 1200
3 Hydraulic Cylinders DA 63 x 36, Stroke 230
2 Hydraulic Cylinders SA 75, Stroke 200
2 Hydraulic Cylinders DA 200 x 110, Stroke 800
4 Jinger-Winch SA 280 x 180, Stroke 5712
4 Hydraulic Cylinders DA 63 x 36, Stroke 140
1 Hydraulic cylinder DA 80 x 45, Stroke 515
2 Hydraulic Cylinders DA 63 x 36, Stroke 80

2 Cargos FOR LINEA MEXICANA

56 Hydraulic Cylinders DA 300 x 200, Stroke 1450
8 Hydraulic Cylinders DA 350 x 230, Stroke 1300

Hydraulic Systems for laying on the sea-floor

17 Hydraulic Cylinders DA 125 x 90, Stroke 450
with accumulators in parallel position
9 Hydraulic Cylinders DA 125 x 90, Stroke 450
with accumulators in perpendicular position

CLUB MED II

10 Hydraulic Cylinders d'orientation de bomes DA 250 x 140, Stroke
1440
2 Hydraulic Cylinders DA 200 x 130, Stroke 690
1 Hydraulic cylinder DA 140 x 56, Stroke 450
5 Hydraulic Cylinders DA 220 x 90, Stroke 450
5 Hydraulic Cylinders DA 140 x 100, Stroke 5200
5 Batteries de 2 accumulateurs
2 Batteries of 2 accumulators

FRENCH CARGO - PAGLIA ORBA

2 Jigger-Winches SA 360 x 250, Stroke 3600
2 Hydraulic Cylinders SA 100, Stroke 300
1 Jigger-Winch SA 400 x 280, Stroke 3600
2 Hydraulic Cylinders SA 100, Stroke 300
2 Hydraulic Cylinders SA 320 x 200, Stroke 2150
6 Hydraulic Cylinders DA 60 x 32, Stroke 210
4 Hydraulic Cylinders DA 320 x 200, Stroke 620
44 Hydraulic Cylinders DA 63 x 36, Stroke 250
2 Hydraulic Cylinders DA 63 x 36, Stroke 220
2 Hydraulic Cylinders DA 45 x 20, Stroke 130
8 Hydraulic Cylinders DA 45 x 20, Stroke 120
1 Hydraulic cylinder DA 220 x 130, Stroke 1205
4 Hydraulic Cylinders SA 80, Stroke 80
2 Hydraulic Cylinders DA 45 x 20, Stroke 80
2 Hydraulic Cylinders SA 130, Stroke 3950
2 Hydraulic Cylinders DA 140 x 70, Stroke 900
2 Hydraulic Cylinders DA 125 x 63, Stroke 900
2 Hydraulic Cylinders DA 160 x 90, Stroke 6500
4 Hydraulic Cylinders DA 280 x 180, Stroke 2650
4 Hydraulic Cylinders DA 280 x 180, Stroke 2050
18 Hydraulic Cylinders DA 80 x 45, Stroke 180
2 Hydraulic Cylinders DA 63 x 36, Stroke 800
2 Hydraulic Cylinders DA 63 x 40, Stroke 225
4 Hydraulic Cylinders DA 63 x 40, Stroke 145

8 Hydraulic Cylinders SA 125, Stroke 170
6 Hydraulic Cylinders DA 60 x 32, Stroke 210
2 Hydraulic Cylinders DA 60 x 32, Stroke 330
5 Hydraulic Cylinders SA 130, Stroke 1950
9 Hydraulic Cylinders DA 45 x 20, Stroke 120
4 Hydraulic Cylinders DA 80 x 45, Stroke 250
4 Hydraulic Cylinders DA 50 x 36, Stroke 90
8 Hydraulic Cylinders SA 160, Stroke 870
16 Hydraulic Cylinders DA 50 x 36, Stroke 160
8 Hydraulic Cylinders DA 63 x 36, Stroke 200
16 Hydraulic Cylinders DA 50 x 36, Stroke 110

FINNISH CARGO

4 Hydraulic Cylinders SA 100, Stroke 300
8 Hydraulic Cylinders DA 45 x 20, Stroke 120
5 Hydraulic Cylinders DA 80 x 45, Stroke 300
4 Hydraulic Cylinders DA 250 x 125, Stroke 1000
8 Hydraulic Cylinders DA 80 x 45, Stroke 200
2 Hydraulic Cylinders DA 50 x 36, Stroke 210
2 Hydraulic Cylinders DA 80 x 45, Stroke 310
20 Hydraulic Cylinders DA 80 x 45, Stroke 180
4 Hydraulic Cylinders SA 80, Stroke 80
5 Hydraulic Cylinders DA 63 x 36, Stroke 250
12 Hydraulic Cylinders DA 60 x 32, Stroke 300
8 Hydraulic Cylinders 80 x 36, Stroke 300
13 Hydraulic Cylinders DA 60 x 32, Stroke 210
2 Hydraulic Cylinders DA 220 x 130, Stroke 1195
2 Hydraulic Cylinders DA 180 x 110, Stroke 1170
2 Hydraulic Cylinders DA 60 x 32, Stroke 330
2 Hydraulic Cylinders DA 45 x 20, Coruse 80
2 Hydraulic Cylinders DA 140 x 70, Stroke 900
2 Hydraulic Cylinders DA 125 x 63, Stroke 900
2 Hydraulic Cylinders SA 130, Stroke 3500
4 Hydraulic Cylinders DA 80 x 45, Stroke 250
2 Hydraulic Cylinders DA 63 x 36, Stroke 225
8 Hydraulic Cylinders SA 160, Stroke 940
2 Hydraulic Cylinders DA 63 x 36, Stroke 800
4 Hydraulic Cylinders DA 63 x 36, Stroke 145
4 Hydraulic Cylinders DA 50 x 36, Stroke 90
8 Hydraulic Cylinders SA 125, Stroke 170
16 Hydraulic Cylinders DA 50 x 36, Stroke 160
16 Hydraulic Cylinders DA 50 x 36, Stroke 110
8 Hydraulic Cylinders DA 63 x 36, Stroke 200
4 Hydraulic Cylinders DA 280 x 180, Stroke 2650

4 Hydraulic Cylinders DA 280 x 180, Stroke 2050
2 Hydraulic Cylinders DA 160 x 90, Stroke 6500

VESSEL D 31 - NAPOLEON BONAPARTE

2 Hydraulic Cylinders DA 125 x 80, Stroke 700
4 Hydraulic Cylinders DA 60 x 32, Stroke 110
8 Hydraulic Cylinders DA 60 x 32, Stroke 110
2 Hydraulic Cylinders DA 80 x 60, Stroke 700
2 Hydraulic Cylinders DA 90 x 60, Stroke 550
4 Hydraulic Cylinders DA 160 x 110, Stroke 1060
4 Hydraulic Cylinders DA 60 x 40, Stroke 60
10 Hydraulic Cylinders DA 80 x 40, Stroke 150
10 Hydraulic Cylinders DA 80 x 40, Stroke 260
2 Hydraulic Cylinders DA 375 x 240, Stroke 2200
2 Hydraulic Cylinders DA 250 x 160, Stroke 1400
2 Hydraulic Cylinders DA 125 x 65, Stroke 350
6 Hydraulic Cylinders DA 60 x 32, Stroke 110
4 Hydraulic Cylinders DA 80 x 40, Stroke 260
11 Hydraulic Cylinders DA 60 x 32, Stroke 110
 1 Hydraulic cylinder DA 480 x 260, Stroke 1550
 1 Hydraulic cylinder DA 390 x 230, Stroke 1550
4 Hydraulic Cylinders DA 60 x 40, Stroke 200
2 Hydraulic Cylinders DA 180 x 80, Stroke 4400
5 Hydraulic Cylinders DA 125 x 70, Stroke 2100
2 Hydraulic Cylinders DA 225 x 90, Stroke 4400
5 Hydraulic Cylinders DA 140 x 70, Stroke 2100
70 Hydraulic Cylinders DA 40 x 28, Stroke 110
 1 Hydraulic cylinder DA 125 x 70, Stroke 2600
 1 Hydraulic cylinder DA 140 x 80, Stroke 2600
16 Hydraulic Cylinders DA 80 x 40, Stroke 110
8 Hydraulic Cylinders DA 60 x 32, Stroke 150
2 Hydraulic Cylinders DA 80 x 45, Stroke 400
8 Hydraulic Cylinders DA 40 x 28, Stroke 100
4 Hydraulic Cylinders DA 40 x 28, Stroke 100
2 Hydraulic Cylinders DA 80 x 45, Stroke 250
2 Hydraulic Cylinders DA 60 x 40, Stroke 270
4 Hydraulic Cylinders DA 30 x 20, Stroke 100
2 Hydraulic Cylinders DA 30 x 20, Stroke 100
2 Hydraulic Cylinders DA 40 x 28, Stroke 250
2 Hydraulic Cylinders DA 30 x 20, Stroke 100
1 Hydraulic cylinder DA 60 x 40, Stroke 250
12 Hydraulic Cylinders DA 40 x 28, Stroke 100
4 Hydraulic Cylinders DA 120 x 80, Stroke 650
2 Hydraulic Cylinders DA 40 x 28, Stroke 160

1 Hydraulic cylinder DA 30 x 20, Stroke 40
2 Hydraulic Cylinders DA 30 x 20, Stroke 50
4 Hydraulic Cylinders DA 60 x 32, Stroke 140
1 Hydraulic cylinder DA 60 x 50, Stroke 3980

CORSAIRE 11000 - NGV ASCO

4 Hydraulic Cylinders DA 100 x 63, Stroke 2400
8 Hydraulic Cylinders DA 50 x 32, Stroke 210
30 Hydraulic Cylinders DA 50 x 32, Stroke 120
3 Hydraulic Cylinders DA 130, Stroke 1600
2 Hydraulic Cylinders DA 80 x 45, Stroke 2000
2 Hydraulic Cylinders SA 125 x 63, Stroke 1600
2 Hydraulic Cylinders DA 125 x 80, Stroke 580
2 Hydraulic Cylinders DA 160 x 100, Stroke 1550
2 Hydraulic Cylinders DA 60 x 32, Stroke 210 self-locking
2 Hydraulic Cylinders DA 60 x 32, Stroke 250
Power Packs

CORSAIRE 11000 - NGV ALISO

4 Hydraulic Cylinders DA 100 x 63, Stroke 2400
8 Hydraulic Cylinders DA 50 x 32, Stroke 210
30 Hydraulic Cylinders DA 50 x 32, Stroke 120
3 Hydraulic Cylinders SA 130, Stroke 1600
2 Hydraulic Cylinders DA 80 x 45, Stroke 2000
2 Hydraulic Cylinders SA 125 x 63, Stroke 1600
2 Hydraulic Cylinders DA 125 x 80, Stroke 580
2 Hydraulic Cylinders DA 160 x 125, Stroke 1580
2 Hydraulic Cylinders DA 60 x 32, Stroke 210
2 Hydraulic Cylinders DA 60 x 32, Stroke 250
Power Packs

VESSEL - TCD "SIROCCO"

2 Hydraulic Cylinders DA 375 x 250, Stroke 3120
2 Hydraulic Cylinders DA 80 x 45, Stroke 180
2 Hydraulic Cylinders DA 100 x 55, Stroke 285
1 Hydraulic Cylinder SA 320 x 250, Stroke 1200
2 Hydraulic Cylinders SA 75, Stroke 200
2 Hydraulic Cylinders DA 63 x 36, Stroke 230
2 Hydraulic Cylinders DA 200 x 110, Stroke 800

Nuclear Aircraft Carrier Charles de Gaulle

18 Hydraulic Cylinders DA 152,4 x 101,6, Stroke 495,3
Battery of Accumulators

DREDGES

TPH 150

2 Hydraulic Cylinders DA 125 x 70, Stroke 450
2 Hydraulic Cylinders DA 95 x 75, Stroke 2200

2 Hydraulic Cylinders DA 110 x 63, Stroke 535

1 Hydraulic cylinder DA 180 x 90, Stroke 670

1 Hydraulic cylinder DA 110 x 63, Stroke 520

TPS 150

2 Hydraulic Cylinders DA 80 x 70, Stroke 1600

2 Hydraulic Cylinders DA 125 x 70, Stroke 800

TPH 400

1 Hydraulic cylinder DA 63 x 45, Stroke 345

1 Hydraulic cylinder DA 125 x 70, Stroke 300

2 Hydraulic Cylinders DA 100 x 90, Stroke 2000

2 Hydraulic Cylinders DA 140 x 85, Stroke 800

2 Hydraulic Cylinders DA 125 x 85, Stroke 280

TPH 400 TV

1 Hydraulic cylinder DA 160 x 130, Stroke 2500 (2100)

2 Hydraulic Cylinders DA 125 x 70, Stroke 250

2 Hydraulic Cylinders DA 125 x 70, Stroke 650

TPH 900

4 Hydraulic Cylinders SA 115, Stroke 2620

1 Hydraulic cylinder DA 80 x 55, Stroke 550

1 Hydraulic cylinder DA 180 x 90, Stroke 750

2 Hydraulic Cylinders DA 125 x 80, Stroke 600

2 Hydraulic Cylinders DA 125 x 110, Stroke 2100

DREDGE REF. 16/38

2 Hydraulic Cylinders DA 300 x 150, Stroke 1250

2 Hydraulic Cylinders SA 200 x 180, Stroke 2600

2 Hydraulic Cylinders DA 180 x 110, Stroke 520

DREDGE (HOLLAND) – 76338 - Rods with KERADOUCE® coating

2 Hydraulic Cylinder DA 150 x 110, Stroke 2670

2 Hydraulic Cylinders DA 150 x 90, Stroke 2670

HOPPER DREDGE (JAPAN) – QUEEN OF PENTA OCEAN - Rod with KERADOUCE® coating

4 Gantry Draghead Cylinders DA 500 x 250, Stroke 2671

4 Intermediate Gantry Cylinders DA 500 x 250, Stroke 3145

2 Trunnion Gantry Cylinders DA 450 x 220, Stroke 1991

26 Bottom Valve Cylinders DA 450 x 200, Stroke 1500

2 Overflow Cylinders DA 280 x 180, Stroke 7600

2 Swell Compensator Cylinders SA 450, Stroke 3000

4 Visor Cylinders DA 250 x 125, Stroke 980

4 Waterflap Cylinders DA 140 x 100, Stroke 300

Dredge of Nantes – France - Rods with KERADOUCE® coating

1 Hydraulic cylinder DA 220 x 110, Stroke 2000

1 Hydraulic cylinder DA 160 x 80, Stroke 1800

OFFSHORE

Set Bearing for the Platform EKOFISK

104 Sets Bearing 700 t
18 Sets Bearing 180 t
with, each, 1 pot, 1 piston and 1 plate

Mooring of an oil-ship

1 Hydraulic cylinder DA 710 x 420, Stroke 3000
1 Power Pack

Pumps for Hydraulic Cylinders Offshore

Hydraulic Cylinders o Pumps DA 100 x 38,1, 3 Strokes
3660 - 3150 - 2710

Oil-Well

Accumulators on a vessel for the exploitation of Oil-Well

4 Hydraulic Cylinders SA 310, Stroke 3850
working in différential with cushionning of Stroke End
4 Accumulators with double piston 580, Stroke 1320

Locking System of a platforme

4 Hydraulic Cylinders DA 220 x 125, Stroke 1250
2 Hydraulic Cylinders DA 220 x 125, Stroke 2000
4 Hydraulic Cylinders DA 275 x 200, Stroke 760
2 Hydraulic Cylinders DA 190 x 130, Stroke 800
Power Packs

Hydraulic System for yoke bonding

Hydraulic cylinder DA 860 x 420, Stroke 3000

Project EURIPIDES

3 Hydraulic Cylinders DA 520 x 360, Stroke 1000
1 Power Pack Capacity 1 200 T

Equipment Stinger 97 - Barge BOS 355 – Grèce

2 Hydraulic cylinder DA 160 x 110, Stroke 330

PRESSES

Press for DEUTSCHE AIRBUS (BREMEN/Germany)

in order to draw the wings of the AIRBUS

- 4 Hydraulic Cylinders DA 200 x 140, Stroke 5000
- 4 Hydraulic Cylinders horizontal DA 520 x 260, Stroke 2550
- 4 Hydraulic Cylinders vertical DA 700 x 500, Stroke 2750
- 4 Hydraulic Cylinders DA 360 x 200, Stroke 1150

Press FOKKER - Holland

Forming and drawing for plane elements for press 600 T

- 2 Hydraulic Cylinders DA 340 x 160, Stroke 1900

PRESS (RUSSIA) - 77046

- 1 Hydraulic cylinder DA 180 x 150, Stroke 4300
- 1 Hydraulic cylinder DA 320 x 240, Stroke 1300
- 4 Hydraulic cylinders DA 180 x 125, Stroke 1450
- 1 Hydraulic cylinder DA 63 x 36, Stroke 400
- 1 Hydraulic cylinder SA hollow 300 x 280, Stroke 20
- 2 Hydraulic cylinders DA 63 x 45, Stroke 175
- 1 Hydraulic cylinder DA 50 x 36, Stroke 60
- 1 Power Pack

Expansion Press to calibrate and test in pressure large welded tubes

- 1 Hydraulic cylinder DA 820 x 560, Stroke 1450
Pressure 300 bar, Force 1580 T
- 1 Hydraulic cylinder DA 1100 x 780, Stroke 1500
Pressure 250 bar, Force 2350 T

PLASTIC INJECTING PRESS

- 1 Hydraulic cylinder SA 450, Stroke 500
- 1 Hydraulic cylinder DA 80 x 50, Stroke 200
- 1 Hydraulic cylinder DA 120 x 85, Stroke 1250
- 1 Hydraulic cylinder DA 140 x 70, Stroke 850

FORGING PRESS OF 600 T FOR COMPACTING

1 Hydraulic cylinder Stroke 200
1 Hydraulic cylinder Stroke 50
1 Power Pack
1 Hydraulic cylinder DA 570 x 400, Stroke 550
1 Hydraulic cylinder DA 110 x 75, Stroke 555

PRESS - EQUIPMENT FOR SHEARS

3 Hydraulic Cylinders DA 170 x 150, Stroke 210
3 Hydraulic Cylinders triple acting 330 x 300 x 580 x 70 x 60 x 165

INJECTING PRESS

1 Hydraulic cylinder SA 875, Stroke 750

PLASTIC INJECTING PRESS

Columns dia. 140, Length 3685
Columns dia. 160, Length 6155
Columns dia. 180, Length 5345
Columns dia. 195, Length 5725
Columns dia. 200, Length 5595
Columns dia. 200, Length 6940
Columns dia. 200, Length 7460
Columns dia. 280, Length 8785

MECANICAL SET FOR A VERTICAL DRAW PRESS OF 160 T

2 Hydraulic Cylinders DA 240 x 140 x 140, Stroke 2600
2 Hydraulic Cylinders DA Double Rod 50 x 36, Stroke 50
2 Hydraulic Cylinders DA 100 x 56, Stroke 110
Frame, springers, cross-rails
Engineering of the all system

FOLDING -PRESS

2 Hydraulic Cylinders DA 440 x 320, Stroke 2200
4 Hydraulic Cylinders DA 250 x 125, Stroke 1560
2 Hydraulic Cylinders DA 120 x 90, Stroke 2800

DRAWING-PRESS for PENCIL MINES

1 Hydraulic cylinder DA 320 x 290, Stroke 560
1 Power Pack
1 Frame
Engineering

PRESS IN TAIWAN

2 Hydraulic Cylinders DA 280 x 200, Stroke 1400
1 Hydraulic Cylinder DA 250 x 200, Stroke 8700
1 Hydraulic Cylinder DA 400 x 300, Stroke 2100
1 Hydraulic Cylinder DA 710 x 530, Stroke 1115
1 Hydraulic Cylinder DA 400 x 300, Stroke 1100

PRESS OF 5 000 T

6 Hydraulic cylinders SA 1020, Stroke 915

FORMING PRESS 4 000 T

1 Pressure Multiplier 4000 Bar
1 Filling Hydraulic cylinder with 1 DA 195 x 130, Stroke 480 and
1 DA 270 x 265, Stroke 480

INJECTING PRESS (Very High Speed)

2 Hydraulic cylinders DA 125 x 90, Stroke 1225

FOUNDRY PRESS with KERADOUCE® coating on the rod

1 prototype Hydraulic cylinder DA 125 x 90 stroke 2050
Drawing 400164700

PRESS TO BOTTLE – with KERADOUCE ® coating

8 Swivel joints Ø 100 - 15 Stations – Version Montée/Baisse – Sept. 1998

Drawing 402825801

Works with dry air – Working pressure 6,5 Bar – Temperature 120°C –

Filtration 0,01 – Body INOX Z2 CND 17-12 ; Shaft INOX coating **KERADOUCE ®**

Max. rotation speed = 8 revolutions/min 0.04 m/s

11 Rotative Piston valve cylinders Ø 100 - 30 stations – August 1998

Drawing 402812001 – continuous business

Works with dry air - Working pressure 5 Bar max.– Temperature 150°C –

Body INOX Z2 CND 17-12 ; Shaft INOX coating **KERADOUCE ®**

Max. rotation speed = 8 revolutions/min 0.04 m/s

1 Piston valve cylinder Ø 100 – 75 stations – February 2000

Drawing 40316401

Working pressure 6,5 Bar max.– Temperature 140°C max. –

Body INOX Z2 CND 17-12 ; Shaft INOX coating **KERADOUCE ®**

Max. rotation speed = 8 revolutions/min

Piston valve cylinder Ø 100 – 25 stations – Version Montée/Baisse - February 2000

1 Prototype in study

Drawing 403156301

Working pressure 6,5 Bar max.– Temperature 140°C max. –

Body INOX Z2 CND 17-12 ; Shaft INOX coating **KERADOUCE ®**

Max. rotation speed = 8 revolutions/min

TUNNEL BORING MACHINES

Tunneling Machine of MILAN (Italy)

19 Push hydraulic cylinders DA 350 x 310, Stroke 1650
14 Articulating hydraulic cylinders DA 350 x 250, Stroke 150

Tunneling Machine of LILLE - 2 E (France)

26 Hydraulic cylinders DA 280 x 240, Stroke 1970
12 Hydraulic cylinders DA 320 x 150, Stroke 220

Tunneling Machine of LILLE - 2 F (France)

2 x 26 Hydraulic cylinders DA 280 x 240, Stroke 1970

Tunneling Machine of JUBILEE LINE - London (Great-Britain)

20 Hydraulic cylinders DA 215 x 170, Stroke 1700

Tunneling Machine of NAPOLI (Italy)

24 Hydraulic cylinders DA 250 x 210, Stroke 1900
12 Hydraulic cylinders DA 200 x 100, Stroke 2200
6 DA Telescopic cylinders 300 x 270 x 6225 x 200,
Stroke 4200

Tunneling Machine of TOULOUSE (France)

22 Hydraulic cylinders DA 250 x 210, Stroke 1535
1 Hydraulic cylinder DA 100 x 56, Stroke 520
2 Hydraulic cylinders DA 100 x 50, Stroke 120
2 Hydraulic cylinders DA 160 x 90, Stroke 1600
2 Hydraulic cylinders DA 125 x 90, Stroke 120

Tunneling Machine of GREAT BELT (Denmark)

144 Hydraulic cylinders DA 300 x 200, Stroke 2200
16 Hydraulic cylinders DA 300 x 200, Stroke 2220 with sensor

Tunneling Machine of SHANGHAI (China)

105 Hydraulic cylinders DA 250 x 220, Stroke 1200
28 Hydraulic cylinders DA 250 x 220, Stroke 1200 with sensor
21 DA telescopic cylinders 250 x 130 x 196, 16 x 195,
Stroke 1860

Tunneling Machine of LIVERPOOL (Great-Britain)

Hydraulic cylinders DA 200 x 180, Stroke 1400

Tunneling Machine of CRETEIL (France)

Hydraulic cylinders DA 200 x 180, Stroke 1400

Tunneling Machine of VITRY (France)

Hydraulic cylinders DA 220 x 180, Stroke 1400

Refitting of hydraulic cylinders of the tunneling Machines for EURO-TUNNEL

2 Hydraulic cylinders DA 150 x 80, Stroke 1200
1 + 1 Hydraulic cylinders DA 63 x 45, Stroke 850
1 + 1 Hydraulic cylinders DA 140 x 80, Stroke 1000
1 Hydraulic cylinder DA 400 x 300, Stroke 2650
1 Hydraulic cylinder DA 70 x 50, Stroke 1600
1 + 1 Hydraulic cylinders DA 180 x 140, Stroke 150
2 Hydraulic cylinders DA 180 x 140, Stroke 200

Manufacturing of

1 Hydraulic cylinder DA 100 x 56, Stroke 630

Tunneling Machine of COREA

4 Hydraulic cylinders DA 200 x 125, Stroke 1050
4 Hydraulic cylinders DA 275 x 200, Stroke 120

2 Hydraulic cylinders DA 520 x 255, Stroke 1800
4 Hydraulic cylinders DA 200 x 125, Stroke 500
4 Hydraulic cylinders DA 320 x 240, Stroke 1800
15 Hydraulic cylinders DA 200 x 140, Stroke 70

Tunneling Machine of LISBOA (Portugal)

1 Hydraulic cylinder DA 63 x 45, Stroke 475
1 Hydraulic cylinder DA 80 x 45, Stroke 1000
2 Hydraulic cylinders DA 140 x 100, Stroke 1000
2 Hydraulic cylinders DA 125 x 70, Stroke 500
2 Hydraulic cylinders DA 100 x 70, Stroke 100
4 Hydraulic cylinders DA 32 x 18, Stroke 20
1 Hydraulic cylinder DA 140 x 80, Stroke 900
2 Hydraulic cylinders DA Double rod 50 x 36, Stroke 120
32 Hydraulic cylinders DA 300 x 240, Stroke 1700
2 Hydraulic cylinders DA 160 x 110, Stroke 150

TUNNELING MACHINES OF PING-LIN (TAIWAN)

Tunneling machines with telescopic shield of \varnothing 11,72 m

8 Hydraulic cylinders DA 250 x 180, Stroke 130
36 Hydraulic cylinders DA 320 x 240, Stroke 1850 + 2
56 Hydraulic cylinders DA 320 x 240, Stroke 2000 + 2
4 Hydraulic cylinders DA 680 x 300, Stroke 800 + 1
8 Hydraulic cylinders SA 380 x 350, Stroke 160
4 Hydraulic cylinders SA 420 x 400, Stroke 270

TUNNELING MACHINES IN HONG KONG

18 Hydraulic cylinders DA 320 x 250 stroke 2600
8 Hydraulic cylinders DA 320 x 250 stroke 2600 with sensor
11 Hydraulic cylinders DA 300 x 125 stroke 300

TUNNELING MACHINE OF CACHAN CHARENTON LOT 4 (TUNNELING MACHINE OF LABRICHE) – France

Repairs with rods in KERADOUCE ® coating

5 Hydraulic cylinders DA 200 x 180 stroke 1400
1 Hydraulic cylinders DA 50 x 36 stroke 400
2 Hydraulic cylinders DA 63 x 45 stroke 500
1 Hydraulic cylinder DA 63 x 45 stroke 1000

4 Hydraulic cylinders DA 50 x 28 stroke 100
1 Hydraulic cylinder DA 50 x 36 stroke 500

TUNNELING MACHINE OF GROENE HART – LEIDEN, HOLLAND

40 Hydraulic cylinders DA 420 x 340, Stroke 2700

CEMENT PLANTS

DENIZLI - Turkey

6 +2 Hydraulic cylinders DA 400 x 200, Stroke 1052

CIMENTAS – Turkey

2 Hydraulic cylinders DA 400 x 200, Stroke 1052
2 Hydraulic cylinders DA 400 x 200, Stroke 948

ASLAN CIMENTO Darica – Turkey

2 + 2 Hydraulic cylinders DA 420 x 220, Stroke 1010

TEPPETZINGO – Mexico

4 + 2 Hydraulic cylinders DA 450 x 240, Stroke 1150
1 Hydraulic cylinder DA 450 x 240, Stroke 1290

RCC Philippines

2 + 2 Hydraulic cylinders DA 420 x 220, Stroke 1010

Lafarge Zement (Karsdorff – Germany)

2 Hydraulic cylinders DA 450 x 240, Stroke 1150

GALADARI

4 Hydraulic cylinders DA 400 x 200, Stroke 1052

TRINO – Italy

1 Hydraulic cylinder SAT 200 x 110, Stroke 607

KONYA – Turkey

2 Hydraulic cylinders DA 450 x 240, Stroke 1290

BARLETTA – Italy

2 + 1 Hydraulic cylinders DA 450 x 240, Stroke 1090

IZMIR - Turkey

2 Hydraulic cylinders DA 420 x 220, Stroke 1010

Cement Plant in Iran

1 Power Pack
1 SAP 250 x 200, Stroke 300

Cement Plant Thouras – Egypt

1 Power Pack
1 DA Double Rod 160 x 110 x 90, Stroke 245
1 Power Pack
1 DA 80 x 56, Stroke 701