



CIVIL AND STRUCTURAL ENGINEERING
SELECTED PROJECTS
PRIVATE AND PUBLIC SECTOR

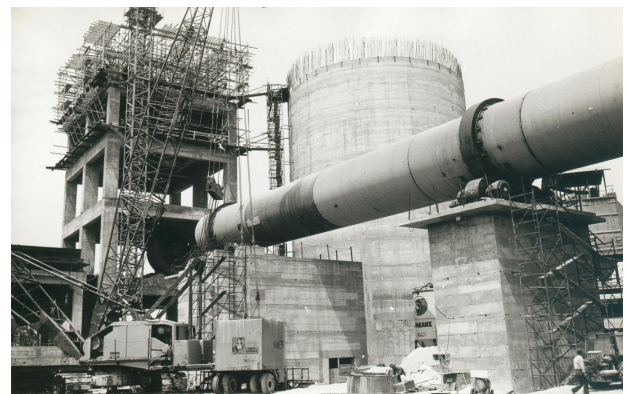


CHRISTOU & ASSOCIATES • Consulting Engineers

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HISTORY

Our office is an independent planning and consulting Firm founded by George Christou in year 1985 after a successful twenty year career as a consultant structural engineer and paid Lecturer at the National Technical University Athens (chair of Concrete Structures).

SERVICES

Our activities and expertise spread mainly in the structural design sector. Industry – Special buildings – Bridges – Underground Structures – Commercial Buildings.

PHILOSOPHY

We are a flexible and effective team. We try to invest our engineering experience and knowledge creating sustainable, technically advanced, cost effective and tailor made solutions. A trustful personal contact to our clients is always of particular importance.

LOCATION

The Office is located in Cholargos, a suburb of Athens in a modern space very close to the metro Station “Nomismatokopeio”.

TEAM

Nowadays our office’s structural department consists of following three Partners:

- Alexander Christou, managing Partner of the Office since 2011,
Deutsche Schule Athen Alumni,
Civil Engineer University of Patras,
M.Sc. University of Karlsruhe (Institut für Bodenmechanik und Grundbau).
17 years of experience in structural Design of various public and private projects.
Prestressed-Precast Structures, Steel Structures, Windturbine foundations, Deep foundations, All types of Residential - Office buildings, Assessment-Repair and Strengthening of Concrete Structures, Road and Railway bridges. Industrial Plants. Construction site Supervision. Timber Structures. Energy Inspector.
- George Christou,
Civil Engineer N.T.U.A.,
ex Lecturer Department of Civil-Engineering N.T.U.A.,
Post Graduate studies, Humboldt Stiftung at T.U. Munich.
50 years of experience in various public and private projects. All types of Road and Railway bridges, Prestressed Concrete Structures, High Buildings, Deep foundations, Repair and Strengthening of Concrete Structures. Consultant and Checking Engineer for Bridges. Infrastructure. Structural Engineering for listed Monuments. Timber Structures. Publications in International Congresses.
- Charalambos Stamos,
Civil Engineer N.T.U.A.,
ex Lecturer N.T.U.A Department of Rural and Surveying Engineering.
40 years of experience in various public and private projects. All types of Road and Railway bridges, Prestressed Concrete Structures, High Buildings, Surveying Studies, Repair and Strengthening of Concrete Structures. Infrastructure Assessment-Repair and Strengthening of Concrete Structures. Industrial Plants. Windturbine foundations.

Our services are supported by highly skilled staff (Draughtsmen, Legal Assistance etc). We are also able to engage specialized assistance in all fields of engineering according to the needs of each project.



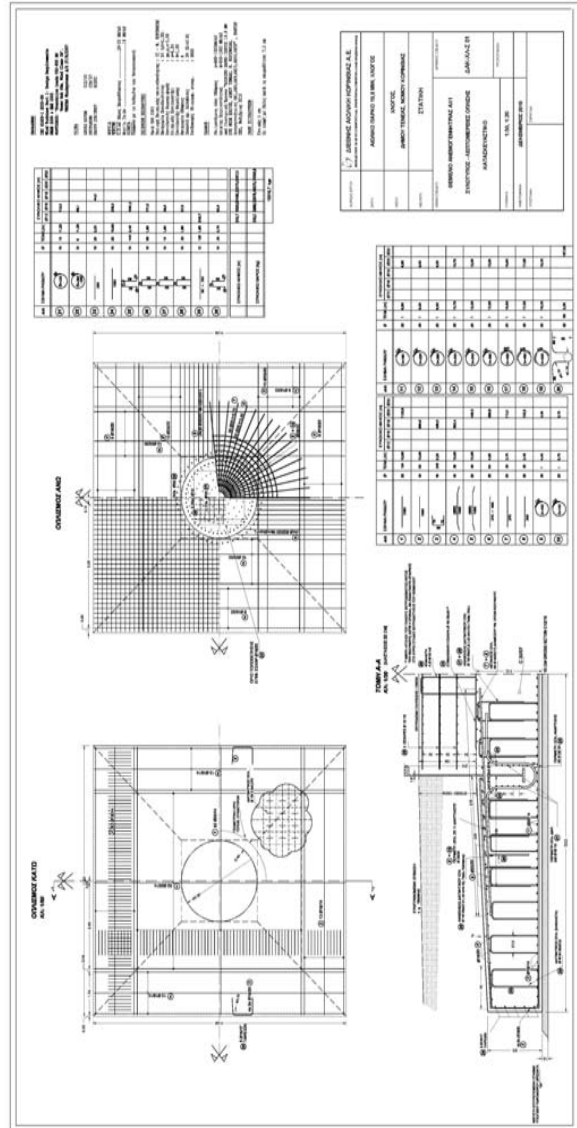
Static and Antiseismic Structural Design Windturbine Foundation
 Circular or rectangular Slab.
 Machine types: “V52-850kW, Tower Hub 49m. Vestas Windsystems”,
 “Energon E-44/s/54/3K”, “NM900/52 NEG MICON” a.o.

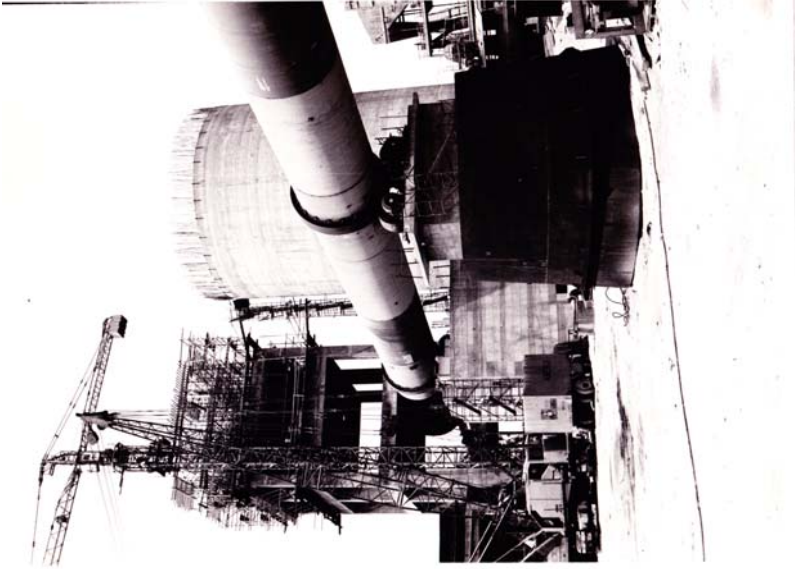
CLIENT : Consortium DAMCOENERGY - DIETHNIS KATASKEVASTIKI S.A.,
 DIETHNIS AIOLIKI S.A. a.o.

LOCATION: Korinth, Evros, Rhodes, Euboea, Crete

PREPARATION DATE : 2002,2007,2010

STUDY: Christou & Associates Consulting Engineers





Our Office has prepared the most structural engineering design projects for the installations of the Cement Plant Halyps Cement S.A.- Italcementi Group located in Aspropyrgos - Attica:

- Raw meal Silo, Reinf. Concrete (one inside another – gliding formwork)
- Cement Silo, Reinf. Concrete, Piles Foundation (gliding formwork)
- Main Clinker Silo, Prestressed Concrete, Piles Foundation.
(Precast Conical cover – gliding formwork)
- Coal Mill Silo, Steel Structure
- Bases of Rotary Kiln
- Preheater Construction
- Building of Clinker Cooler
- Preheater Tower (+2 times Static and Dynamic Assessment due to installations)
- Control Building
- Bases of Steel Silos, Piles Foundation
- Bases of Filters
- Various Retaining Walls
- Assessment of Static and Dynamic Efficiency of two existing (fly ash) Steel Silos

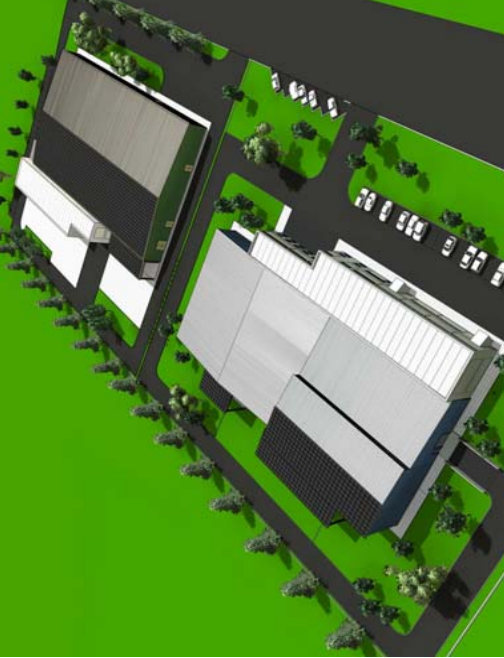
DESIGN STUDY DATE : 1980 - 2010

STRUCTURAL DESIGN: Christou & Associates Consulting Engineers



**PPRESTRESSED CLINKER SILO (Ø40m)
CONICAL ROOF
PRECAST BEAMS, PRECAST SLAB ELEMENTS
PILES FOUNDATION
CONSTRUCTION 1996
HALYPS CEMENT S.A.
ASPROPYRGOS - ATTICA**





Static & Seismic resistant Design of Industrial Plant consisting of: three steel Steel Industrial buildings, of different height, Steel Portal frame type, total span 30, 38 και 40 m respectively, Crane track installation, Steel space truss supporting two steel chimneys and two reinf. concrete two-storey operation buildings.

CLIENT: Piritium S.A., Silcio S.A.

LOCATION: Industrial Area Patras – Prefecture of Achaia

DATE : 2008-2009

CONSTRUCTION DATE: 2008-2009

DESIGNER: Christou & Associates Consulting Engineers



STRUCTURAL DESIGN OF

1. Steel (COR-TEN B) Chimney, height 30m, shell thickness 5mm, hollow section space frame support. IKARIA POWER STATION.
2. Concrete Chimney, height 48m, diameter 6m, shell thickness 25cm, provision for extension up to 68 m height. Pile foundation, 25 Drilled Piles, diameter 100cm.

CLIENT : D. E. I.

CONTRACTOR : ATERMON ATEE

LOCATION : IKARIA, CHIOS

DATE: 1) 2005 2) 1999

PLANNER: Christou & Associates Consulting Engineers



**PRECAST INDUSTRIAL BUILDINGS
INSTALLATIONS OF COMPANIES**

BARBASTATHIS S.A, MEGA S.A., BIORYL S.A.

CLIENT-CONSTRUCTION: BETANET ABEE

STRUCTURAL-SEISMIC RESISTANT DESIGN: Christou & Associates Consulting Engineers

PROJECTS: Main Roof triangular beams type I (I=20.0 to 29mm), on prestressing bed, Roof sheet: concrete hollow-core slabs or light double skin Steel Panels. Calculation and Precast Detailing: beam column connections (considering Earthquake Actions), Precast drain beams, Various Elements, Thin double skin (Isolation in-between) Panels using Deha Connections, Foundations.

CONSTRUCTION DATE: 2002-2003



CLIENT : **D. E. I.**
CONTRACTOR: **TECHNIKI ENOSI S.A.**
PROJECT: **STRUCTURAL DESIGN CONCRETE CHIMNEY (H=200m)
UNITS 1 AND 2 POWER GENERATION PLANT AG. DIMITRIOS
PTOLEMAIDA, PREFECTURE OF KOZANI**

LOCATION:

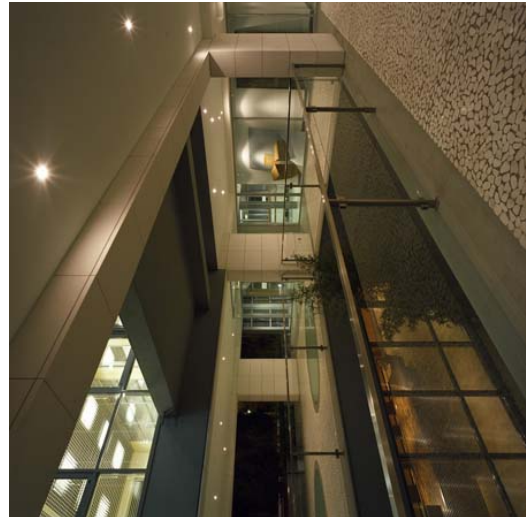
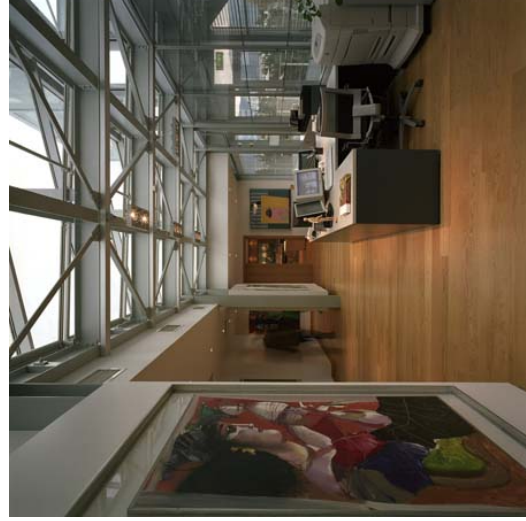
DATE: **1981-1982**

DESIGNER: **Christou & Associates Consulting Engineers**



OFFICE BUILDING IN MAROUSI – KAPODISTIRIOU STR. 38-40
Structural Design Reinf. Concrete Framework & Steel Staircase + Atrium
Construction 2003-2004

Planner: Christou & Associates Consulting Engineers



**NEW TOWN HALL
MUNICIPALITY OF TEGEA, PREFECTURE OF ARCADIA**

DONATION by “Michail N. Stassinopoulos-Viohalco Public Benefit Foundation”

CONSTRUCTION: 2006-2007



Architectural Design: Eleni Kalafati
Consultants Architectural Design: Prof. NTUA N. Kalogeras, Ass. Prof. NTUA D. Papaleksopoulos
Structural Design: **Alexander G. Christou**
Mechanical Engineering Study: H M Consultants
Project Management: Ergosteel S.A.



LUXURIOUS OFFICE BUILDING – PEIRAEUS COAST

- Project:** Seven-storey Office and Store Building, three underground parking levels, 70m from sea, waterproofing pit.
- Substructure:** Perimetrical Continuous bored Pile Wall, two lines of temporary Anchors, Raft foundation, waterproofing seal
- Superstructure:** Reinf, Concrete , low profile beams
- Location:** Kondili coast & Vlachakou
- Construction:** 2002-2004
- Client:** DANAOS World-Class Shipping
- Structural Design:** Christou & Associates Consulting Engineers



RESIDENTIAL BUILDING IN NEW FILOTHEI - ATHENS

**Project: Structural & Earthquake resistant Design Reinf. Concrete Structure
Design: Christou & Associates
Special features: (big cantilevers, V-shaped Columns, Steel-Concrete Framework
Combination etc).**

**Construction 2003 – Architect: Prof. Univrs. PATRAS G. Aisopos
Participation in Exhibition “New Trends in Architecture in Europe and Japan 2002”**

ΕΛΛΗΝΙΚΗ ΣΥΜΜΕΤΟΧΗ ΣΕ ΔΙΕΘΝΗ ΕΚΘΕΣΗ Νέες τάσεις στην αρχιτεκτονική Ευρώπης και Ιαπωνίας

Ο αρχιτέκτονας Γιάννης Αϊσώπος εκπροσώπησε την Ελλάδα στην έκθεση «New Trends of Architecture in Europe and Japan 2002» στο Τόκιο της Ιαπωνίας.

Η Έκθεση «New Trends of Architecture in Europe and Japan 2002» διοργανώθηκε από την Εταιρεία Αρχιτεκτονικών Επιστημών της Ευρώπης, ενώ με τον ίδιο τίτλο διοργανώθηκε και στην Ιαπωνία από την Εταιρεία Αρχιτεκτονικών Επιστημών της Ιαπωνίας. Η Έκθεση οργανώθηκε από την Κοινωνία Ευρωπαϊκών Αρχιτεκτόνων. Είναι από όλες τις Ευρωπαϊκές Έκθεσης, να να ποσοδευόταν το έργο τους και να υποστηρίξουν τις ιδέες τους με νέες λύσεις αναδιάρθρωσης τους. Οι δεκαπέντε Ευρωπαϊκοί αρχιτέκτονες επιλέχθηκαν από δύο επιμελητές, έναν από κάθε μία από τις δύο χώρες που φιλοξενούν τις πολιτιστικές δραστηριότητες της Ευρώπης, για το 2002, τον Ισπανό αρχιτέκτονα Alejandro Zahra-Polo και τον Βελγιο αρχιτέκτονα Bob van Reeth. Από την άμεση ημερομηνία, την επιλογή των νέων Ιαπωνικών αρχιτεκτόνων έγινε ο αρχιτέκτονας Toyo Ito. Αναλυτικά οι συμμετέχοντες αρχιτέκτονες είναι:

- Ευρωπαϊκή Ένωση:**
- Αυστρία: Regier Riewe Architects
 - Βέλγιο: enr. Architecten
 - Γαλλία: Albert Hail Moungui Narris
 - Γερμανία: Mare Lucaton & Jean-Philippe Vissal
 - Ιταλία: Doris Mandrup Architects
 - Ελλάδα: Τσίβιλης Αθηνάϊος
 - Ολλανδία: O Donnell & Tuomey Architects
 - Ισπανία: Abalos y Herreros
 - Ιαπωνία: UGA-Office of Architecture
 - Ηνωμένες Πολιτείες: Ney & Partners sari
 - Καναδάς: Cepetard B.V.
 - Αυστραλία: Aires Mateus & Associados LDA
 - Σουηδία: Studio Grön architecten ab
 - Αμερική: Atelier Hideoh Abe
 - Ιαπωνία: Kazuo Kojima C+A
 - Κατοχή: Kazuo Sejima Shue Nishizawa SANAA
 - Μαρόκο: Marouano Ullou - Phase Associates

Ο Ευρωπαϊκός και οι Ιαπωνικές αρχιτεκτονικές και οι επιμελητές έλαβαν μέρος σε ένα συνέδριο στο κοινό ενδιαφέρον που οργανώθηκε στο Maison Franco-Japonaise στο Τόκιο την 1η Ιουνίου 2002. Το έργο των είκοσι αρχιτεκτόνων θα παρουσιαζόταν στο πολιτιστικό κέντρο Hildebrand Forum στο Τόκιο από την 1η έκθεση του Ιουνίου. Την συνέχεια, η Έκθεση θα τοποθετείται στη Σαχάρα στο Τόκιο από την 11η Οκτωβρίου με 10 Νοεμβρίου και την Μπαρζελόννη του Βελγίου.

Την Ελλάδα εκπροσώπησε στην Έκθεση «New Trends of Architecture in Europe and Japan 2002» ο αρχιτέκτονας Γιάννης Αϊσώπος με το κτίριο «Πολύγωνο-Κατακόλι» στο Μαρούσι της Αθήνας. Η Πολύγωνο-Κατακόλι είναι ένα υβριδικό κτίριο που συνδυάζει μια διαώκηση, λύση για τον κεντρικό χώρο των διαώκησεων, πολυκατοικία. Η πολυκατοικία είναι η προσέγγιση στο διαώκηση και αποτελείται από διατάξεις που είναι μετακινούμενα και αποδίδει προς αποδοτικό τμήμα διατάξεων με κεντρικές θέσεις. Ο κεντρικός κορμός αποτελείται από ταβάνια, ταράτσες, ποσών και δώματα. Διατάξεις είναι κεντρικά και εσωτερικά διατάξεις, όπως και άλλες διατάξεις, δύο διατάξεις κεντρικά και εσωτερικά κεντρικά και εσωτερικά διατάξεις. Ο εν-βλκ στην κεντρική του κεντρική.



Ο Γιάννης Αϊσώπος είναι αρχιτέκτονας στην Αθήνα και συνεργάζεται με τον αρχιτέκτονα Patras G. Aisopos στο Πανεπιστήμιο Πατρών. Σημειώσεις στο EMF και στο Harvard Graduate School of Design.

Επιμελητές: Jahnke, TEE • 2008 • 22 Ιουλίου 2002 • 119



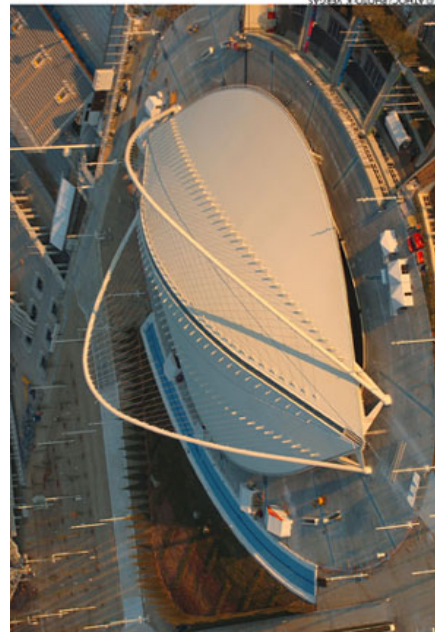
ATHENS OLYMPIC VELODROME 1988 - 1991

PUBLIC CLIENT: REPUBLIC OF GREECE , MINISTRY OF CULTURE

CONTRACTOR: GNOMON S.A.

PROJECT DESCRIPTION :In situ concrete substructure. Precasted beams and stands.

STRUCTURAL DESIGN :CHRISTOU & ASSOCIATES Consulting Engineers



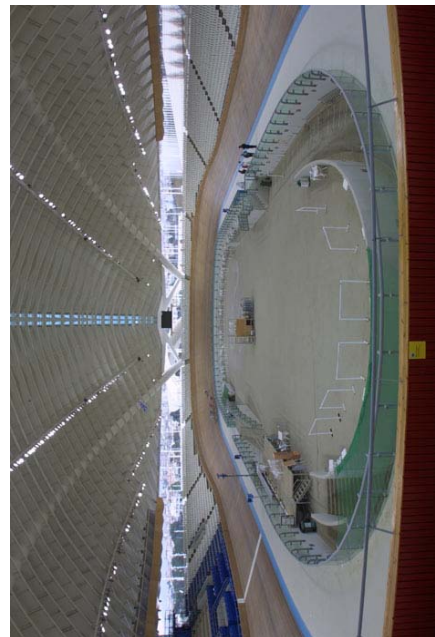
ROOF DESIGN&CONSTRUCTION

by Santiago Calatrava

FOR THE 2004 Olympic Games.

“The **Olympic Velodrome** is a [stadium](#) at the Athens Olympic Sports Complex, built in 1991 for the Mediterranean Games. It was extensively refurbished in order to host the [track cycling](#) events at the [2004 Summer Olympics](#) in [Athens, Greece](#). The stadium, which seats 5,250 - though only 3,300 seats were made publicly available for the games - has distinctive twin roofs covering the stands on each side, designed by [Santiago Calatrava](#).”

➤ from wikipedia





Κόσμημα πραγματικό το νεοκλασικό κτίριο της Τράπεζας Εργασίας, στην Παλαιά Βουλή. Ο αρχιτεκτονικός «φλοιός» δεν «συνθλίφθηκε» από τη γυάλινη προέκταση που υψώθηκε πίσω του για την εξυπηρέτηση των λειτουργικών αναγκών της τράπεζας.

**ARTICLE FROM NEWSPAPER KATHIMERINI, SUNDAY 9TH JANUARY 2000
TITLE: BANKING SERVICES OF HIGH “BEAUTY”
PHOTO EXTRACT**

**STRUCTURAL CHECK OF LISTED MONUMENTAL ATHENIAN NEOCLASSICAL
BUILDING AND DESIGN OF NEW EXTENSION**

DESIGNER: Christou & Associates Consulting Engineers

**ADMINISTRATION TOWER O T E
(HELLENIC TELECOMMUNICATIONS ORGANIZATION)
MAROUSI - ATHENS**

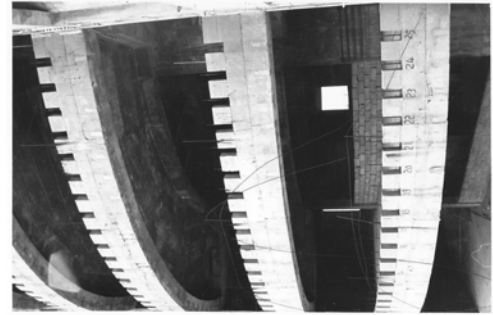
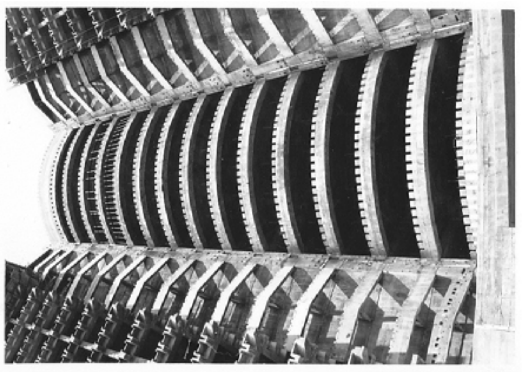
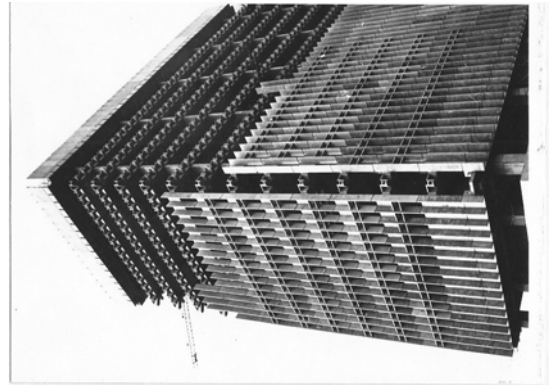
PROJECT:

Precast hanging façade concrete elements.
Central Concrete Core, height 72.0m, curved prestressed
perimetrical beams, length 15.0m
Static check Calculations of complete Building

PUBLIC CLIENT: OTE S.A.

**STRUCTURAL
STUDY: G. CHRISTOU & ASSOCIATES**

CONSTRUCTION: 1976-1978



CRUISE TERMINAL AG. NIKOLAOS PEIRAEUS PORT

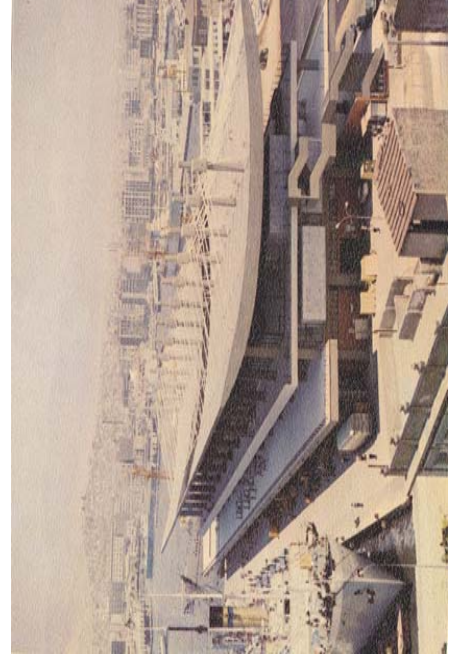
Hanging curved concrete roof structure .
Prestressed tendons. Main Roof beams L=51,0m
Project Publication TEE(greek ASCE) VI World Conference
Prestressed Concrete Structures in Prague (1970). Considered Listed
Monument of modern Architecture at Peiraeus Port

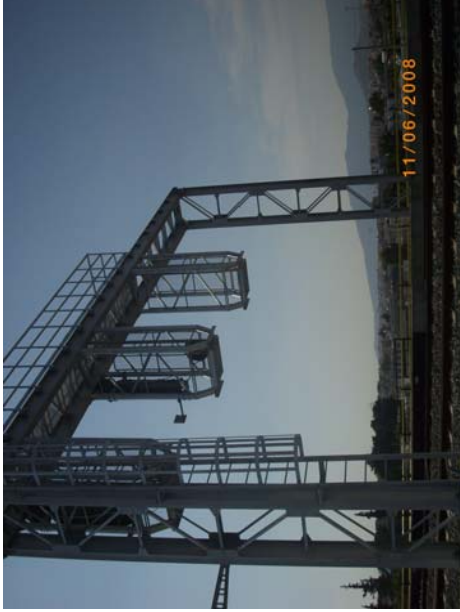
PUBLIC CLIENT: PIREAUS PORT AUTHORITY

CONTRACTOR: S. KOULANDROU

STRUCTURAL DESIGN: G. CHRISTOU

CONSTRUCTION DATE: 1970





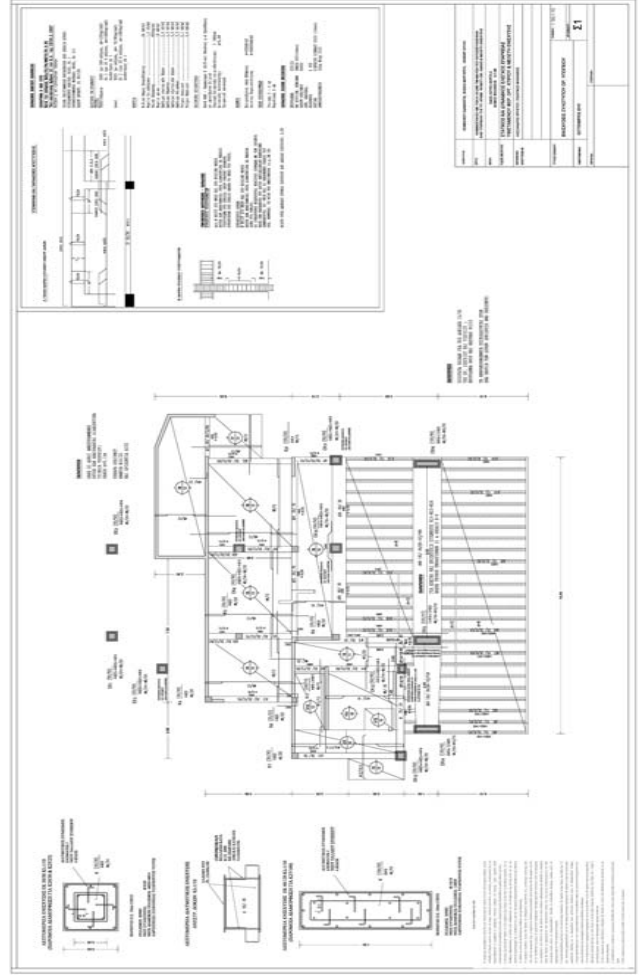
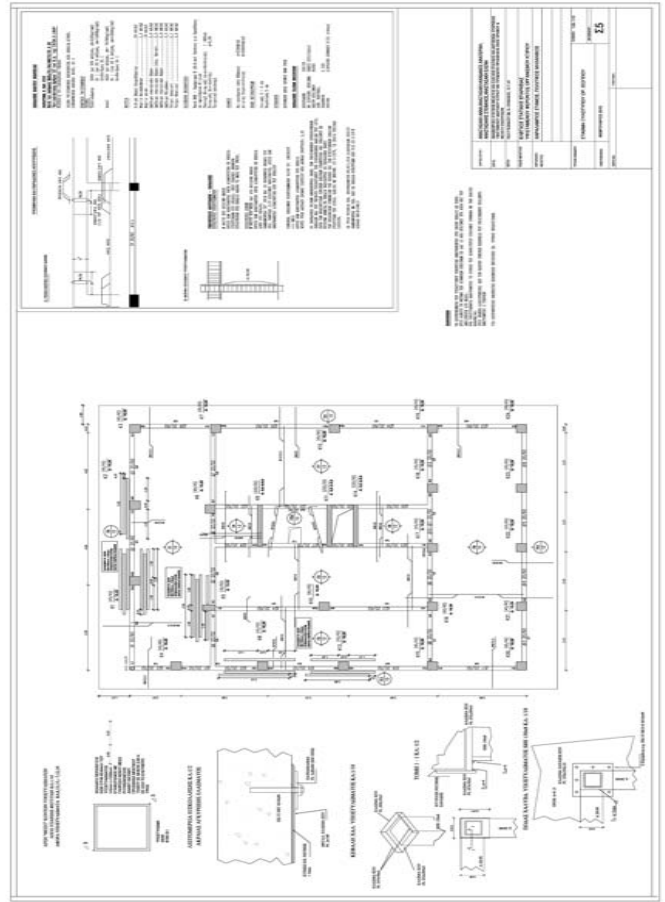
CLIENT:
CONTRACTOR - ASSIGNMENT:
PROJECT:
CONSTRUCTION:
DESIGNER:

ATHENS SUBURBAN RAILWAY – CONTRACT ERGOSE 265
DIETHNIS KATASKEVASTIKI ATTNE
STEEL GALVANIZED (PORTALS) SUPPORT STRUCTURES FOR RAILWAY LIGHTS
2008-2009
Christou & Associates Consulting Engineers

DESCRIPTION: Structural and antisismic Design of Galvanized Steel Truss type Structures in various lengths and Forms (Γ and Π) and different substructure conditions pile foundation, on existing retaining walls etc ,



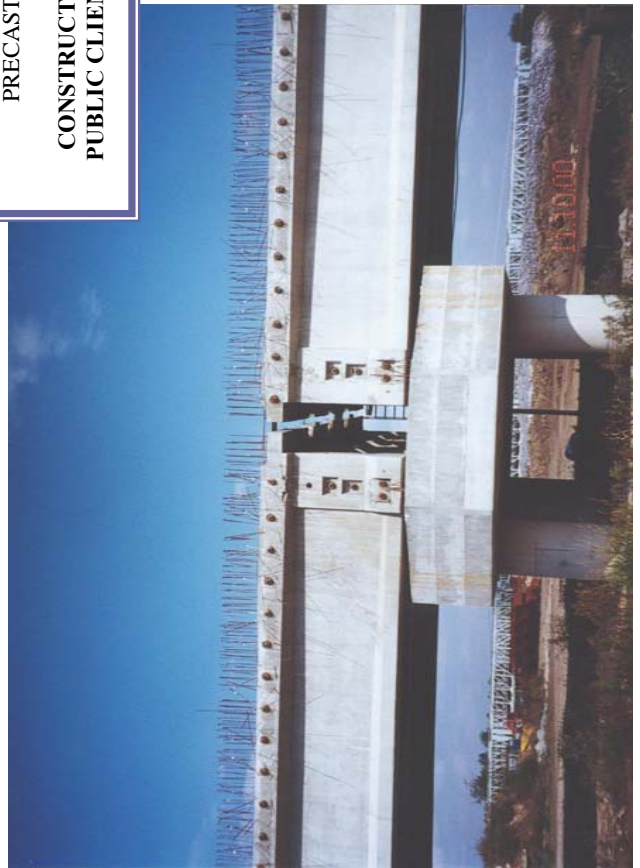
Assessment and Retrofitting of existing concrete buildings - Cases of Strengthened Buildings 2009-2010
Implementation of externally bonded FRP Reinforcement, concrete reinforced mantles, steel plates and sections, hollow section stiffeners depending on each study needs
Structural Design: Christou & Associates Consulting Engineers





**RAILWAY BRIDGE FOR DOUBLE TRACK
OVER AKSIOS RIVER
TOTAL LENGTH 659,00 m
PRECAST – PRESTRESSED**

**CONSTRUCTION DATE: 1999-2000
PUBLIC CLIENT: OSE-ERGOSE S.A.**





DSI provides you with DYWIDAG-CONSTRUCTION SYSTEMS



URAJAH-MUZAHMIYAH BRIDGES, RIYADH
Owner: Ministry of Communication, Kingdom of Saudi Arabia
Contractor: J. V. JAX, S. J./Edok-Eter S. A., GR
DYWIDAG-Posttensioning System with Strands

The above Viaduct Bridges studies were prepared by our Office in year 1980 and presented through T.E.E. in the 9th International Conference for Prestressed Concrete of F.I.P. in Stockholm. Photos of the complete bridge were used on the advertising Brochure from DYWIDAG – SYSTEMS INTERNATIONAL GmbH, Special Construction Methods

URAJAH – MUZAHMIYAH BRIDGES, RIYADH, SAUDI ARABIA (1980)



**BRIDGE OVER GALLIKOS RIVER - (1982)**

PUBLIC CLIENT: MINISTRY OF TOWN PLANNING,
DEVELOPMENT AND ENVIRONMENT

STRUCT. ENG. : G. CHRISTOU & ASSOCIATES

CONTRACTOR : MICHANIKI S.A..

PROJECT DESCRIPTION : total bridge length 245 m (7 x 35.0 m)
Two sections, each width 20,25 m.
Prestressed Concrete – Piles Foundation