CUSTOM REPORT SELECTION

* METROPOLITAN MASS TRANSIT SYSTEM

No: 08560

ANTWERP

Owner MIVA - B.S.D. METRO

Designer M.I.V.A. ENGINEERING DEPT

Contractor C.V. MECOMA

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 26,000 LBS

Completed 1991

Comments XYPEX PRODUCTS WERE USED TO SEAL ENTRANCE AND EXIT

PORTALS ON ALL 12 STATIONS. DIFFERING CONSTRUCTION METHODS IN THE TUNNEL AND STATION PORTIONS ALLOWED STRONG GROUND WATER INGRESS AT THE JOINTS AND XYPEX WAS SPECIFIED FOR USE AFTER EXTENSIVE TESTING. WORK WAS CARRIED OUT AT DEPTHS OF

65 TO 185 FT BELOW THE WATER TABLE.

* FRESUS TUNNEL

No: 02603

FRESUS

Proj. Type TUNNELS & SUBWAY SYSTEMS

VAULTS & ELEVATOR PITS

Comments SECONDARY TREATMENT OF THE VENTILATION DUCTS.

* GENERAL ELECTRIC/CTRL PUERTO NUEVO DE CICIOS CONVI

No: 11601

BUENOS AIRES ARGENTINA

Owner GENERAL ELECTRIC

Designer TECHINT, S.A.
Contractor TECHINT, S.A.
Applicator TECHINT, S.A.

Proj. Type TUNNELS & SUBWAY SYSTEMS

Completed 1998

Comments ALL TUNNELS AND WATER SUPPLY STRUCTURES, WITH WALLS

0.65 METERS THICK, WERE TREATED WITH XYPEX ADMIX C-2000.

BASEMENT STRUCTURES WERE TREATED WITH XYPEX

CONCENTRATE.

* CONVENTILLO DE LA PALOMA - HISTORICAL BUILDING

No: 11125

No: 09741

SAN TELMO, B.A.

ARGENTINA

Applicator

INTPRO, SRL

Proj. Type **HOUSE BASEMENTS**

TUNNELS & SUBWAY SYSTEMS

Comments

THE FAMOUS 1830 UNDERGROUND BLDG. WAS

STORED/WATERPROOFED AGAINST WATER SEEPAGE IN THIS HIGH WATER TABLE AREA. TUNNELS CONNECTING VARIOUS HOUSES WERE REHABILITATED WITH PONY WALLS TO SHORE UP OLD STRUCTURES. ADMIX C2000 WAS ADDED TO THE CONCRETE, FOLLOWED BY COATS

OF MODIFIED & CONCENTRATE.

"LA PALOMA" IS SUBJECT OF TANGO SONGS, LITERATURE, ETC.

* HOMEBUSH BAY ZONE SUB-STATION

No: 11677

HOMEBUSH BAY

AUSTRALIA

TAYLOR, THOMSON, WHITTING

Designer Contractor **ENERGY AUSTRALIA**

Applicator DEMARTIN & GASPARINI/POLYSEAL

NUCLEAR & POWER GENERATING STATIONS Proj. Type

TUNNELS & SUBWAY SYSTEMS

Completed

Late 1998

Comments

ELECTRICAL SWITCHING STATION AND TUNNELS. XYPEX ADMIX C-2000NF APPLIED TO BELOW GROUND TUNNELS HOUSING HIGH VOLTAGE ELECTRICITY CABLES FOR OLYMPIC PRECINCT AND SURROUNDING SUBURBS. THIS SITE IS SUBJECT TO HIGH WATER

TABLE.

* SWAN PORTLAND CEMENT LTD.

KWINANA AUSTRALIA

Owner SWAN PORTLAND CEMENT LTD. Designer VAN DE MEER & ASSOCIATES Contractor UNITED CONSTRUCTION

Applicator **PERMATECH**

TUNNELS & SUBWAY SYSTEMS Proj. Type

Total 450 CU. METERS

Comments ADMIX C-1000 WAS USED IN THE CONCRETE OF THE TUNNEL UNDER

THE CLINKER STOCKPILE WHICH IS BELOW THE WATER TABLE. THE

FLOOR WALL JOINTS WERE TREATED WITH CONCENTRATE.

* DOMAIN TUNNEL/YARRA CROSSING - STAGE 1 AND 2

No: 11683

MELBOURNE

AUSTRALIA

Proj. Type TUNNELS & SUBWAY SYSTEMS

Comments ADMIX C-1000NF WAS USED TO WATERPROOF THE CONCRETE

PAVEMENT AND LINING OF THE DOMAIN TUNNEL IN THE SECTION OF YARRA CROSSING STAGE 1. STAGE 2 OF THE SAME TUNNEL (CUT & COVER CONSTRUCTION) USED CONCENTRATE/MODIFIED COATINGS ON WALL SEGMENTS. XYPEX DS1 CONCENTRATE WAS USED ON THE HORIZONTAL SURFACES OF THE CONCRETE PAVEMENT AND ROOF

SEGMENTS.

* SYDNEY HARBOUR TUNNEL

No: 08315

SYDNEY

AUSTRALIA

Owner SYDNEY HARBOUR TUNNEL COMPANY LIMITED
Contractor TRANSFIELD-KUMAGAI GUMI JOINT VENTURE
Applicator SEAL-MAX CONCRETE WATERPROOFING

Proj. Type TUNNELS & SUBWAY SYSTEMS

Completed 1992~1999

Comments EXTENSIVE HAIRLINE CRACK REPAIR UNDERTAKEN WHEN OTHER

PRODUCTS FAILED TO SEAL WATER SEEPAGE. TWO WORK CREWS SPENT APPROXIMATELY THREE MONTHS IN THE TUNNEL USING BOTH

PATCH N' PLUG AND XYPEX CONCENTRATE TO STOP LEAKS. 52 PRODUCTS WERE TESTED AND XYPEX WAS THE ONLY ONE THAT

PASSED. REPAIR STARTED IN 1991 AND COMPLETED 1999.

* SPENCER STREET SUBWAY

No: 03073

AUSTRALIA

Owner VLINE
Contractor THE MET
Applicator THE MET

Proj. Type TUNNELS & SUBWAY SYSTEMS

Completed 1986

Comments THIS SUBWAY LEAKED TO SUCH AN EXTENT THAT IT HAD TO BE

CLOSED FREQUENTLY. SINCE TREATMENT WITH XYPEX, THERE HAVE

BEEN NO LEAKS PRESENT.

* JOINTING PRE-CAST SUBWAY SECTIONS

No: 03083

MENTONE AUSTRALIA METRALL

Contractor **METRALL** Applicator **METRALL**

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Completed 1989

Owner

XYPEX IS BECOMING THE STANDARD PROCEDURE FOR Comments

WATERPROOFING THE JOINT BETWEEN IN-SITU AND PRE-CAST

CONCRETE BRIDGE SECTIONS.

* SOFIA SUBWAY SYSTEM

No: 09833BGR101

No: 11006

SOFIA BULGARIA

MUNICIPALITY OF SOFIA Owner Contractor "METROPOLITEN" CO.

Applicator ING. MEDAROV

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Completed 1999

Comments SEVERE LEAKAGE PROBLEMS CAUSED BY UNDERGROUND WATER

PRESSURE CAUSED CONCRETE SEGMENTS OF THE TUNNEL RING TO BECOME DEFECTIVE AND DEVELOP SEVERE LEAKAGE PROBLEMS. XYPEX PATCH 'N PLUG WAS USED TO REPAIR CRACKS THEN A COAT

OF CONCENTRATE WAS APPLIED.

* HIGHWAY CARVALHO PINTO TUNNELS

JACAREI BRAZIL

DESENVOLVIMENTO RODOVIARIO S.A. (DERSA) Owner Contractor CBPO-CIA. BRASILEIRA DE PROJETOS E OBRAS

PIRES & GIOVANETTI ENGENHARIA E ARQUITETURA Applicator

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Total 15,000 SQ METRES

XYPEX PATCH 'N PLUG WAS USED TO SEAL ALL WATER SEEPAGES Comments

> UNDER HIGH AND MODERATE PRESSURE. A TWO COAT APPLICATION OF XYPEX CONCENTRATE AND MODIFIED WAS THEN SPRAYED OVER

THE SURFACE.

* LINHA AMARELA TUNNEL

No: 10071

Page: 5

RIO DE JANEIRO

BRAZIL

RIO DE JANEIRO CITY HALL Owner Contractor OAS ENGENHARIA S.A.

Applicator PIRES & GIOVANETTI ENGENHARIA Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Total 25,000 SQ METRES

July 1996 Completed

Comments EXCAVATION OF TUNNELS IN AN AREA OF FRACTURED ROCK

MEASURING 25,000 SO. METERS. THE AREA WAS TREATED WITH TWO

COATS OF XYPEX CONCENTRATE.

* SAO PAULO METRO SYSTEM - JOSE BONIFACIO TUNNEL

No: 10396

No: 10009

SAO PAULO

BRAZIL

Owner SAO PAULO METROPOLITCAN COMPANY (METRO-SP) Contractor COMPANHIA BRASILEIRA DE PROJETOS E OBRAS Applicator PIRES & GIOVANETTI ENGENHARIA E ARQUITETURA

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Total **5,000 SO METRES**

Completed June/1997

Comments TREATMENT OF INFILTRATION OF THE TUNNEL SURFACE

(SHOTCRETE) USING XYPEX CONCENTRATE AND MODIFIED. PATCH 'N

PLUG WAS USED TO SEAL ALL INFILTRATIONS AND DRAINS.

* AYRTON SENNA TUNNEL COMPLEX

SAO PAULO

BRAZIL

Owner SAO PAULO CITY HALL (EMURB)

Contractor **CONSTRAM ENGENHARIA**

Applicator PIRES & GIOVANETTI ENGENHARIA Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 8,000 SQ METRES

Completed 09/01/96

TUNNEL PASSES UNDER LAGOON IN IBIRAPUERA PARK. A 2-COAT Comments

> APPLICATION OF SHORCRETE, 30 CM. THICK, WAS APPLIED TO A LENGTH OF 2,800 METERS IN TWO SEPARATE TUBES IN THE TUNNEL. PATCH 'N PLUG WAS USED TO SEAL ALL WATER SEEPAGE UNDER

MODERATE PRESSURE.

* SAO PAULO SUBWAY SYSTEM - PAULISTA EXTENSION

No: 11000

SAO PAULO

BRAZIL

Owner SAO PAULO METROPOLITAN COMPANY

Contractor COMPANHIA BRASILEIRA DE PROJETOS E OBRAS Applicator COMPANHIA BRASILEIRA DE PROJETOS E OBRAS

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 40,000 SQ METRES

Comments XYPEX PATCH 'N PLUG WAS APPLIED TO TREAT CRACKS AND

INFILTRATIONS, FOLLOWED BY A SPRAY APPLICATION OF XYPEX

CONCENTRATE AND MODIFIED TO THE ENTIRE SURFACE.

* MIGUEL REALE TUNNEL

No: 11002

No: 09693

SAO PAULO

BRAZIL

Owner ELECTROPAULO-ELECTRICIDADE DE SAO PAULO S.A.
Contractor ENGEFORM CONTRUCOES E COMERCIO/CONSTRUTORAENGEFORM CONTRUCOES E COMERCIO/CONSTRUTORA-

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 7.000 METERS

Comments OVER 35 TONS OF XYPEX CONCENTRATE AND PATCH 'N PLUG WAS

USED TO TREAT THE INFILTRATIONS OF THE TUNNEL THAT MEASURES 2.4 METERS IN DIAMETER AND 7,000 METERS LONG.

* JANIO QUADROS AND SEBASTIAO CAMARGO TUNNELS

SAO PAULO

BRAZIL

Owner SAO PAULO CITY HALL (EMURB)
Contractor CAMARGO CORREA ENGENHARIA
Applicator PIRES & GIOVANETTI ENGENHARIA
Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 2,600 SQ METRES

Completed 10/01/1995

Comments XYPEX PATCH 'N PLUG WAS USED TO SEAL 1,700 POINTS OF WATER

SEEPAGE UNDER HIGH PRESSURE. TWO COATS OF XYPEX WAS THEN APPLIED TO 2,600~SQ METERS OF SHOTCRETE BY SPRAY MACHINE.

* TRIBUNAL DE JUSTICA (SUPREME COURT OF STATE)TUNNEL

No: 09692

No: 12097

No: 07780

SAO PAULO

BRAZIL

Owner SAO PAULO CITY HALL (EMURB)

Contractor CBPO - CIA. BRASILERIRA DE PROJECTOS E OBRAS

Applicator PIRES & GIOVANETTI ENGENHARIA Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Total 8,200 SQ METRES

Completed 01/09/1995

Comments XYPEX PATCH 'N PLUG WAS USED TO SEAL 3,100 POINTS OF WATER

> SEEPAGE WITH HIGH AND MODERATE PRESSURE. TWO COATS OF XYPEX CONCENTRATE WAS THEN APPLIED ON THE SHOTCRETE

SURFACE OF THE TUNNEL WITH A SPRAY GUN.

* PORT OF SEPETIBA - IRON TRANSPORTATION TERMINAL

SEPETIBA **BRAZIL**

Owner CAMARGO CORREA/CBPS

Applicator PIRES, GIOVANETTI & GUARDIA ENGINHARIA

TUNNELS & SUBWAY SYSTEMS Proj. Type

VAULTS & ELEVATOR PITS

Total 21,000 KGS Completed June 1999

21,100 KG. OF XYPEX PRODUCTS WAS PRODUCED TO WATERPROOF Comments

THE TUNNEL AND PIT OF THIS IRON TRANSPORTATION TERMINAL. 849 SQ.M. OF SLURRY COAT, 1,780 LINEAR METERS OF CRACKS AND CONSTRUCTION JOINTS, AND 3,526 DEFECTIVE CONCRETE POINTS

WERE TREATED WITH THE XYPEX SYSTEM.

* ROSSDALE INTAKE RELOCATION/TUNNEL REPAIRS

EDMONTON, ALBERTA

CANADA

Owner CITY OF EDMONTON

Designer **REID CROWTHER & PARTNERS**

CITY OF EDMONTON Contractor

Applicator CITY OF EDMONTON - DEPARTMENT OF PUBLIC WORKS

Proj. Type SEWAGE & WASTEWATER TREATMENT PLANTS

TUNNELS & SUBWAY SYSTEMS

Total 440 METERS

CAST-IN-PLACE 1.5M WATER PIPE. PROPOSAL IS TO USE XYPEX FOR Comments

JOINT REPAIR AND THEIR ONGOING MAINTENANCE PROGRAM

* 109th STREET RATHOLE TUNNEL

No: 02288

EDMONTON, ALBERTA

CANADA

Designer Contractor Applicator Proj. Type Total CITY OF EDMONTON WELLS CONSTRUCTION

SUMCON WATERPROOFING LTD. **TUNNELS & SUBWAY SYSTEMS**

30,000 SQ FT

1983 Completed

* O.B. HUTTERITE COLONY

No: 08380

KITSCOTY, ALBERTA

CANADA

Owner O B HUTTERITE COLONY

OWNER

Applicator Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Total 2800 LIN FT

Comments JULY 1995: AS PER GARY PLUNKETT: ALTHOUGH SOME PATCH 'N

PLUG HAS BEEN USED, COST HAS DELAYED COATINGS APPLICATION.

* UNITED OILSEED PRODUCTS LTD.

No: 02103

LLOYDMINSTER, ALBERTA

CANADA

ALTASK CONCRETE WPG. LTD. Applicator **TUNNELS & SUBWAY SYSTEMS** Proj. Type

Comments LEAKAGE REPAIR IN ONE OF THE UNDERGROUND TUNNELS. TWO

COATS OF XYPEX WERE ALSO APPLIED TO WALLS AND FLOORS OF

TUNNEL.

* ALCAN ALUMINUM OF CANADA

No: 02307

KITIMAT, BRITISH COLUMBIA

CANADA

Applicator E.C.W.

TUNNELS & SUBWAY SYSTEMS Proj. Type

Comments AREAS OF APPLICATION: XYPEX PRODUCTS WERE USED TO REPAIR

> LEAKAGE THROUGH CONSTRUCTION JOINTS AND EXPANSION JOINTS IN THE TUNNEL UNDER STORAGE SILOS. A XYPEX CONCENTRATE COATING WAS ALSO APPLIED TO THE INTERIOR OF THE TUNNEL TO

TREAT HAIRLINE CRACK

* LIONS GATE HOSPITAL

No: 02096

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N. VANCOUVER, BRITISH COLUMBIA

CANADA

Contractor GRIMWOOD CONSTRUCTION LTD
Applicator INDUSTRIAL WPG. SYSTEMS
Proj. Type TUNNELS & SUBWAY SYSTEMS

Comments XYPEX APPLICATION FOLLOWED A MEMBRANE FAILURE AND A

VANDEX FAILURE. TUNNEL CONNECTS TWO HOSPITALS TO EACH

OTHER FROM UNDER THE ROAD.

* NEPTUNE TERMINALS - CONVEYOR TUNNELS

No: 09732

NORTH VANCOUVER, BRITISH COLUMBIA

CANADA

Owner NEPTUNE TERMINALS
Applicator TRORY CONSTRUCTION

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 15,000 SQ FT

Completed 1991

Comments A TWO COAT APPLICATION OF XYPEX CONCENTRATE AND MODIFIED

WAS APPLIED TO 15.000 SQ. FT. OF A CONVEYOR TUNNEL AT THIS BULK TERMINAL . THE TUNNEL IS APPROXIMATELY 20 FEET BELOW GROUND AND SUBJECT TO TIDAL ACTION OF UP TO 8 FEET AS IT IS

LOCATED RIGHT BESIDE THE OCEAN.

* FRASER VALLEY FLOOD CONTROL

No: 02104

PORT COQUITLAM, BRITISH COLUMBIA

CANADA

Contractor VAN BORNE CONSTRUCTION

Applicator ECW

Proj. Type TUNNELS & SUBWAY SYSTEMS

Completed 1979

Comments LEAKAGE THROUGH JOINTS AND CRACKS IN FLOOD CONTROL

TUNNELS WAS SEALED WITH XYPEX.

* TUNNEL REPAIR No: 02230

PORT COQUITLAM, BRITISH COLUMBIA

CANADA

Owner FRASER VALLEY FLOOD CONTR

Owner Contractor VAN BOURNE CONST.

Applicator E.C.W.LTD.

TUNNELS & SUBWAY SYSTEMS Proj. Type

Comments XYPEX PRODUCTS WERE USED FOR THE REPAIR OF THE FLOOD

CONTROL TUNNELS TO STOP LEAKAGE THROUGH JOINTS IN THE

STRUCTURE.

* CONVEYOR TUNNEL No: 02106

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TILLBURY ISLD, BRITISH COLUMBIA **CANADA**

Owner
Designer
Applicator
Proj. Type Owner **INLAND CEMENT**

BACM DEVELOPMENT COMPANY

ECW

TUNNELS & SUBWAY SYSTEMS

Total 4,500 SQ FT

Completed 1979

* INLAND CEMENT PLANT

No: 02105

TILLSBURY ISLD, BRITISH COLUMBIA

CANADA

BACM DEVELOPMENT COMPANY Designer Applicator
Proj. Type
Comments DILLINGHAM CORPORATION

PACIFIC E.C.W. LTD.

TUNNELS & SUBWAY SYSTEMS

XYPEX WAS APPLIED TO CONCRETE WALLS, FLOORS AND JOINTS OF

CONVEYOR TUNNEL.

* SASKATCHEWAN WHEAT POOL No: 02215

VANCOUVER, BRITISH COLUMBIA

CANADA

Owner **SAME** Applicator E.C.W.

TUNNELS & SUBWAY SYSTEMS Proj. Type

FOUNDATION WALLS & FLOORS

Total 650 LBS Completed 1981

* SASKATCHEWAN WHEAT POOL

No: 01635

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VANCOUVER, BRITISH COLUMBIA

CANADA

Owner SAME Applicator E.C.W.

Proj. Type FOUNDATION WALLS & FLOORS

TUNNELS & SUBWAY SYSTEMS

Total 650 LBS Completed 1981

C AND R CRACKS AND CONSTRUCTION JOINTS IN LOWEST Comments

UNDERGROUND LEVEL OF GRAIN ELAVATORS

* PRAIRIE CREEK PROJECT MINESITE

No: 02258

NW TERRITORIES

CANADA

Owner **CADILLAC EXPLORATIONS** Designer Proj. Type KILBORN ENGINEERING

TUNNELS & SUBWAY SYSTEMS

FOUNDATION WALLS & FLOORS

Completed 1981

* HIGHLAND CREEK POLLUTION PLANT ADDITION

No: 01879

HIGHLAND CREEK, ONTARIO

CANADA

Owner CITY OF HIGHLAND CREEK PROCTER & REDFERN Designer Contractor PIGGOTT CONSTRUCTION APRIL WATERPROOFING LTD. Applicator

SEWAGE & WASTEWATER TREATMENT PLANTS Proj. Type

TUNNELS & SUBWAY SYSTEMS

Comments XYPEX CONCENTRATE WAS APPLIED TO ALL EFFLUENT CHANNELS,

CONNECTING TUNNELS AND DIGESTER TANKS.

* THUNDER BAY POLLUTION PLANT

No: 01883

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THUNDER BAY, ONTARIO

CANADA

CITY OF THUNDERBAY Owner Designer Contractor MACLAREN ENGINEERS COLAVINO BROS. CONSTR. Applicator APRIL WATERPROOFING LTD.

Proj. Type SEWAGE & WASTEWATER TREATMENT PLANTS

TUNNELS & SUBWAY SYSTEMS

Comments XYPEX CONCENTRATE WAS APPLIED TO EXTERIOR FOUNDATION

WALLS, UNDERGROUND TUNNELS, DIGESTORS, AERATION TANKS,

GRIT BINS, EFFLUENT CONDUITS AND ROOF SLABS.

* HUMBER TREATMENT PLANT

No: 01885

TORONTO, ONTARIO

CANADA

Owner **SAME**

Owner Designer Contractor **GORE & STORIE ENGINEERING**

ELLIS - DON LIMITED

APRIL WATERPROOFING LTD.

SEWAGE & WASTEWATER TREATMENT PLANTS Proj. Type

TUNNELS & SUBWAY SYSTEMS

Comments XYPEX WATERPROOFING TREATMENT WAS APPLIED TO DIGESTER

TANKS, TUNNELS AND SLABS ON GRADE.

* SHERRIT GORDON MINE

No: 08792

FORT SASKATCHEWAN, SASKATCHEWAN

CANADA

SHERRIT GORDON MINE Owner Designer **SGM ENGINEERING**

GORD GUNTHER CONSTRUCTION Contractor

Proj. Type **VAULTS & ELEVATOR PITS**

TUNNELS & SUBWAY SYSTEMS

Total 880 LIN FT Dec. 1994 Completed

* SEPARATION / COMMUNICATION CHANNEL

No: 02112

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BASEL

SWITZERLAND

Owner
Designer
Contractor
Applicator
Proj. Type
Completed CIBA GEIGY CHEMICAL AFGERTER AND BOSSHARD

MARTI AQ BASEE

XYPEX CHEMICALS (EUROPE) **TUNNELS & SUBWAY SYSTEMS**

Completed 1980

* GRIMSEL HYDRO POWER STATION

No: 02089

GRIMSEL

SWITZERLAND

Owner KWO KRAFTWERKE OBERHASLI AG Designer Proj. Type I.U.B. INGENIEUR NEHMUNG AG BERN

TUNNELS & SUBWAY SYSTEMS

RESERVOIRS

Comments XYPEX USED AT 10- ON CABLE CAR STATION, WHICH IS BUILD INTO

ROCK, SHOTCRETE TUNNEL SECTION, VALVE HOUSE AND POWER

HOUSE 3 KM INSIDE MOUNTAIN, FRESH WATER RESERVOIR,

ENTRANCEWAYS, MACHINE ROOMS, CHANNELS, RETAINING WALLS

AND TRANSFORMER STATIONS AND PITS.

.....

* GRIMSEL HIGHWAY TUNNEL

No: 02114

GRIMSELL SWITZERLAND

Applicator XYPEX CHEMICALS (EUROPE) **TUNNELS & SUBWAY SYSTEMS** Proj. Type

* CONVENTO VIEJO RESERVOIR - WATER SPILLWAY TUNNEL

No: 10423

CHILE

MINISTRY OF PUBLIC WORKS - IRRIGATION DEPARTMENT Owner

Proj. Type Completed **TUNNELS & SUBWAY SYSTEMS**

April 1994

THE WATER SPILLWAY TUNNEL, LOCATED 300 KM. SOUTH OF Comments

> SANTIAGO ON THE COASTAL MOUNTAINS, REQUIRED REPAIRS TO BE DONE TO THE CONCRETE JOINTS. THIS WAS CARRIED OUT BY THE USE OF XYPEX PATCH 'N PLUG, FOLLOWED BY A COAT OF XYPEX

CONCENTRATE.

* YIN RUAN RU JIN WATER TUNNEL

No: 10315

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PEOPLE'S REP. OF CHINA

TUNNELS & SUBWAY SYSTEMS Proj. Type

* XIYI CIRCUIT WATERPROOFING IN XIZIMEN SUBWAY STATN

No: 11404

BEIJING

PEOPLE'S REP. OF CHINA

Owner Applicator Proj. Type BEIJING SUBWAY CO.

BEIJING CHENRONG WATERPROOFING MATERIAL CO. LTD.

TUNNELS & SUBWAY SYSTEMS

35 SQ METRES

* BEIJING SUBWAY HEAT & POWER PLANT STATION

No: 11384

BEIJING

PEOPLE'S REP. OF CHINA

Owner **BEIJING SUBWAY**

Designer BEIJING CHENJIAN DESIGN & RESEARCH INSTITUTE

Contractor **BEIJING SUBWAY** Applicator Proj. Type **BEIJING SUBWAY**

TUNNELS & SUBWAY SYSTEMS

NUCLEAR & POWER GENERATING STATIONS

Completed 04/1995

Comments XYPEX CONCENTRATE WAS APPLIED ON A TRIAL BASIS.

* QINGDAO RAILWAY STATION YIQUN UNDERGROUND CITY

No: 11388

SHANDONG QINGDAO

PEOPLE'S REP. OF CHINA

Owner **OINGDAO SUBWAY**

BEIJING CHENJIAN DESIGN & RESEARCH INSTITUTION Designer

Proj. Type TUNNELS & SUBWAY SYSTEMS

Completed Aug. 1996

XYPEX CONCENTRATE AND PATCH 'N PLUG WAS APPLIED ON A TRIAL Comments

BASIS.

* SHANGHAI NEW RAILWAY STATION

No: 11390

SHANGHAI

PEOPLE'S REP. OF CHINA

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Total 12 SQ METRES

Completed June 1996

XYPEX CONCENTRATE AND PATCH 'N PLUG WAS USED ON A TRIAL Comments

* SHANGHAI GUJIANG TUNNEL

No: 11407

SHANGHAI

PEOPLE'S REP. OF CHINA

Applicator SHANGHAI TUNNEL CO.

TUNNELS & SUBWAY SYSTEMS Proj. Type

* HUANGPUJIANG ZEBRA CROSSING TUNNEL PROJECT

No: 11411

SHANGHAI

PEOPLE'S REP. OF CHINA

SHANGHAI WEITIE BUILDING MATERIALS CO. LTD. Owner

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

* SHANGHAI CHANGSHU SUBWAY STATION

No: 09086

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SHANGHAI

PEOPLE'S REP. OF CHINA

Owner SHANGHAI SUBWAY MANAGEMENT CO. Contractor SHANGHAI SUBWAY MANAGEMENT CO. SHANGHAI SUBWAY MANAGEMENT CO. Applicator

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Total 200 KM. SUBWAY

06/01/94 Completed

Comments WATER INTRUSION REPAIR AT COLD JOINT BETWEEN CEILING AND

WALL. XYPEX CONCENTRATE & PATCH 'N PLUG CRACK REPAIR SYSTEM USED TO SEAL WATER FROM ENTERING INTO THE SUBWAY STATION. XYPEX 100% SUCCESSFUL. PREVIOUS ATTEMPTS USING

OTHER RODUCTS HAD FAILED.

* TIAN JIN YINLAN WATER TUNNEL

No: 11386

No: 10400CZE252

TIANJIN

PEOPLE'S REP. OF CHINA

Designer TIANJIN WATER CONSERVATORY Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Completed July 1996

Comments XYPEX CONCENTRATE AND PATCH 'N PLUG WAS APPLIED ON A TRIAL

BASIS.

* METRO STATION - TRACK B

HURKA, PRAGUE CZECH REPUBLIC

Contractor METROSTAV A.S.

Applicator ABV S.R.O.

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Completed Nov. 1994

Comments SEEPAGE OF WATER INTO THE CONCRETE CONSTRUCTION OF THE

METRO STATION (IN TUNNELS AND MACHINE ROOM) WAS

SUCCESSFULLY REPAIRED WITH THE USE OF XYPEX CONCENTRATE,

MODIFIED AND PATCH 'N PLUG.

* TUNNEL No: 02489

HANOVER

GERMANY

Applicator BENECKE

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

* PRESA DE VAULE-PERIPA

No: 08121

MANUBI PROVINCE

ECUADOR

Owner C.E.D.E.G.E.

TAMS ENGINEERING Designer

Contractor CONSTRUCTORA AGROMAN

Proj. Type **DAMS**

TUNNELS & SUBWAY SYSTEMS

Total 18,000 METERS

XYPEX USED TO PREVENT DETERIORATION OF THE CONCRETE IN THE Comments

> DIVERSION TUNNEL CAUSED BY "GAS SULFIDRICO" PRODUCED BY THE DECOMPOSITION OF "LECHUGIN", A PLANT FOUND IN THOSE

WATERS.

* PARIS METRO SYSTEM

No: 08561

PARIS

FRANCE

Owner PARIS METRO Designer PARIS METRO

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Completed 1987

XYPEX PRODUCTS WERE USED TO SEAL CRACKS, JOINTS AND WATER Comments

> INFILTRATION IN VARIOUS AREAS OF THE NEW AND OLD SUBWAY TUNNELS AND STATIONS IN THIS SYSTEM. THE SUCCESS OF THESE REPAIRS WAS A STRONG FACTOR IN THE SELECTION OF XYPEX BY THE CITY OF ANTWERP FOR USE IN THEIR REMEDIAL PROGRAM.

* TUNNEL OF THE CHAMOISE NANTUA

No: 02600

CHAMOISE NANTUA

FRANCE

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Comments THANET APPLICATOR. TREATMENT OF FISSURES IN THE

VENTILATION DUCTS OF THE TUNNEL (300 ML FISSURES). HEIGHT OF

DUCT - 100 METERS.

* MARSEILLE METRO (BOUCHES DU RHONE)

No: 02427

MARSEILLE

FRANCE

Contractor **ARPEC**

TUNNELS & SUBWAY SYSTEMS Proj. Type

Total 4,000 SQ METRES

LINING OF THE LOWER LEVEL IN TERMINAL. REPAIR OF WATER Comments

INFLUX.

* CHAMBERLAIN SQUARE TUNNEL

No: 02535

BIRMINGHAM

UNITED KINGDOM

CANBRI TECHNOLOGIES Applicator

TUNNELS & SUBWAY SYSTEMS Proj. Type

VAULTS & ELEVATOR PITS

Comments XYPEX CRYSTALLINE SYSTEM USED TO REPAIR WATER INGRESS AT

VARIOUS AREAS OF TUNNEL.

* KEDBACK COAL MINE

No: 02538

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______ **SOUTH WALES**

UNITED KINGDOM

Owner NATIONAL COAL BOARD Applicator **CANBRI TECHNOLOGIES**

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

VAULTS & ELEVATOR PITS

Comments OPEN-CAST COAL TREATMENT PLANT WITH UNDERGROUND

CHAMBER. CONSIDERABLE LEAKAGE SOME FORMING FOUNTAINS OF

WATER. CRACKS TREATED WITH PATCH'N PLUG, SLURRY OF

.....

CONCENTRATE, COMPLETELY SUCCESSFUL.

* M & R ISLAND LINE MASS TRANSIT TUNNEL

No: 02677

HONG KONG

Contractor
Applicator
Proj. Type
Completed GAMMON (H.K.) LTD

SEALAND WATERPROOFING ENGINEERS CO. LTD.

TUNNELS & SUBWAY SYSTEMS

Completed 1985

Comments TUNNEL WALL CRACKS WERE TREATED WITH XYPEX.

* PEDESTRIAN TUNNEL - UNIVERSITY RAILWAY STATION

No: 02832

SHATIN HONG KONG

SEALAND WATERPROOFING LTD Contractor Contractor Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Completed 1983

* POWER PLANT SZASZHALOMBATTA

No: 11145HUN101

DUNAI HOEROMU

HUNGARY

DUNAI HOEROMU RT. (JSC.) Owner

Contractor VEGYEPSZER RT., Applicator CHEM-BETON KFT.

Proj. Type **NUCLEAR & POWER GENERATING STATIONS**

TUNNELS & SUBWAY SYSTEMS

Total 4,500 SQ METRES

Jan. 1998 Completed

Comments TWO COAT APPLICATION OF XYPEX CONCENTRATE WAS USED TO

> WATERPROOF AN UNDERGROUND WATER-CARRYING CHANNEL (200 M. LONG) SEPARATED BY A CONCRETE WALL FROM A CHANNEL SERVING AS A UTILITY TUNNEL. AFTER 6 MONTHS IN OPERATION THERE WERE NO SIGNS OF WATER LEAKAGE INTO THE UTILITY

CHANNEL.

* SAMARANG POWER GENERATING STATION

INDONESIA

No: 02244

SAMARANG

Designer **BLACK & VEATCH INTERNATIONAL** Contractor P.T.PEMBANGUNAN PERUMAHAN

Proj. Type CONCRETE PIPE

TUNNELS & SUBWAY SYSTEMS

Comments XYPEX WAS APPLIED TO ALL CONSTRUCTION JOINTS ON 6,000 METRE

WATER PIPE.

* BASTIA ROAD TUNNEL

No: 02428

CORSICA

ITALY

Contractor Proj. Type Comments **SIREC**

TUNNELS & SUBWAY SYSTEMS

XYPEX TREATMENT OF CONCRETING BELOW SEA-LEVEL.

* AOMORI CITY TUNNEL

No: 08394

AOMORI

JAPAN

Owner Contractor Applicator Proj. Type Owner **AOMORI CITY** JAPAN XYPEX

JAPAN XYPEX CO. LTD.

TUNNELS & SUBWAY SYSTEMS Proj. Type

Total **4,075 CU METERS**

Completed 1996

TO PREVENT WATER LEAKAGE FROM THE CRACKS AND Comments

DETERIORATED CONSTRUCTION JOINTS OF THE ORIGINAL

BOX CULVERT TUNNEL, XYPEX ULTRA-PLUG WAS APPLIED,

FOLLOWED BY AN APPLICATION OF XYPEX CONCENTRATE TO THE ENTIRE SURFACE TO REINFORCE THE BOX CULVERT TUNNEL, A U-SHAPED CONCRETE LINING, USING XYPEX ADMIX C-2000, WAS THEN

INSTALLED.

* HAYASENO DAM AND TORIMIZU TUNNEL

No: 02864

AOMORI PREF.

JAPAN

Contractor TAISEI BUILDING COMPANY Proj. Type **TUNNELS & SUBWAY SYSTEMS**

DAMS

* OKACHIMACHI TUNNEL

No: 08559

TOKYO

JAPAN

Owner EAST JAPAN RAILWAY COMPANY
Designer EAST JAPAN RAILWAY COMPANY

Contractor KUMAGAI GUMI CO. LTD.

Proj. Type TUNNELS & SUBWAY SYSTEMS

Completed 1992

Comments XYPEX PRODUCTS WERE USED TO WATERPROOF AREAS OF THIS

TUNNEL WHICH RUN UNDER THE CENTRAL BUSINESS DISTRICT OF TOKYO AND FORMS A NEW ARTERY FOR JAPAN'S FAMED BULLET TRAIN LINKING THE MAIN TOKYO AND UENO STATIONS. PREVIOUS SUCCESS OF XYPEX ON KUMAGAI GUMI TUNNEL PROJECTS WAS A

FACTOR IN ITS FURTHER SELECTION.

* KAMISIMIZU TUNNEL

No: 02858

JAPAN

Contractor MITSUI BUILDING COMPANY
Proj. Type TUNNELS & SUBWAY SYSTEMS

Completed 1986

* SEIKANN TUNNEL

No: 02851

AOMORI PREFECT.

JAPAN

Contractor KASHIMA BUILDING CO

Proj. Type TUNNELS & SUBWAY SYSTEMS

Completed 1984

* HUTAMATE TUNNEL

No: 02849

AOMORI PREFECT.

JAPAN

Contractor KASHIMA / FUJITA JV

Proj. Type TUNNELS & SUBWAY SYSTEMS

* TMABETSU TUNNEL

No: 02854

AOMORI PREFECT.

JAPAN

Contractor Proj. Type Completed KASHIMA BUILDING COMPANY **TUNNELS & SUBWAY SYSTEMS**

1985

* TSUGARU TUNNEL

No: 02848

AOMORI PREFECT.

JAPAN

KASHIMA / FUJITA JV

TUNNELS & SUBWAY SYSTEMS

Contractor KASI Proj. Type TUNI Completed 1984

* MINATO TUNNEL

No: 02857

FUKUSHIMA PREF.

JAPAN

Contractor GYOU BUILDING COMPANY Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Completed 1985

* TAKESAKE TUNNEL

No: 02856

HIROSHIMA PREF.

JAPAN

Contractor Proj. Type Completed OBAYASHI / KOKUDO JV JAPAN **TUNNELS & SUBWAY SYSTEMS**

Completed 1985

* JOUZANKEI NO.6 TUNNEL

No: 02855

HOKKAIDOU

JAPAN

TAKENAKA ITOU JV Contractor

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

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* UKISHIMA TUNNEL

No: 02850

HOKKAIDOU

JAPAN

MITSUI BUILDING CO

TUNNELS & SUBWAY SYSTEMS

Contractor Proj. Type Completed 1984

* TOMARIGENHATSU TUNNEL

No: 02853

HOKKAIDOU

JAPAN

MAEDA BUILDING CO

TUNNELS & SUBWAY SYSTEMS

Contractor MAE
Proj. Type TUNI
Completed 1984

* SHINNRYUU TUNNEL

No: 02847

HOKKAIDOU

JAPAN

Contractor KUMAGAI CONST / IWATA JV Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Completed 1984

* TOYOHAME TUNNEL

No: 02846

HOKKAIDOU

JAPAN

Contractor Proj. Type Completed OTARU DEVELOPER

TUNNELS & SUBWAY SYSTEMS

Completed 1983

* TOYOHAME TUNNEL

No: 02845

HOKKAIDOU

JAPAN

MAIDA / ARAI / ABE JV

TUNNELS & SUBWAY SYSTEMS

Contractor Proj. Type Completed Completed 1983 07/31/2000

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* SHINRYUU TUNNEL

No: 02844

HOKKAIDOU

JAPAN

Contractor Proj. Type Completed KUMAGAI CO / IWATA BUILDING CO **TUNNELS & SUBWAY SYSTEMS**

1982

* KIDAKA KIYOMI TUNNEL

No: 02760

HOKKAIDOU

JAPAN

KUMAGAI CONSTRUCTION COMPANY

Contractor KUM Proj. Type TUN Completed 1981 **TUNNELS & SUBWAY SYSTEMS**

* SEIKANN TUNNEL

No: 02759

HOKKAIDOU

JAPAN

Contractor JAPAN PUBLIC RAILROAD COMPANY Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Completed 1981

* RYUGASAKI TUNNEL

No: 02758

IWATE PREF.

JAPAN

Contractor Proj. Type Completed Owner JAPAN PUBLIC HIGHWAY COMPANY KUMAGAI CONSTRUCTION COMPANY

TUNNELS & SUBWAY SYSTEMS

1981

* YOUKAITIBAMIYAGAWATUTUMI TUNNEL

No: 02860

MIE PREFECTURE

JAPAN

Contractor ISW CITY OFFICE

TUNNELS & SUBWAY SYSTEMS Proj. Type

07/31/2000

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* SHINOTAKE TUNNEL

No: 02861

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TOKYO

JAPAN

Contractor Proj. Type Completed OKUTAMA BUILDING COMPANY **TUNNELS & SUBWAY SYSTEMS**

Completed 1986

* KINRO TUNNEL

No: 02859

WAKAYAMA PREF.

JAPAN

Owner PUBLIC WORKS BUREAU Contractor WAKAYAMA PREFECTURE Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Completed 1986

* MITSUISHI TUNNEL

No: 02863

WAKAYAMA PREF.

JAPAN

Contractor MINISTRY OF CONSTRUCTION Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Completed 1986

* KENDOU YUSAKA TUNNEL

No: 02862

WAKAYAMA PREF.

JAPAN

WAKAYAMA PREFECTURE Contractor Proj. Type
Completed **TUNNELS & SUBWAY SYSTEMS**

1986

* AUTOMOBILE CLUB OF MONACO

No: 02602

MONACO

TUNNELS & SUBWAY SYSTEMS Proj. Type

CHEMICAL & CHLORIDE PROTECTION

Comments INTERIOR LINING OF THE UNDERGROUND CAR PARK ADJACENT TO

THE SEA.

07/31/2000

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* MEXICO CITY SUBWAY LINE B

No: 12136

MEXICO CITY

MEXICO

Owner **MEXICO CITY**

Contractor Applicator Proj. Type Comments **FESTER FESTER**

TUNNELS & SUBWAY SYSTEMS

XYPEX PATCH 'N PLUG AND XYPEX CONCENTRATE WERE USED TO

WATERPROOF EXTENSIVE WATER LEAKS THROUGHOUT THE

SUBWAY'S LINE B.

* LRT 2-CENTRAL MARKET

No: 10507

KUALA LUMPUR

MALAYSIA

SNC & GTMI JV Contractor

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Completed June 1998

* KUALA LUMPUR CITY CENTRE LRT STATION

No: 10508

KUALA LUMPUR

MALAYSIA

Contractor Applicator Proj. Type Completed LM/JDC JV **EASTCHEM**

TUNNELS & SUBWAY SYSTEMS

Dec. 1997

Comments 24.000 METERS OF CONCENTRATE WAS BRUSHED ON SLAB. AS THE

CULVERT IS SUSPENDED OVER A CAR PARK IT IS IMPORTANT THAT

THERE BE NO LEAKAGES.

* DUTA PLAZA - LRT STATION

No: 09646

KUALA LUMPUR

MALAYSIA

Owner CITY PROPERTIES SDN. BHD.

Designer ARCH: GOH HOCK GUAN & ASSOC.

MASCON SDN. BHD. Contractor

Applicator EASTCHEM TECHNOLOGY (M) SDN. BHD.

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

BELOW GRADE CONCRETE BLOCK WALLS

Total **40,000 SQ METRES**

LRT STATION BELOW COMMERCIAL AND RETAIL CENTRE (5 STORIES Comments

BELOW GRADE) LOWEST SLAB DS2 APPLICATION. TOTAL AREA

40,000 SQ. METERS. ALL BELOW GRADE.

* GRAND HYATT HOTEL LOCATION - LRT STATION

No: 09649

KUALA LUMPUR

MALAYSIA

TUNNELS & SUBWAY SYSTEMS Proj. Type

Comments SECTION APPLIED WITH CONCENTRATE. YET TO RECEIVE

> CONFIRMATION RE REMAINNG WORK ON THE SITE. VANDEX WAS ALSO TESTED AT THIS SITE AND IT FAILED. APPLICATION SUPERVISED

BY NEIL JONES OF CMW.

* NORWEGIAN NATIONAL RAILWAYS

No: 02113

No: 09781

BERGEN

NORWAY

Designer **MITTET**

Applicator Proj. Type NORDISK CON-SEAL A/S

TUNNELS & SUBWAY SYSTEMS

Total 200 SQ METRES

Completed 1981

Comments ONE COAT OF CONCENTRATE AND ONE COAT OF MODIFIED WAS

APPLIED IN THIS TUNNEL.

* PANAMA CANAL GATUN LOCKS CULVERTS

PANAMA CITY

PANAMA

Owner PANAMA CANAL COMMISSION

Designer PANAMA CANAL ENGINEERING DIVISION PANAMA CANAL MAINTENANCE DIVISION Contractor PANAMA CANAL MAINTENANCE DIVISION Applicator

TUNNELS & SUBWAY SYSTEMS Proj. Type

ADMIX PROJECTS

Comments XYPEX ADMIX WAS ADDED TO THE SHOTCRETE MIX AND APPLIED TO

ALL CULVERT (TUNNELS) SURFACES. THE ORIGINAL SPEC CALLED

FOR APPLICATION OF XYPEX CONCENTRATE FOLLOWED BY SHOTCRETE, HOWEVER USE OF XYPEX ADMIX SIMPLIFIED THE

PROCESS AND REDUCED COSTS.

* PANAMA CANAL - PEDRO MIGUEL LOCKS TRANSFORMER ROOM

No: 09949

No: 10671POL125

No: 11608POL126

PANAMA CITY

PANAMA

Owner PANAMA CANAL COMMISSION

Designer PANAMA CANAL ENGINEERING DIVISION
Applicator PANAMA CANAL - MAINTENANCE DIVISION

Proj. Type VAULTS & ELEVATOR PITS

TUNNELS & SUBWAY SYSTEMS

Completed 1995

Comments XYPEX CONCENTRATE AND MODIFIED WERE USED TO REPAIR AND

TREAT THE WALLS OF THE TRANSFORMER ROOM OF THE PEDRO

MIGUEL FLOODGATE ACCESS TUNNELS.

* RAILWAY/BUS STATION - TUNNEL LEAKS

GDANSK

POLAND

Owner ZARZAD DROG I ZIELENI

Designer ABH NOMOS LTD.
Contractor ABH NOMOS LTD.
Applicator ABH NOMOS LTD.

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 100 SQ METRES

Completed Sept. 1994

Comments DUE TO A RISE IN THE GROUND WATER TABLE LEAKAGE OCCURRED

ALONGSIDE A CAST IN PLACE CONCRETE STAIR CASE. XYPEX WAS

USED TO WATERPROOF THE AREA.

* CITY HALL UNDERGROUND RAILWAY STATION

WARSAW

POLAND

Owner METRO WARSZAWSKIE

Designer BIURO PROJEKTOW ARCHITEKTONICZNYCH I BUDOWLANYCH

Contractor WARBUD S.A. Applicator ABH NOMOS

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 10,404 SQ METRES

Completed Oct. 1999

Comments THIS IS THE FIRST UNDERGROUND RAILWAY STATION IN POLAND TO

BE WATERPROOFED USING XYPEX PRODUCTS. FOUNDATION PLATES, FLOOR SLABS, AND CONSTRUCTION JOINTS AT THE MAIN TUNNEL WERE WATERPROOFED. THE FOUNDATION AND FLOOR SLABS, THE WALLS AND CONSTRUCTION JOINTS AT FOUR EXIT TUNNELS WERE

ALSO WATERPROOFED.

* SEWER TUNNELS - MADEIRA ISLANDS

No: 08558

PORTUGAL

TUNNELS & SUBWAY SYSTEMS Proj. Type

SEWAGE & WASTEWATER TREATMENT PLANTS

Total 20,000 LBS

Completed 1993

OVER 20,000 LBS OF XYPEX MATERIAL WAS APPLIED TO THE Comments

SHOTCRETE SEWER TUNNELS ON THIS PROJECT. XYPEX WAS USED TO

STOP WATER INFILTRATION INTO THE TUNNELS AND PROVIDE

PROTECTION FROM THE CORROSIVE EFFECTS OF HYDROGEN SULFIDE

GAS.

* COSTA DO ESTORIL-SANITATION SCHEME

No: 08555

PORTUGAL

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

SEWAGE & WASTEWATER TREATMENT PLANTS

Total 600,000 SQ FT

1993

Completed

Comments THE SANITATION PROJECT BEING CONSTRUCTED IN THIS POPULAR

> PORTUGESE HOLIDAY AREA IS DESIGNED TO PREVENT POLLUTION OF THE LOCAL BEACHES. IT CONSISTS OF 21 KMS OF SEWER TUNNELS AND PIPES WHICH FEED INTO A WASTE WATER TREATMENT PLANT. XYPEX WAS SPECIFIED FOR WATERPROOFING AND H2S PROTECTION.

* CERVEPAR (BREWERY) TUNNEL

ASUNCION **PARAGUAY**

CERVEPAR

CERVECERIA QUILMES

Owner
Designer
Applicator
Proj. Type
Completed INTPRO SRL

TUNNELS & SUBWAY SYSTEMS

Completed 1996

THE JOINTS AND CONCRETE WALLS OF THE TUNNELS AND SUBWAY Comments

SYSTEM WERE REPAIRED AND WATERPROOFED WITH XYPEX

PATCH 'N PLUG AND CONCENTRATE.

* CERVECERIA PARAGUAYA

No: 09908

No: 11598

IPANE PARAGUAY

CERVEZERIA PARAGUAYA Owner

Applicator INTPRO S.R.L.

TUNNELS & SUBWAY SYSTEMS Proj. Type

* PEDESTRIAN UNDERPASS

No: 10436

No: 10644SVR111

MOSCOW

RUSSIA

Owner MOSCOW MUNICIPALITE
Designer METROGIPROTRANS
Contractor INTERAQUA LTD.

Proj. Type TUNNELS & SUBWAY SYSTEMS

Completed October 95

COMMENTS CONSIDERABLE STRUCTURAL DAMAGE OCCURRED AS A RESULT OF

WATER SEEPING THROUGH JOINTS BETWEEN CONCRETE BLOCKS IN THE CEILING OF THE UNDERPASS. ALL JOINTS WERE SEALED WITH XYPEX PATCH 'N PLUG, FOLLOWED BY AN APPLICATION OF XYPEX

CONCENTRATE TO THE SURFACE OF THE STRUCTURE.

* GOSTINY DVOR No: 10761

MOSCOW

RUSSIA

Owner GOSTINY DVOR
Designer MOSPROEKT-2

Contractor CENTROTRANSSTROY Applicator INTERAQUA, LTD.

Proj. Type TUNNELS & SUBWAY SYSTEMS

FOUNDATION WALLS & FLOORS

Total 42,795 KGS Completed Dec. 1998

Comments XYPEX MATERIALS WERE USED TO PROVIDE WATERPROOFING TO

THE REINFORCED CONCRETE TUNNEL STRUCTURES. 7150 RUNNING MTR OF ABUTTING JOINTS, TECHNOLOGICAL JOINTS & EXPANSION JOINTS. 17,060 SQ.M. OF CONCRETE WALL SURFACES, OVERLAPPINGS,

FLOORS. 1,670 SQ.M. SURFACES OF BRICKWORK.

* UTILITY TUNNELS - ELECTRICAL DISTRIBUTION

BRATISLAVA

SLOVAK REPUBLIC

Owner SLOVENSKE ELEKTRARNE, A.S.

Applicator HYDROSAN S.R.O.

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 950 SQ METRES

Completed 1997

Comments THIS 15 YEAR OLD UTILITY TUNNEL FOR DISTRIBUTING HIGH

VOLTAGE ELECTRICITY REQUIRED REPAIR DUE TO GROUND WATER LEAKS UP TO 130 CM. ABOVE FLOOR LEVEL IN SOME AREAS. A TWO-COAT APPLICATION OF XYPEX CONCENTRATE AND MODIFIED WAS APPLIED. CRACKS AND JOINTS WERE FILLED WITH XYPEX PATCH 'N

PLUG.

No: 10546SVR108

* UTILITY TUNNEL - POTABLE WATER

BRATISLAVA

SLOVAK REPUBLIC

Owner WATERWORKS BRATISLAVA

Applicator HYDROSAN S.R.O.

Proj. Type TUNNELS & SUBWAY SYSTEMS

WATER TREATMENT PLANTS

Total 3,500 SO METRES

Completed 1995/96/97

Comments THESE TUNNELS, WHICH HOUSE UNDERGROUND PIPES AND CABLES,

WERE EXPERIENCING SEVERE LEAKAGE OF UP TO 13,000 GAL. PER 24 HOURS. RESTORATION CONSISTED OF 5700 LINEAR FEET OF CRACK REPAIR USING PATCH N' PLUG, CONCENTRATE AND MODIFIED. THE

REPAIRS ARE TO PROLONG THE LIFE OF THE CONCRETE.

* ANKARA SUBWAY TUNNELS

ANKARA

TURKEY

Owner ANKARA MUNICIPALITY

Designer L.R.T.C. (GERMAIN) AND YUKSEL PROJECT

Contractor KOPEX (POLISH CO.) 1994-1995

Applicator MR. MUSTAFA CAVUSOGLU FOR BAYINDIR AND MR. PAVEL

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 5,600 SQ METRES

Completed Ongoing

Comments 11,000 SQ.M. OF CRACKS WAS REPAIRED WITH PATCH 'N PLUG TO STOP

WATER INGRESS THROUGH CONSTRUCTION JOINTS. 5,600 SQ.METERS OF XYPEX CONCENTRATE AND MODIFIED WAS ALSO APPLIED TO THE

SURFACE TO PROVIDE WATERPROOFING.

* NATURAL GAS CENTRAL INDUSTRIAL BUILDING

No: 02938

No: 09004

LULEBURGAZ

TURKEY

Owner NATURAL SOURCES MINISTRY

Contractor ENKA Applicator ENKA

Proj. Type TUNNELS & SUBWAY SYSTEMS

FOUNDATION WALLS & FLOORS

Total 3,600 SQ FT

Comments LEAKAGES FROM TUNNEL CEILING AND SIDE WALLS HAVE

BEEN TREATED.

* TAIPEI SUBWAY HSINGCHAN SERVICE TUNNEL

No: 03003

TAIPEI

TAIWAN

Owner Contractor Applicator Proj. Type Completed TAIPEI CITY GOVERNMENT

RET-SER ENGINEERING AGENCY

BIWOOD

TUNNELS & SUBWAY SYSTEMS

Completed 1987

* KHARKOV SUBWAY

No: 11200

KHARKOV UKRAINE

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

* TEATRALNA SUBWAY STATION

No: 11194

KIEV

UKRAINE

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

* MAGMA COPPER - SHOTCRETE TUNNELS

No: 08073

SAN MIGUEL, ARIZONA

U.S.A.

MAGMA COPPER

Owner
Designer
Contractor
Proj. Type
Total
Completed
Comments **OWNER OWNER**

TUNNELS & SUBWAY SYSTEMS

30,000 SQ FT

1987

XYPEX WAS USED TO WATERPROOF 30,000 SQ. FT. OF SHOTCRETE Comments

.....

TUNNEL LINER.

* PENSTOCK TUNNEL - DRUM POWER HOUSE

No: 02088

ALTA, CALIFORNIA

U.S.A.

PACIFIC GAS & ELECTRIC CO Owner Applicator PACIFIC GAS AND ELECTRIC Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Total 7,550 LBS 1977 Completed

* SCHRAMSBERG VINEYARDS

No: 02110

CALISTOGA, CALIFORNIA

U.S.A.

Contractor ALF BURTLESON CONSTR.
Applicator SCHRAMSBERG VINEYARDS
Proj. Type TUNNELS & SUBWAY SYSTEMS

GRAIN ELEVATORS & FOOD STORAGE

Total 415 LBS Completed 1982

* STAGS LEAP WINERY

No: 02779

NAPA, CALIFORNIA

U.S.A.

Owner STAGS LEAP WINERY

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 180 LBS Completed 1987

Comments REPAIRS WERE MADE TO THE EXISTING GUNITE TUNNEL WITH

XYPEX. TWO COATS OF XYPEX 'CONCENTRATE' WERE APPLIED AT A

RATE OF 1.5 LB/SQ.YD. PER COAT.

* FAR NIENTE WINERY

No: 02782

OAKVILLE, CALIFORNIA

U.S.A.

Owner FAR NIENTE WINERY

Designer DONALD HERZOG ASSOCAITES

Contractor CHRISTENSEN & KOMES

Applicator ALF BURTLESON CONSTRUCTION Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 660 LBS Completed 1986

Comments XYPEX CONCENTRATE WAS APPLIED TO THE NEW TUNNEL WALLS OF

THIS WINE "CAVE".

* STANFORD UNIVERSITY LINEAR ACCELERATOR TUNNEL

No: 01016

PALO ALTO, CALIFORNIA

U.S.A.

Designer KAISER ENGINEERING Contractor CONTINENTAL HELLER

Applicator GEORGE FORTUNE PAINTING INC

Proj. Type **NUCLEAR & POWER GENERATING STATIONS**

TUNNELS & SUBWAY SYSTEMS

Total 6,000 LBS

Completed 1979

XYPEX SYSTEM WAS USED TO REPAIR CRACKS AND CONCRETE Comments

DEFECTS IN NEW LINEAR ACCELERATOR TUNNEL.

* STANFORD UNIVERSITY CARBON DATING CHAMBER

No: 01264

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PALO ALTO, CALIFORNIA

U.S.A.

Proj. Type **NUCLEAR & POWER GENERATING STATIONS**

TUNNELS & SUBWAY SYSTEMS

Comments XYPEX USED TO WATERPROOF SUBTERRANEAN CONCRETE TESTING

CHAMBER USED FOR CARBON DATING.

* RUTHERFORD HILL WINERY

No: 02715

RUTHERFORD, CALIFORNIA

U.S.A.

RUTHERFORD HILL WINERY

Owner Contractor Applicator Proj. Type ALF BURTLESON CONSTRUCTION CO. ALF BURTLESON CONSTRUCTION CO. **TUNNELS & SUBWAY SYSTEMS**

Total 165 LBS Completed 1986

Comments XYPEX CONCENTRATE USED FOR TOUCH UP AT THE RATE OF 2 LB PER

SQUARE YARD FOR THESE WINERY TUNNELS.

* CALIFORNIA STATE OFFICE BUILDING 1B

No: 02090

SACRAMENTO, CALIFORNIA

U.S.A.

Contractor CONTINENTAL HELLER Applicator CURTIS ROOFING CO.

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Total 560 LBS

CONNECTING TUNNEL. Comments

* NAVAL AIR STATION UTILITY TUNNELS

No: 02119

SAN DIEGO, CALIFORNIA

U.S.A.

Owner U.S. NAVY

Designer NAVAL ENGINEERING COMMAND Contractor C. E. WYLIE CONSTRUCTION Applicator C.E. WYLIE CONSTRUCTION Proj. Type **TUNNELS & SUBWAY SYSTEMS**

MILITARY PROJECTS

Total 10,000 SO FT

Completed 1980

XYPEX WAS APPLIED TO THE INTERIOR OF THE UTILITY TUNNELS. Comments

* EMBARCADERO STATION

No: 02116

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SAN FRANCISCO, CALIFORNIA

U.S.A.

Contractor Applicator Proj. Type Comments HOMER J. OLSEN CO. HOMER J. OLSEN CO.

TUNNELS & SUBWAY SYSTEMS

XYPEX WAS APPLIED TO CONSTRUCTION JOINT AT TOP OF SLURRY Comments

WALL TO PREVENT LEAKAGE INTO FINISHED STATION.

* OIL STORAGE TANKS & TRANSFER TUNNELS

No: 08146

SAN FRANCISCO, CALIFORNIA

U.S.A.

CHEVRON USA Owner Designer OVERAA & CO.

TUNNELS & SUBWAY SYSTEMS Proj. Type

RESERVOIRS

Comments MATERIAL WAS REQUESTED BY CHEVRON OIL USA. DS1 WAS

.....

APPLIED TO OIL STORAGE TANKS AND TRANSFER TUNNELS LOCATED ON THE SHORE OF SAN FRANCISCO BAY. XYPEX USED TO PREVENT WATER SEEPAGE INTO THE TRANSFER TUNNELS AND TANKS.

* SAN FRANCISCO AIRPORT - SOUTH TERMINAL

No: 02506

SAN FRANCISCO, CALIFORNIA

U.S.A.

S. F. AIRPORT AUTHORITY Owner Designer **GROUP IV ARCHITECT** Contractor **WILLIAMS & BURROWS**

Applicator UNIVERSAL PROTECTIVE COAT Proj. Type **TUNNELS & SUBWAY SYSTEMS**

PARKING DECKS, PARKADES & WALKWAYS

Comments SLABS, WALLS, JOINT REPAIR AT S. TERMINAL TUNNELS.

* BAY AREA RAPID TRANSIT DISTRICT

No: 02177

SAN FRANCISCO, CALIFORNIA

U.S.A.

Contractor HOMER J. OLSEN COMPANY Applicator GENERAL CONTRACTORS LABOR

Proj. Type **VAULTS & ELEVATOR PITS**

TUNNELS & SUBWAY SYSTEMS

Comments XYPEX CONCENTRATE APPLIED TO CONSTRUCTION JOINT AT TOP OF

SLURRY WALL TO PREVENT LEAKAGE INTO FINISHED SUBWAY

STATION.

* GLORIA FERRER WINERY

No: 02998

SONOMA, CALIFORNIA

U.S.A.

Owner FREIXENET-SONOMA

Designer JOHN PICCHI & ASSOCIATES Contractor CHRISTENSEN & FOSTER **CHRISTENSON & FOSTER** Applicator

BELOW GRADE CONCRETE BLOCK WALLS Proj. Type

TUNNELS & SUBWAY SYSTEMS

NEW WINERY-CHAMPAGNE CELLARS & VISITORS CENTER. THE CAVES Comments

(CELLARS) EXTEND 200 FT AND PROVIDE 4,200 SQ.FT. OF STORAGE.

* GLORIA FERRER WINERY - CHAMPAGNE CAVES

No: 02687

SONOMA, CALIFORNIA

U.S.A.

Owner FREIXENET - SONOMA

Designer JOHN PICCHI & ASSOCIATES
Contractor CHRISTENSEN & FOSTER
Applicator CHRISTENSEN & FOSTER

Proj. Type TUNNELS & SUBWAY SYSTEMS

VAULTS & ELEVATOR PITS

Total 4,560 LBS

Completed 1986

Comments RETAINING WALLS/SLABS (BELOW & ONGRADE), FOOTINGS, TOWER

WALLS AT VISITOR CENTRE, TUNNELS & CHAMPAGNE CELLARS. THESE NEW CELLARS EXTEND 200 FT AND PROVIDE 4,200 SQ FT OF

WINE STORAGE.

* NEWTON VINEYARD - TUNNELS

No: 02717

ST. HELENA, CALIFORNIA

U.S.A.

Owner NEWTON VINEYARD

Contractor ALF BURTLESON CONSTRUCTION CO.
Applicator ALF BURTLESON CONSTRUCTION CO.

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 2,940 LBS Completed 1986

Comments XYPEX CONCENTRATE APPLIED TO ENTRANCE OF GUNITE TUNNEL

(NEW CONSTRUCTION).

* GENERAL TELEPHONE COMPANY

No: 02115

WALNUT, CALIFORNIA

U.S.A.

Owner GENERAL TELEPHONE CO.
Applicator INDUSTRIAL PAINTING & WPG
Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 3,000 SQ FT

Completed 1982

Comments XYPEX WAS APPLIED TO INTERIOR OF TUNNEL AND WAS USED TO

REPAIR CRACKS (APPROX 150 LIN FT).

* RICE GROWERS ASSOCIATION STORAGE BINS

No: 01731

WILLIAMS, CALIFORNIA

U.S.A.

Owner RICE GROWERS ASSOCIATION Contractor CAMPBELL CONSTRUCTION

Proj. Type GRAIN ELEVATORS & FOOD STORAGE

TUNNELS & SUBWAY SYSTEMS

Comments XYPEX ULTRA-PLUG AND XYPEX CONCENTRATE WERE USED TO

REPAIR ACTIVE LEAKS IN THE RICE STORAGE BINS AND RICE

TRANSFER TUNNELS.

* GRAIN SILO No: 02503

FORT COLLINS, COLORADO

U.S.A.

Applicator KIEFER CONCRETE CO.

Proj. Type TUNNELS & SUBWAY SYSTEMS

CONCRETE SILOS

Total 420 LBS Completed 1984

Comments GRAIN SILO REPAIRS

* WASHINGTON D.C. METRO AREA SUBWAY SYSTEM

No: 02238

WASHINGTON, DISTRICT OF COLUMBIA

U.S.A.

Owner WASHINGTON METRO TRANSIT

Designer BECHTEL CORPORATION

Applicator CONCRETE WATERPROOFING OF VIRGINIA INC

Proj. Type TUNNELS & SUBWAY SYSTEMS

VAULTS & ELEVATOR PITS

Completed 1982

Comments XYPEX APPLIED TO 760 LIN FT TUNNEL (30,000 SQ FT), TO SHOTCRETE

& CONCRETE VAULTS (20,000 SQ FT), AND TO PASSWAYS,

MECHANICAL ROOMS, DECKS, EQUIPMENT VAULTS, ELEVATOR & ELECTRICAL PITS. APPLICATION IN TUNNEL IS ONGOING. ALSO XYPEX PRODUCTS BEING USED FOR REPAIR OF CONCRETE DEFECTS.

* CONGRESS HEIGHTS STATION AND NATM TUNNELS

No: 09315

WASHINGTON, DISTRICT OF COLUMBIA

U.S.A.

WASHINGTON METRO AREA TRANSIT AUTHORITY Owner

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

TUNNELS & SUBWAY SYSTEMS

Owner
Designer
Proj. Type
Completed 01/15/1996

TWO 60 LB. PAILS OF XYPEX CONCENTRATE WAS APPLIED TO Comments

BELOW GRADE WALLS.

* CABLE EXPANSION VAULT

No: 02099

BEAUFORD, GEORGIA

U.S.A.

Owner Applicator Proj. Type Owner SOUTHERN BELL TELEPHONE

HOLBROOK WPG. LTD.

TUNNELS & SUBWAY SYSTEMS

* CHICAGO SUBWAY - DEARBORN STREET STATION

No: 02865

CHICAGO, ILLINOIS

U.S.A.

Owner Applicator Proj. Type Completed CHICAGO TRANSIT AUTHORITY C.W.I. CORPORATION (INDIANA) **TUNNELS & SUBWAY SYSTEMS**

1982

CONTACT NEU-CO CONSTUCTION IN INDIANA FOR MORE Comments

INFORMATION ON THIS PROJECT.

* COAL-FIRED POWER STATION

No: 02117

GIBSON, INDIANA

U.S.A.

PUBLIC SERVICE INDIANA Owner Contractor
Applicator
Proi To PUBLIC SERVICE INDIANA **NEWBERG CONSTRUCTION**

CWI CORPORATION

TUNNELS & SUBWAY SYSTEMS Proj. Type

Total 776 LIN FT

Completed 1982

Comments 800 LB ULTRA PLUG, 1,800 LB CONCENTRATE. CRACK REPAIR WAS

DONE UNDER HYDROSTATIC WATER PRESSURE WITH COMPLETE

SUCCESS.

* HENRY CO. HOSPITAL

No: 02093

NEW CASTLE, INDIANA

U.S.A.

Owner HENRY CO. HOSPITAL Applicator C.W.I. CORPORATION

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 2,400 SQ FT

Completed 1982

Comments TWO CONCRETE AIR CONDITIONING DUCTS WERE COATED WITH

XYPEX CONCENTRATE - ALSO ALL CRACKS IN A HOSPITAL TUNNEL WERE REPAIRED - CEILING OF TUNNEL RECEIVED 1 COAT OF XYPEX

CONCENTRATE. 170 LF, 870 LB.

* MARBLE HILL NUCLEAR POWER PLANT

No: 02122

NEW WASHINGTON, INDIANA

U.S.A.

Owner PUBLIC SERVICE INDIANA

Designer SARGENT & LUNDY

Contractor GUST K. NEWBERG CONSTRUCTION INC.

Applicator CONCRETE WATERPROOFING OF INDIANA, INC.

Proj. Type TUNNELS & SUBWAY SYSTEMS

NUCLEAR & POWER GENERATING STATIONS

Completed 1982

Comments XYPEX APPLIED TO TENDON TUNNELS (CIRCULAR TUNNELS LOCATED

DIRECTLY BENEATH NUCLEAR CONTAINMENT STRUCTURES). OVER 800 LF OF CRACKS AND FAULTY CONSTRUCTION JOINTS WERE SEALED WITH XYPEX IN THIS AREA AND A MAJOR REPAIR EFFORT WAS CARRIED OUT IN THE LOWEST EMERGENCY LEVEL OF THE

AUXILIARY BUILDING.

* HOLNAM CEMENT DISTRIBUTION TERMINAL

No: 09797

RESERVE, LOUISIANA

U.S.A.

Owner HOLNAM CEMENT
Designer RIVER CONSULTING
Contractor BOH BROTHERS (DS1)
Applicator CARLO DITTA, INC.

Proj. Type TUNNELS & SUBWAY SYSTEMS

FOUNDATION WALLS & FLOORS

Comments NEW TUNNEL UNDER CONSTRUCTION. EXPECTED COMPLETION

DATE: DECEMBER, 1996. 150 PAILS OF DS1, 100-60 LB. PAILS AND 100-20

LB. PAILS OF C-1000 ADMIX BEING USED.

* P.P.G. TUNNEL No: 09375

WEST LAKE, LOUISIANA

U.S.A.

Owner P.P.G. INC. Designer P.P.G. INC.

Contractor ANGELLE CONCRETE

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 100 CU YDS

Comments ADMIX C-1000 WAS USED TO WATERPROOF THIS POURED-IN-PLACE

NEW TUNNEL.

* WASHINGTON D.C. METRO SYSTEM

BETHESDA, MARYLAND

U.S.A.

Owner WASHINGTON METRO TRANSIT AUTHOR.

Designer BECHTEL CORPORATION
Contractor FRUIN-COLNON-HORN-L & W

Applicator CONSULDYNE, INC.

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 7,500 LIN FT

Completed 1981

Comments OWNER WAS UNABLE TO CONTAIN WATER IN THIS AREA WHICH

HOUSES ELECTRICAL EQUIPMENT. AFTER XYPEX APPLICATION,

OWNER WAS ABLE TO PROCEED WITH EQUIPMENT INSTALLATION. 100

LF OF CRACKS, 9,100 LB. XYPEX ALSO APPLIED TO ENTIRE PASSAGEWAY OVER THIS SECTION OF SUBWAY TUNNEL.

* WASHINGTON D.C. METRO SYSTEM

No: 02083

No: 02084

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BETHESDA, MARYLAND

U.S.A.

Owner WASHINGTON METRO TRANSIT

Designer BECHTEL CORPORATION
Contractor A.A. BEIRO CONSTR. CO.
Applicator CONSULDYNE, INC.

Proj. Type ROOF DECKS

TUNNELS & SUBWAY SYSTEMS

Total 170,000 SQ FT

Completed 1982

Comments 107,000 LB. THIS TUNNEL SECTION WAS ONE OF THE WORST LEAKAGE

AREAS IN 59 MILE SYSTEM. THERE IS A VERY HIGH WATER TABLE IN THAT VICINITY. XYPEX APPLICATION HAS MINIMIZED LEAKAGE PROBLEMS TO THE LEVEL ACCEPTABLE TO THE METRO TRANSIT

AUTHORITIES.

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* GENERAL MOTOR DELPHI - TUNNEL ROOF SLAB

No: 10502

MICHIGAN

U.S.A.

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Total 120 YDS

* FORD MOTOR COMPANY R&E POWERHOUSE

No: 07970

DEARBORN, MICHIGAN

U.S.A.

Owner FORD MOTOR COMPANY

FORD ENGINEERING DIVISION Designer

Applicator CONCRETE WATERPROOFING SYSTEMS, INC

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

XYPEX SYSTEM APPLIED TO TUNNEL. THERE WAS SERIOUS WATER Comments

INGRESS IN VARIOUS AREAS OF THE TUNNEL WHICH WAS

SUCCESSFULLY WATERPROOFED WITH XYPEX CONCENTRATE, XYPEX

MODIFIED, XYPEX ULTRA PLUG AND MEGAMIX.

* FISHER THEATER No: 02453

DETROIT, MICHIGAN

U.S.A.

Owner FISHER BUILDING Applicator Proj. Type **GRUNWELL-CASHERO**

TUNNELS & SUBWAY SYSTEMS

Total 1,680 LBS

Comments BASEMENT WALLS, TUNNELS. VERY SEVERE WATER PRESSURE

CAUSING PROBLEMS IN THEIR PEDESTRIAN TUNNEL, XYPEX

COMPLETELY STOPPED ALL LEAKS.

* DETROIT CHILDRENS HOSPITAL

No: 02328

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DETROIT, MICHIGAN

U.S.A.

Applicator Proj. Type REFINED CONCRETE WPG. TUNNELS & SUBWAY SYSTEMS

Comments XYPEX WAS USED TO WATERPROOF CRACKS, CONTRUCTION JOINTS,

AND SPALLED AREAS IN THE MAINTENANCE TUNNEL.

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* MONROE POWER PLANT - FERMI II

No: 02118

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MONROE, MICHIGAN

U.S.A.

DETROIT EDISON Owner Designer **DETROIT EDISON** Applicator REFINED CONCR. WPG.

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Total 100 LIN FT

Completed 1982

Comments 100 LINEAL FEET OF CRACKS.

* MONROE POWER PLANT

No: 02218

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MONROE, MICHIGAN

U.S.A.

DETROIT EDISON

Designer
Applicator
Proj. Type REFINED CONCRETE WPG INC **TUNNELS & SUBWAY SYSTEMS**

Total 100 LIN FT

Comments CRACKS IN TUNNEL. GOOD JOB

* VETERANS ADMINISTRATION HOSPITAL

ST CLOUD, MINNESOTA

U.S.A.

Contractor DONLAR CORP

TUNNELS & SUBWAY SYSTEMS Proj. Type

Total 1,000 SQ FT

CONCENTRATE APPLIED TO PEDISTRIAN TUNNEL. Comments

* OLD FORT FINISHING PLANT

No: 02092

No: 02234

ASHVILLE, NORTH CAROLINA

U.S.A.

Designer **OLD FORT COMPANY** WELLS & WEST CO.

Contractor Applicator Proj. Type Total CONCRETE WPG. OF TENNESSE **TUNNELS & SUBWAY SYSTEMS**

22 LIN FT

Comments CRACK REPAIR IN CENTRE OF 6' X 8' CONCRETE TUNNEL UNDER

INTERSTATE 40.

* SALEM NUCLEAR STATION - UNITS 1 & 2

No: 01323

LOWER ALLOWAYS, NEW JERSEY

U.S.A.

Owner PUBLIC SERVICE ELECTRIC & GAS
Contractor UNITED ENGINEERS & CONSTRUCTORS

Applicator CATALYTIC, INC

Proj. Type NUCLEAR & POWER GENERATING STATIONS

TUNNELS & SUBWAY SYSTEMS

Total 10,000 LBS

Completed 1980

Comments XYPEX PRODUCTS WERE USED TO SEAL CRACKS AND CONSTRUCTION

JOINTS IN BELOW-GRADE STRUCTURES AND TUNNELS.

* PRINCETON UNIVERSITY POOL COMPLEX

No: 03021

DDINGETON NEW IEDGEN

PRINCETON, NEW JERSEY

U.S.A.

Owner PRINCETON UNIVERSITY

Designer BROWNING DAY MULLINS DIERDORF

Contractor HUBER HUNT AND NICHOLLS
Applicator SOUTHSHORE WATERPROOFING
Proj. Type SWIMMING & DECORATIVE POOLS

TUNNELS & SUBWAY SYSTEMS

Total 60,000 SQ FT

Completed 1990

Comments TWO COAT APPLICATION OF XYPEX TO EXTERIOR WALLS AND POOL

FLOOR. IT WAS ALSO APPLIED TO TUNNEL AREA BETWEEN POOL

COMPLEX AND GYMNASIUM.

* ST. JOHNS LAW SCHOOL

No: 07788

NEW YORK, NEW YORK

U.S.A.

Owner ST. JOHNS UNIVERSITY

Designer CARSON LUNDIN & THORSON

Contractor GEORGE A FULLER CO.
Applicator GEIGER ROOFING CO. INC.
Proj. Type FOUNDATION WALLS & FLOORS

TUNNELS & SUBWAY SYSTEMS

Total 12,300 SQ FT

Comments GEIGER ROOFING CALLED FOR AVAILABILITY - REFERED THEM TO

TOM FARRELL. ALLIED ROOFING WILL SUPPLY MATERIAL.

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* N.Y. CITY TRANSIT AUTHORITY

No: 02262

NEW YORK, NEW YORK

U.S.A.

Contractor HORN CONSTRUCTION

Applicator CRYSTALLINE CONC.W/P CORP Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Comments TUNNEL SEEPAGE REPAIR. HEY'DI FAILED HERE.

* MANHATTAN PSYCHIATRIC CENTER TUNNEL REPAIRS

No: 10382

WARDS ISLAND, NEW YORK

U.S.A.

Owner MANHATTAN PSY. CENTER (STATE OF NY DORM AUTHORITY)

Designer TAMS CONSULTANTS

PROMO PRO Contractor Applicator PROMO PRO Proj. Type **MANHOLES**

TUNNELS & SUBWAY SYSTEMS

Total 7,900 SQ FT Completed 04/30/99

Comments 18 MANHOLES, LEADING INTO A 3,000 FT. LONG TUNNEL, WERE

> WATERPROOFED USING XYPEX CONCENTRATE. A BLEND OF XYPEX PATCH 'N PLUG AND CONCENTRATE WAS USED IN THE COVES OF THE

WALL/FLOOR JOINTS.

* FORD MOTOR PLANT

No: 02455

MAUMEE, OHIO

U.S.A.

FORD MOTOR COMPANY Owner Designer FORD ENGINEERING DEPT Contractor

R.H. DEWEY CO, INC Applicator R.H. DEWEY CO, INC

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Total 3,400 LBS

XYPEX APPLIED TO EXTERIOR OF TUNNEL WALL AND CEILING. Comments

> BITUMINOUS HOTMOP ORIGINALLY SPECIFIED, HOWEVER CONTRACTOR WOULD NOT GUARANTEE IT. FORD ENGINEERS RECOMMENDED THE USE OF XYPEX AND THE CONTRACTOR THEN

GUARANTEED THE APPLICATION.

No: 02094

No: 09218

* DANA WORLD HEADQUARTERS

TOLEDO, OHIO

U.S.A.

Owner DANA WORLD HEADQUARTERS

Designer OWNER

Applicator CONCRETE WPG. INC.

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 100 LIN FT

Completed 1982

Comments TUNNEL PARKING AREA AND JOINT REPAIRS.

* CHESTER PRISON FOR DRUG OFFENDERS

CHESTER, PENNSYLVANIA

U.S.A.

Owner DEPARTMENT OF CORRECTIONS
Designer DEPARTMENT OF GENERAL SERVICES

Contractor BROWN & ROOT BUILDING CO.

Applicator TOJAK CONSTRUCTION

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 15.000 SO FT

Comments XYPEX WAS USED ON THIS PROJECT AS A RESULT OF THE

CONSTRUCTION MANAGER REQUESTING THE SUBCONTRACTOR FIND AN ALTERNATE METHOD OF WATERPROOFING THAT COULD BE APPLIED TO THE STRUCTURE AND BACKFILLED ASAP. THIS

APPLICATION WAS COMPLETED IN LATE FALL WHEN THE NORTHEAST

WAS EXPERIENCING AN EARLY AND SNOWY WINTER.

* PHILADELPHIA INTERNATIONAL AIRPORT - US AIR TUNNEL

No: 09668

PHILADELPHIA, PENNSYLVANIA

U.S.A.

Owner CITY OF PHILADELPHIA

Contractor CARSON CONCRETE CORPORATION/BUCKLEY & COMPANY Applicator CARSON CONCRETE CORPORATION/BUCKLEY & COMPANY

Proj. Type TUNNELS & SUBWAY SYSTEMS

Completed 05/01/96

Comments THE TUNNEL SLAB SURFACE WAS PREPARED, CONCRETE WAS

PUMPED ONTO THE SLAB, FOLLOWED BY A POWER TROWEL FINISH TECHNIQUE TO INCLUDE THE BROADCASTING OF DS2. 24-HOURS A DAY CONSTANT PUMPING TO REMOVE GROUND WATER AT SITE

REQUIRED.

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* BANK OF HOUSTON

No: 02101

HOUSTON, TEXAS

U.S.A.

Owner **SAME**

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Completed 1975

Comments XYPEX SYSTEM WAS APPLIED TO SERVICE TUNNELS UNDER

DRIVE-IN TELLERS.

* INTERCONTINENTAL AIRPORT

No: 02102

HOUSTON, TEXAS

U.S.A.

Applicator C.W.P. TEXAS

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Comments XYPEX CONCENTRATE WAS APPLIED TO HAIRLINE CRACKS IN

> SLURRY COAT ON TUNNEL WALL SECTION BELOW RUNWAY WAS A TEST TO DETERMINE THE FEASIBILITY OF XYPEX. FURTHER WORK ON

THIS PROJECT IS EXPECTED.

* CITY HALL PEDESTRIAL TUNNEL

No: 02109

HOUSTON, TEXAS

U.S.A.

Owner CITY OF HOUSTON

Applicator BRUCE HEFNER & W.CHAPMAN Proj. Type TUNNELS & SUBWAY SYSTEMS

Comments ANNEX TUNNEL BELOW COLLISEUM LEADING TO MUSIC HALL

NEGOTIATIONS FOR FURTHER WORK IN PROGRESS. JIM HOLLIS 713

222-5701

* CITY HALL No: 02108

HOUSTON, TEXAS

U.S.A.

Owner CITY OF HOUSTON

Applicator Proj. Type Comments CONCRETE WPG. OF TEXAS **TUNNELS & SUBWAY SYSTEMS**

Comments SEALED TWO SKYLIGHTS IN TUNNEL.

* HARDY TOLL ROAD TUNNEL

No: 10110

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HOUSTON, TEXAS

U.S.A.

CITY OF HOUSTON

Owner
Designer
Contractor TURNER, COLLIE & BRADEN, INC. SPAW GLASS CONSTRUCTION CHAMBERLIN WATERPROOFING Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Total 14,000 S. F. Completed 04/18/97

Comments XYPEX CONCENTRATE WHITE WAS APPLIED TO STRUCTURES.

INTERIOR TUNNEL WALLS, ELEVATOR SHAFTS.

* INDUSTRIAL GENERATING COMPANY

No: 02111

ROCKDALE, TEXAS

U.S.A.

Owner INDUSTRIAL GENERATING CO.

Designer
Applicator
Proj. Type BROWN & ROOT INC.

CWP TEXAS

TUNNELS & SUBWAY SYSTEMS

EXPANSION JOINTS WERE DRY PACKED WITH CONCENTRATE AS Comments

WELL AS VARIOUS AREAS WHERE WATER WAS LEAKING THROUGH

WALLS OF THE LIGNITE TUNNEL.

* FRANKLIN QUEST FIELD

No: 11529

UTAH

U.S.A.

GUARANTEED WATERPROOFING & CONSTRUCTION Applicator

Proj. Type TUNNELS & SUBWAY SYSTEMS

XYPEX PRODUCTS WERE USED TO STOP SEVERE LEAKING OF THE Comments

WALL AND FLOOR JOINTS IN THE BELOW-GRADE BATTING TUNNEL.

* WASHINGTON D.C. METRO SYSTEM

No: 02085

ALEXANDRIA, VIRGINIA

U.S.A.

Owner WASHINGTON METRO TRANSIT

Designer **BECHTEL CORPORATION**

Contractor **O CORPORATION** Applicator CONSULDYNE, INC.

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Total 500 LIN FT

Completed 1982

APPLY XYPEX TO OVERHEAD CRACK REPAIR OF CONST. & CONTROL Comments

JOINTS IN SUBWAY STATION. 4,800 LB.

* MONTLAKE REGULATOR STATION

No: 01911

KING COUNTY, WASHINGTON

U.S.A.

Designer MUNICIPALITY OF METROPOLITAN SEATTLE Proj. Type SEWAGE & WASTEWATER TREATMENT PLANTS

TUNNELS & SUBWAY SYSTEMS

XYPEX CRYSTALLINE WATERPROOFING WAS APPLIED TO THE TANKS Comments

> COMMON WITH AREAS TO BE OCCUPIED BY EQUIPMENT, PIPING OR PERSONNEL AND TO ALL BELOW GRADE SURFACES OF REGULATOR

STRUCTURE, EXTERIOR SURFACES OF TUNNEL, AND TO TOP SURFACES OF THE ROOF SLAB OVER THE CONTROL ROOM.

* GROUP HEALTH HOSPITAL

No: 01321

REDMOND, WASHINGTON

U.S.A.

Designer MAHLUM & MAHLUM

Applicator Proj. Type JOHN SELLEN CONSTRUCTION FOUNDATION WALLS & FLOORS

TUNNELS & SUBWAY SYSTEMS

Completed 1975

* GROUP HEALTH MEDICAL CENTER

No: 01766

REDMOND, WASHINGTON

U.S.A.

Designer HAHLUM & HAHLUM

JOHN SULLEN CONSTR. CO. Contractor Proj. Type FOUNDATION WALLS & FLOORS

TUNNELS & SUBWAY SYSTEMS

XYPEX CRYSTALLINE WPFG. WAS SPECIFIED AND APPLIED TO CAST-Comments

IN-PLACE CONCRETE AS SPECIFIED BY THE ARCHITECT AND SHOWN

ON THE DRAWINGS. AREAS INCLUDED COLD JOINTS AND

FOUNDATION WALLS. TWO COATS APPLIED TO TUNNEL FLOOR AND

WALLS.

* GENERAL TELEPHONE COMPANY

No: 02270

REDMOND, WASHINGTON

U.S.A.

Contractor DOME CONSTRUCTION & DESIGN INC

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

XYPEX PRODUCTS WERE USED TO WATERPROOF THE EXTENSION OF Comments

UNDERGROUND UTILITY TUNNEL.

* SEATTLE - TACOMA INTERNATIONAL AIRPORT

No: 02082

SEATTLE, WASHINGTON

U.S.A.

PORT OF SEATTLE Owner

Designer PORT OF SEATTLE, ENGINEERING DEPARTMENT

Applicator WASHINGTON WPG. CO.

TUNNELS & SUBWAY SYSTEMS Proj. Type

Completed 1973

Comments XYPEX WAS APPLIED TO LEAKING CRACKS AND CONSTRUCTION

> JOINTS IN 4 1/2 MILES OF TUNNEL. WATER LEAKAGE IN THIS TUNNEL SYSTEM, WHICH HOUSES AUTOMATED TRAINS, WAS SO SEVERE THAT THE WATER WAS COVERING THE ELECTRIC RAILS. THIS SUBWAY SYSTEM CONNECTS ALL THE PASSENGER TERMINALS AT THE

AIRPORT.

* MERCER ISLAND TUNNEL

No: 02098

SEATTLE, WASHINGTON

U.S.A.

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Comments HAD A LEAKING PROBLEM FOR 28 YEARS. MANY FIRMS TRIED

UNSUCCESSFULLY TO WATERPROOF. XYPEX WAS ABLE TO TOTALLY

SEAL OFF THE FLOW OF WATER IN THE WORST AREA.

* UNIVERSITY OF PUGET SOUND - TUNNELS

No: 02095

TACOMA, WASHINGTON

U.S.A.

Owner UNIVERSITY OF PUGET SOUND

Applicator Proj. Type SOUND CONCRETE WPG.

TUNNELS & SUBWAY SYSTEMS

Comments UNDERGROUND TUNNEL LEADING FROM FRATERNITY AND

SORORITY HOUSES TO CENTRAL BELOW GRADE KITCHEN.

* RAPID TRANSIT AND BAGGAGE TUNNELS

No: 02107

TACOMA, WASHINGTON

U.S.A.

Proj. Type **TUNNELS & SUBWAY SYSTEMS**

* REPAIR OF BOX CULVERT UNDER HIGHWAY

No: 02991

MADISON, WISCONSIN

U.S.A.

Owner WISCONSIN D.O.T. DIST.1

Designer OWNER

Applicator EPOXY SPECIALISTS

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 5,000 SQ FT

Completed 1988

Comments BOX TUNNELS WERE LEAKING CONTINUOUSLY CAUSING BAD ICE

BUILD-UPS IN WINTER THAT CAUSED BLOCKAGE AND WATER BACK UPS IN SPRING. 800 FEET OF CRACK REPAIR WAS DONE FOLLOWED BY

COATING.

* RAW WATER TUNNEL

No: 02990

MILWAUKEE, WISCONSIN

U.S.A.

Owner MILWAUKEE WATER WORKS

Designer OWNER

Applicator PUKALL CO.INC.

Proj. Type TUNNELS & SUBWAY SYSTEMS

Total 1,200 LBS Completed 1986

Comments WHEN TUNNEL WAS DEWATERED OWNER FOUND THAT GROUND

WATER WAS INFILTRATING INTO THE SYSTEM AND XYPEX WAS USED

TO REPAIR THE PROBLEM.

* VENEZUELA AIRFORCE F-16 JET FIGHTERS TUNNEL

No: 10680

VENEZUELA

Proj. Type TUNNELS & SUBWAY SYSTEMS

Comments 10,000 SQUARE METERS OF CONCRETE IN THE TUNNEL USED

TO SHELTER F-16 JET FIGHTERS WAS TREATED WITH XYPEX

CONCENTRATE.

* AGUA VIVA TUNNEL

No: 10679

VENEZUELA

Proj. Type TUNNELS & SUBWAY SYSTEMS

Comments 3,500 SQUARE METERS OF CONCRETE IN THE TUNNEL WAS TREATED

WITH XYPEX CONCENTRATE.

* CARACAS METRO - PHASE III

No: 08562

> **CARACAS VENEZUELA**

Owner CARACAS METRO SYSTEM Proj. Type **TUNNELS & SUBWAY SYSTEMS**

Total 1,600,000 SQ FT

Completed 1992

Comments XYPEX CONCENTRATE WAS APPLIED TO PRE-CAST CONCRETE

> SEGMENTS USING THE DRY-SHAKE METHOD DURING CONSTRUCTION. THE DRY XYPEX MATERIAL WAS SPREAD OVER FRESH CONCRETE AND THEN WORKED INTO THE SURFACE BY MEANS OF A TROWEL. THIS RESULTED IN SAVINGS FOR THE CONTRACTOR AND THE METRO

SYSTEM.

End of Report