SHIRISH PATEL & ASSOCIATES CONSULTANTS PRIVATE LIMITED

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SHIRISH PATEL & ASSOCIATES
CONSULTNATS PRIVATE LIMITED

Company Profile

Shirish Patel & Associates Consultants Private Limited was formed in 1974, by the staff of a group that had grown since its founding in 1960 by the present Chairman-Emeritus, Mr Shirish B Patel. In 2010, SPA completed 50 years in the field of Civil Engineering Design.

Since it started, the firm has focussed exclusively on civil engineering. For Prime Consultancy projects, SPA works with an Architect and Service Consultants, those whom SPA considers best suited for each particular project. At the same time the Client also deals with the Architect / Service Consultant through SPA, thus giving it the same convenience as an in-house Architect / Service Consultant within SPA would provide. Prime responsibility for all work including architectural and services continues to vest with SPA.

Pursuit of Quality

The pursuit of quality has been the driving force central to SPA's work. Our mission is to achieve, for each project, the best possible solution, safe, durable, economical and aesthetic, with minimal subsequent maintenance through the application of our experience, skills and ingenuity and based on a complete understanding of the Client's requirements, both explicit and silent. This applies starting with overall concepts through every stage of work to the thoroughness of final drawings. The aim is that the Client should feel satisfied with every aspect of SPA's service, but in particular appreciate the quality of the finished product both immediately and throughout its subsequent life.

Organization

The company has six design associates and each project is assigned to one of the associates and the project is reviewed by other associates. The company functions on a profit-sharing basis, at all levels, from peon to senior-most Associate. Senior Associates have a shareholding in the Company. Associateship is open to every engineer in the Company.

Area of Services

- Design of various types of Civil & Structural works :
  - Architectural projects like Hotels, Residential and Office Buildings, Auditoriums etc
  - Industrial Projects
  - Railway Stations
  - Road Bridges, Railway, Metro & Monorail Bridges & Foot Bridges
  - Marine projects like Jetties, Dock gates etc
- Prime Design Consultancy for Industrial projects, Metro Railway projects in association with Architectural & MEP firms
- Project Management & Construction Supervision for Housing, Roads & Flyovers
- Proof Checking

Awards

Awards for Excellence in Engineering : Structural Design Awards

- **Fédération Internationale de la Précontrainte (FIP) 1994**: SPA is the first Indian Company to have won an International Outstanding Structures Award in June 1994 for Administrative building of Engineering Construction Corporation (ECC) at Madras. The design was considered as one of the five most outstanding structures built in the preceding four years, worldwide.

- **American Concrete Institute, Maharashtra India Chapter, 1995**: First Prize for Most Outstanding Concrete Structure in India: Panval Nadi Viaduct for Konkan Railway Corporation Limited.

- **Indian Institution of Bridge Engineers, 1995**: First Prize, for Most Outstanding National Bridge National Awards Panval Nadi Viaduct for Konkan Railway Corporation Limited.

- **ACCE SIMPLEX AWARD, 1999**: Recipient of the `Innovative Design of Structures - 1999' for Juinagar Foot Bridge at Navi Mumbai for CIDCO.

- **Indian Institution of Bridge Engineers, 1997**: First Prize for Most Outstanding Bridge National Award (Aesthetics) for Juinagar Foot Bridge at Navi Mumbai for CIDCO

- **National Design and Research Forum and The Institution of Engineers (India), 1993**: Prestressed Concrete Engineering Design Award.

- **National Design and Research Forum and The Institution of Engineers (India), 1991**: Architectural Engineering Design Award.

- **American Concrete Institute, Maharashtra India Chapter, 1991**: Third Prize for Most Outstanding Concrete Structure in India for New Integral Coach Factory at Kapurthala.

- **Institute for Steel Development & Growth (INSDAG), 2012**: Third Prize for Most Outstanding Structural Steel Design - Roof of EON Free Zone for Panchshil at Kharadi, Pune.

Project Management Awards

- **Institution of Engineers (India), Belapur Centre, 1995:** Award for the best Project Management Consultancy for CIDCO Mass Housing project at Belapur.

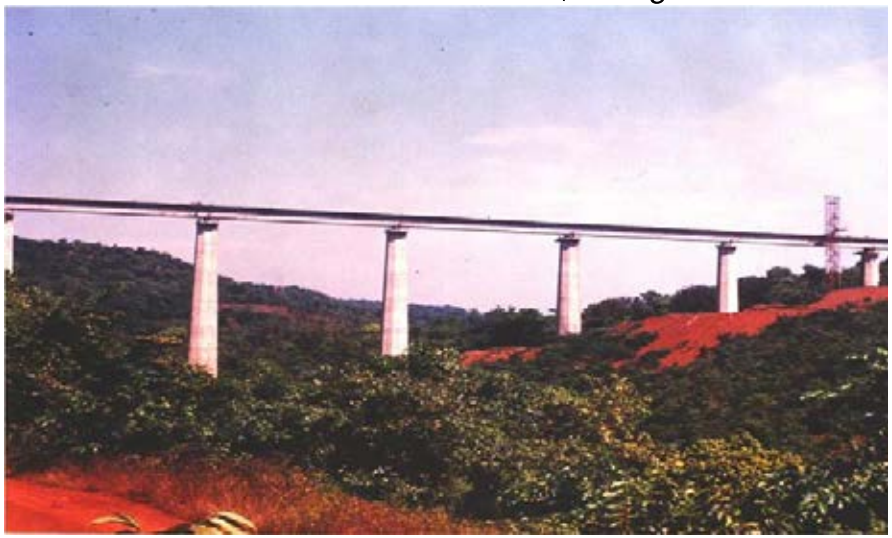
- **City & Industrial Development Corporation of Maharashtra, 1996:** Award for best Infra-structural work for their Mass Housing Projects at Nerul.

Photograph of some of the projects winning the awards listed above are given on following pages.

ECC – Administrative Building, Madras

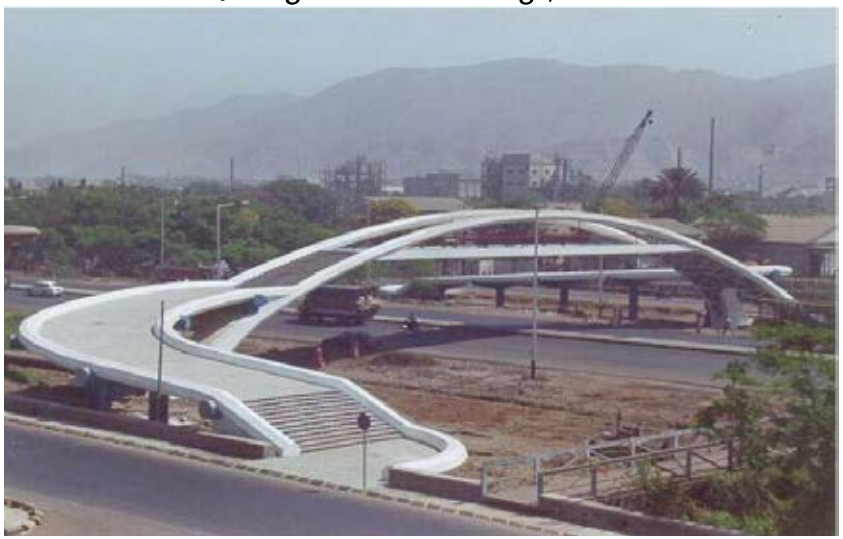
One of the five outstanding structures in World Award – 1994 from
The Fédération Internationale de la Précontrainte (FIP)

KRCL – Panval Nadi Viaduct, Ratnagiri



Most outstanding Concrete Structure Awards – 1995 from
ACI – (Maharashtra India Chapter) & Indian Institute of Bridge Engineers

CIDCO - Juinagar Foot Over Bridge, Navi Mumbai



National Award (Aesthetics) from IIBE – 1997 & Innovative Design of
Structure Award from ACCE SIMPLEX - 1999

IRCON - New Integral Coach Factory, Kapurthala

Most outstanding Concrete Structure in India Award – 1988 from
American Concrete Institute (Maharashtra India Chapter)

Awards

Panchshil – EON FREE ZONE – Kharadi, Pune

Most outstanding Structural Steel Design of Roof Award – 2012 from
Institute for Steel Development & Growth (INSDAG)

CIDCO – Belapur Mass Housing Project, Navi Mumbai

Best Project Management Consultancy Award – 1995 from
Institute of Engineers, Belapur Centre

CIDCO - Nerul Mass Housing Project, Navi Mumbai

Best infra-structural work Award – 1996 from
City & Industrial Development Corporation of Maharashtra

Awards

Innovations

First time application in India & Innovations

The pursuit of quality necessarily leads to the exploring of solutions that may be particularly appropriate to a specific problem, but which have not been seen before in India. SPA thus has a number of innovations, and "first time in India" achievements to its credit.

Some of these are listed below:

- Concrete hinges, used for the first time in the Kemps Corner flyover, Bombay (1965)
- The 14.5 m high precast concrete wall panels used in the L & T Factory at Bangalore are the largest single piece wall panels in India (1976)
- Design of the first complete large panel system of prefabricated construction in India, used after thorough full-scale mock-up testing for the construction of 27-storeyed apartment buildings at Petit Hall, Nepean Sea Road, Bombay (1973)
- 20 m span pre-tensioned hyperbolic paraboloid roof shells for L&T Bangalore, the longest span in the world for this kind of element at the time of construction (1976)
- Invention of strip skylights; cheaper than northlight, they provide brighter lighting and eliminate internal gutters; first used for L&T at Bangalore (1982)
- Assembly of a complete hangar roof 90 m x 45 m on the ground, lifted vertically into position by jacks for HAL, Bangalore (1981)
- Design of funicular precast post-tensioned 30 m span trusses, Trussed precast concrete columns 17.6 m high & 12m span pre-tensioned concrete angle purlins for Bowl Mill Project for BHEL at Hyderabad. The purlins are the longest such elements in India (1982)
- First time application of Incremental Launching of Bridge in India for Panval Nadi having Typical span of 40m & Tallest pier of 63m for Kokan Railway Corporation Limited (1994)
- Full Span Precast Prestressed voided Bridge Deck of 4.3m width & 16.5m Typical span made continuous and integral with piers for Dwarka Elevated Viaduct for Delhi Metro Rail Corporation (2004)
- Four Lane Elevated Road cum Metro Viaduct supported on single central pier for Jaipur Metro - Delhi Metro Rail Corporation using segmental construction having Cantilevered arms & spine beam for Road and Box girder for Metro (2013)

Photograph of projects listed above are given on following pages:

Kemps Corner Flyover, Mumbai

Concrete Hinge
as
Bearing in Bridge

First application in
1965

Concrete Hinge Bearings

L & T – Factory at Bangalore

14.5m High
Single piece wall panel

Largest in India in
1976

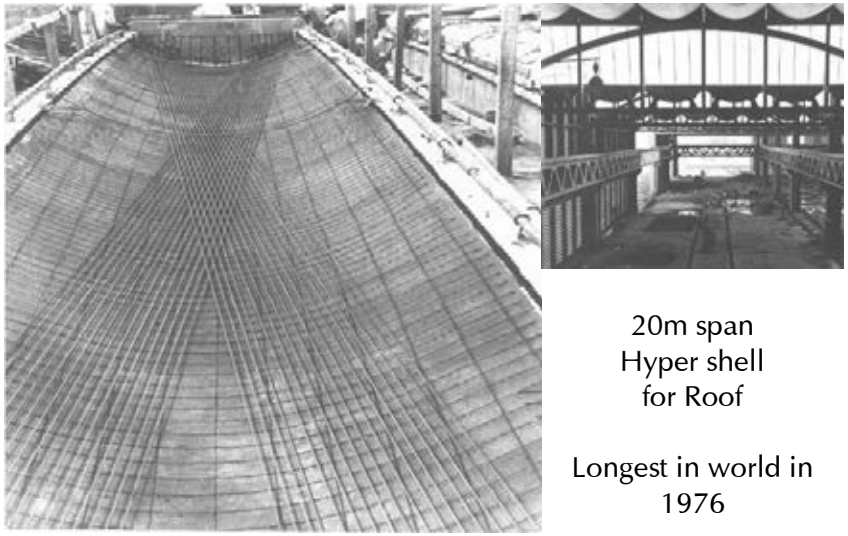
Precast concrete wall Panels with Beer bottle finished surface

Petit Hall – 3 Towers of 27 Storied in Precast, Mumbai

First large panel system of prefabrication in India used for upper 24 floors after thorough full scale load testing - 1973

Innovations

L & T – Factory at Bangalore

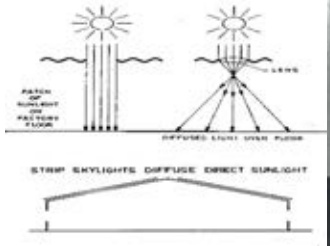


20m span
Hyper shell
for Roof

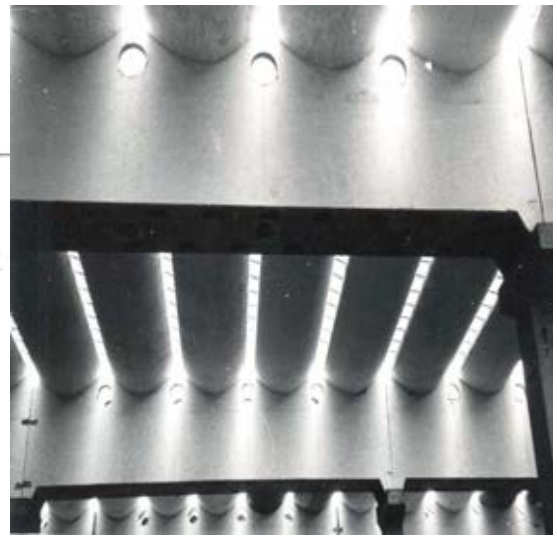
Longest in world in
1976

Pre-tensioned Hyperbolic Paraboloid Shell

L & T – Factory at Bangalore



Invention of
Strip skylights
using
Figured wired glass
1982



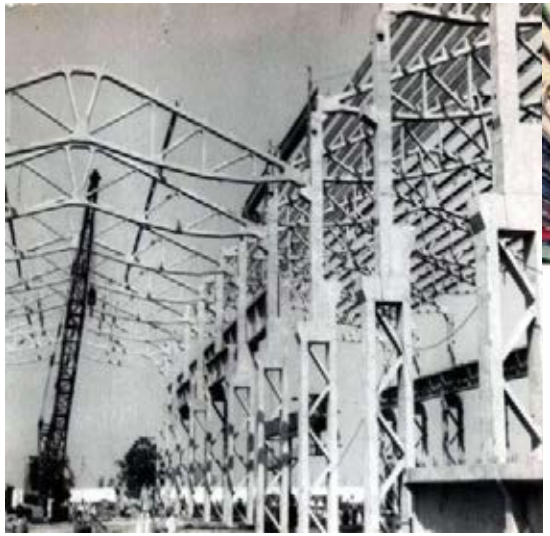
Strip Skylights cheaper than North light & provide brighter light

HAL – ASTE Hangar (2nos) at Bangalore

Complete assembly of 90m x 45m roof & lifting vertically by jacks (no use of cranes) - 1981

Innovations

BHEL – Bowl Mill Project at Hyderabad



12m span
pre-tensioned Purlins,
30m span
post-tensioned Trusses,
17.m high
Trussed columns
1982

Complete construction with Precast elements :
Purlins, Trusses, Columns, Gantry Girders, Louvers

KRCL – Panval Nadi Viaduct, Ratnagiri

Incremental Launching of
Bridge
40m Typical span &
62m High Tallest Pier

First application in
1994

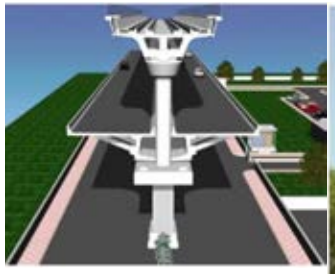
424m long bridge for a single track railway

DMRC – Dwarka Elevated Viaduct, New Delhi

16.5m span &
4.3m wide
Precast voided
Bridge Deck made
Continuous & Integral
with Piers
2004

Full span Precast Prestressed voided Bridge Deck

DMRC – Elevated Road Cum Metro Viaduct, Jaipur



Segmental
Construction
having spine beam &
Cantilever arms
for flyover &
Box girders for Metro

Elevated Road & Metro Viaduct supported on Single Central Pier

Innovations

Major Projects

Administrative & Institutional Buildings

CIDCO – Exhibition & Business Centre, Navi Mumbai

2008 - On going

44,000m²

TCL – Corporate Data Centre, Mumbai

2008 35,000m²

National Judicial Academy, Bhopal

2001 28,000m²

Goa Legislative Assembly, Goa

2001 5,000m²

Administrative & Institutional Buildings

Administrative & Institutional Buildings

Plasma Research Institute – Gandhinagar, Phase I, II & III

1985, 1992 & 1999

20,500m²

TCL – Internet Data Centre, Pune

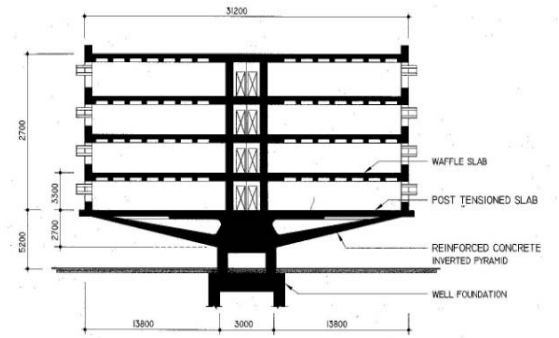
2009 1,00,000m²

M&M – Office Building, Mumbai

1985 9,000m²

Dabhol Power, Institutional building

2000 14,000m²



CROSS SECTION

L&T – ECC Administrative Building, Chennai

1989 Recipient of The Fédération Internationale de la Préecontrainte (FIP) Award – 1994 3,100m^2

M&M – R & D Building, Nashik

1984 2,400m^2

L&T – Office Building, Bangalore

1977 2,100m^2

Ceat Tyres – Office at Worli, Mumbai

1972 6,800m^2

SPA

Administrative & Institutional Buildings

High Rise Buildings

Panchshil – Trump Tower, Pune

2012 – On going 38,000m²

K Raheja Universal – Reflection, Mumbai

2012 - On going 110,000m²

K Raheja Universal – Exotica, Mumbai

2012 - On going 200,000m²

K Raheja Universal – Altamount, Mumbai

2007 16,000m²

Bhojwani – Kamgar Nagar, Mumbai

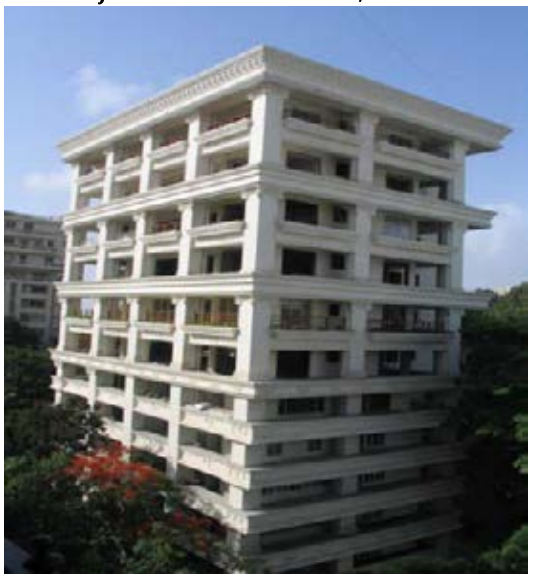
2012 55,000m²

Bhojwani – Pedder Road, Mumbai

2008 18,000m²

High Rise Buildings

Bhojwani – Nav Reshma, Mumbai



2004 Extension area 3,600m^2

Bhojwani - Buckley Court, Mumbai

2001 7,000m^2

Petit Tower, Mumbai

2003 18,000m^2

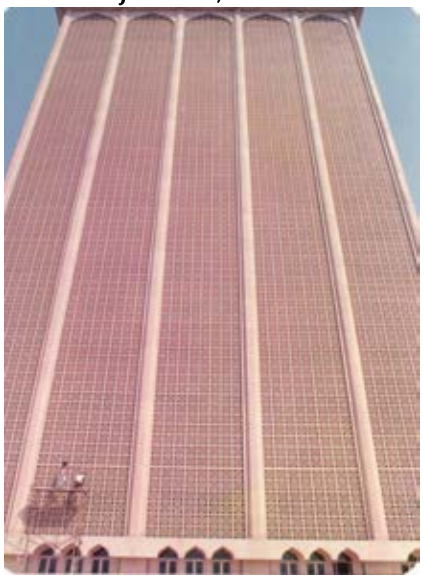
Fortune 2000, Mumbai

1998 20,000 m^2

Kashmir House, Mumbai

1988 6,500m^2

Haj House, Mumbai



1987 22,000m^2

High Rise Buildings

National Hospital, Mumbai

1975 15,000m^2

Kanchenjunga Apartment, Mumbai

1974 12,000m^2

Great Eastern Apartment, Mumbai

1967 16,000m^2

Petit Hall Towers - 3 Buildings, Mumbai

First application in India of Large Panel Prefabrication for 24 Storeyed Towers

1973 50,000m^2

Above Podium, Floors are Fully Precast

Full Scale load Test of Precast System

High Rise Buildings

Hotels

Panchshil – Ritz Carlton, Pune

2012 – On going 50,000m²

Panchshil – Marriott Hotel, Pune

2010 70,000m²

Panchshil – Oakwood Hotel, Pune

2009 37,000m²

Panchshil – Courtyard Hotel, Pune

2008 35,000m²

Taj - Wellington Mews, Mumbai

2002 30,000m²

Dodla International – Trivandrum Hotel

2001 20,000m²

Taj – Jodhpur Hotel

1998 20,000m²

Sahyadri Guest House, Mumbai

1995 10,900m²

Taj - Lucknow Hotel

1994 15,000m²

SPA

Hotels

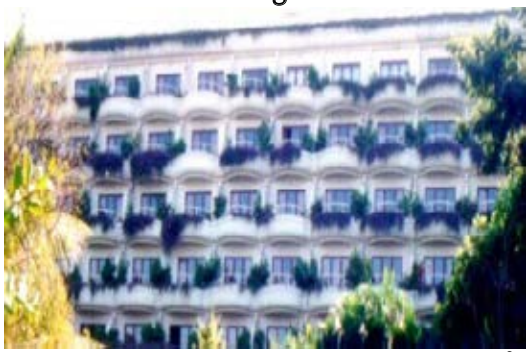
Hotel Grand Kakatiya, Hyderabad

1993 25,000m²

Sea Pearl Hotel, Visakhapatnam

1991 6,000m²

Oberoi – Bangalore Hotel



1991 20,000m²

Malabar Hotel, Cochin

1989 3,300m²

Hotel Krishna Oberoi, Hyderabad

1986 24,000m²

Taj Bengal, Calcutta

1985 35,000m²

Taj Palace Hotel, New Delhi

1982 60,000m²

Taj Mahal Hotel, New Delhi

1978 30,000m²

Taj Coromandal Hotel, Madras

1972 20,000m²

SPA

Hotels

Industrial Projects

L&T – Steel Melting & Forging Shop, Hazira, Gujarat

2013 Heavy Shop with EOT Cranes of 350Mt capacity 70,000m^2

ADANI - Grain Terminals, Various States

2008 320,000Mt Storage Capacity

SKODA – Auto CKD Plant Factory, Aurangabad

2003 & 2007 83,000m^2

Railway Workshop at Navi Mumbai

2003 6,000m^2

BMW - CKD Plant, Chennai

2007 18,600m^2

LRDE – Radar Test Platform, Bangalore

2001

Industrial Projects

Petronas - Primary Reformer, Malaysia

1999

M&M – Jeep & Ford Plant, Nashik

1980-98 100,000m²

M&M – Die Shop, Nashik

1996 6,600m²

TTK Biomed – IV Fluid Plant, Aurangabad

1994 4,400m²

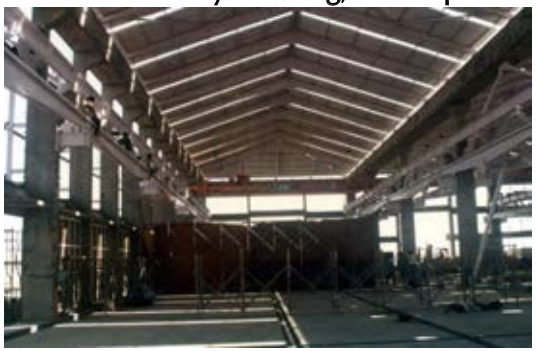
L&T – Cement Plant Upgradation, Awarpur

1993

RIL – Ethylene Terminal, Hazira

1990 10,000Mt Capacity Cryogenic Tank

L&T – Factory Building, Pithampur



1990 10,200m²

IOBL– Grease Plant, Navi Mumbai

1989 7,000m²

IRCON – Aqaba Railway Workshop, Jordon

1988 4,400m²

Industrial Projects

IRCON – New Rail Coach Factory, Kapurthala



1988 | 12mx20m Prefabricated Stressed skin type steel roof modules used for entire factory area | 140,000m²

HSL – Dock Cover, Visakhapatnam


1986 | 62m span, 42m height, 2 x 150Mt Capacity EOT Cranes | 18,800m²

ONGC – Gas Sweetening Plant, Hazira

1986

TATA – Printing Press, Nerul

1985 | 4,000m²

CP Tools – Factory Building, Halol

1985 | 4,600m²

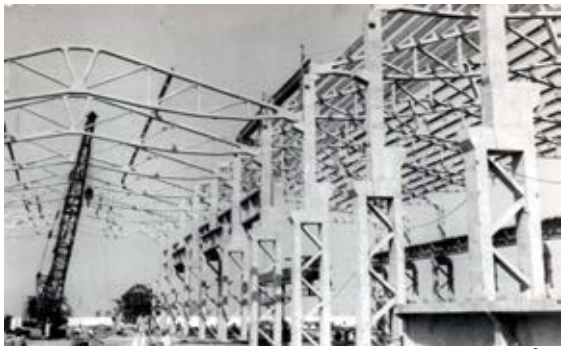
MCFL – DAP Bulk Storage Silo, Mangalore

1984 | Precast Roof | 6,800m²

Industrial Projects

BHEL – Bowl Mill Project, Hyderabad





1982 Factory building from all Precast elements like Columns, Gantry Girders, Trusses, Purlins 13,200m²

L&T – Excavator Shop, Bangalore



1976 & 1982 Factory building from Precast North light Girders, Hyper shells, Wall Panels with Beer bottle finish 12,000m²

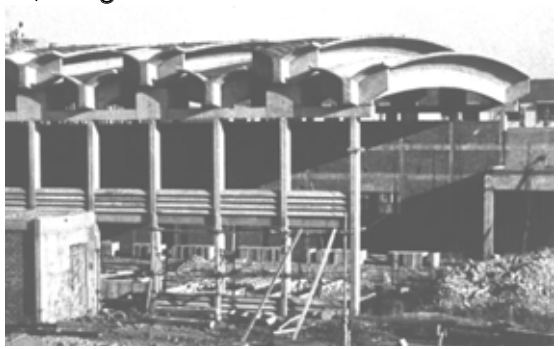
L&T – Hydraulic Shop, Bangalore



1982 Factory building from Precast Folded Plates, Roof beams, Columns, Wall panels with Beer bottle finish 6,000m²

Industrial Projects

HAL – ALH Project, Bangalore

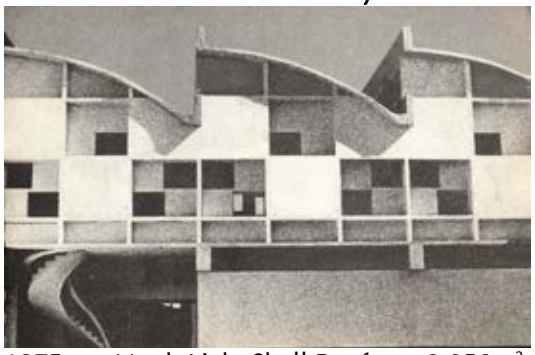


1980 Precast Butterfly shells 7,750m²

L&T – Canteen Building at Powai

1980 Hyper Shell Roof

Advani Oerlikon–Factory at Pune



1975 North Light Shell Roof 3,250m²

L&T – Factory at Madh Island, Mumbai

1973 In Precast Concrete 1,750m²

Advani Oerlikon–Factory at Madras

1973 Hyper Shell Roof 5,300m²

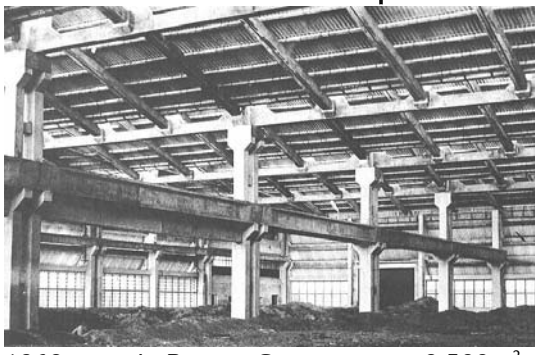
Yemen Dairy & Juice Industries, Hodeidah

1979 5,900m²

L&T – Brewery at Uran, Mumbai

1968 In Precast Concrete 4,800m²

Madras Port Trust – Workshop at Madras



1968 In Precast Concrete 8,500m²

SPA

Industrial Projects

Bridges

DMRC – 5.75Km Elevated Road Cum Metro Viaduct, Jaipur

Segmental construction for Four lane flyover with Elevated Metro viaduct supported on a single central pier

2013

ROB with Spine beam & Cantilevered arms

5.75 Km

Bridges

DMRC– Kochi Metro & ROB, Kerala

2011 4 lane, 400m

IL&FS – Rapid Metro Viaduct, Gurgaon

2011 Concept Designer for 7 Km

MSRDC - Suman Nagar Flyover, Mumbai

2011 Voided Integral Deck 500m

Versova Andheri Ghatkopar (VAG) Corridor MRTS – 11.4Km Elevated Viaduct, Mumbai

2011 Subconsultants for Design of Substrucutre (Principal Consultants – PB SYSTRA) 11.4Km

DMRC- 7Km Dwarka Elevated Viaduct, New Delhi

2004 Full Span Precast Deck made integral with Piers 7 Km

KRCL-14 Nos of ROB, Jharkhand

2003 Each bridge length varies, Total 7.5Km

Bridges

ROB on Vashishti River, Chiplun

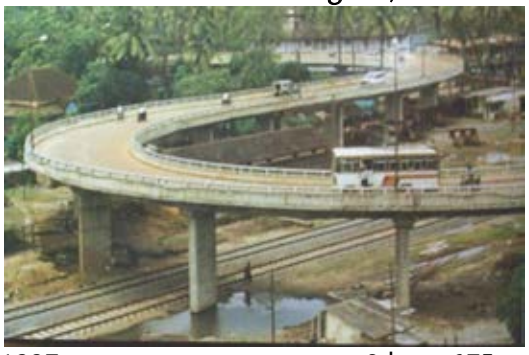
2001 2 lane, 110m

CIDCO-Khandeshwar ROB, Navi Mumbai

1998

4 lane, 645m

KRCL – ROB at Madgaon, Goa



1997 2 lane, 675m

KRCL–Railway Bridge, Nandivli-Ratnagiri

1995 36m Arch, Bridge 72m

KRCL - Multiple-Cell Culvert, Vilawade

1994 Railway Culvert with 17m overburden

KRCL – Railway Bridge, Berdewadi

1993 85m

CIDCO – ROB at Nerul, Navi Mumbai

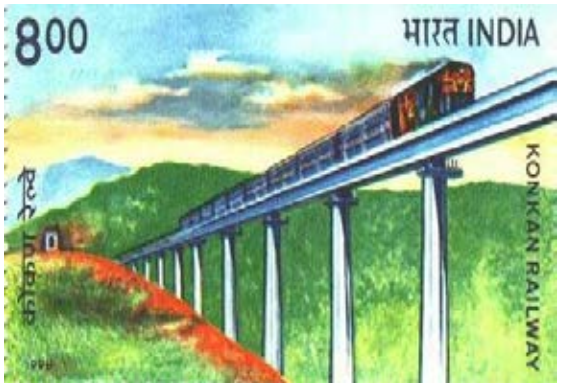
1989 6 lane, 420m

KRCL - Skybus Test Track , Goa

2004

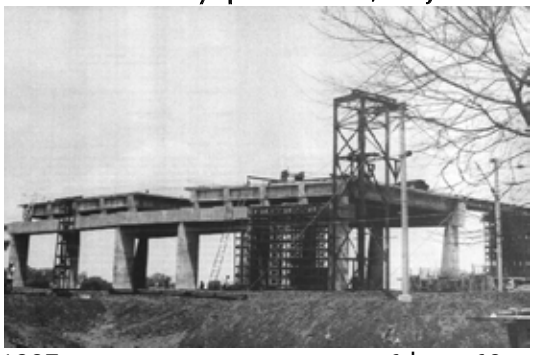
Bridges

KRCL - Panval Nadi Viaduct, Ratnagiri



1994 Tallest Pier 62m height, Bridge deck launched by Incremental method (**1st time in India**) for 424m long Viaduct

ROB at Chayapuri & Pilol, Gujarat

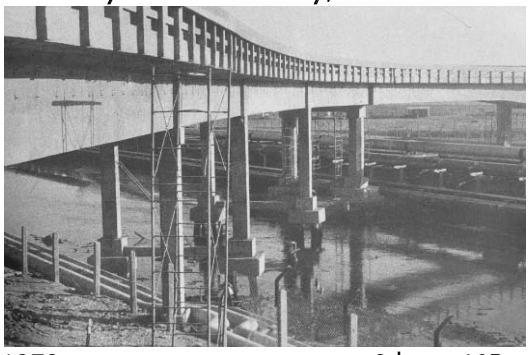


1987 6 lane, 60m

Wadala Bridge, Mumbai

1979 8 lane, 2x400m

Flyover at Trombay, Mumbai



1978 2 lane, 465m

Bridges

Kemps Corner Flyover, Mumbai

1965 With Bearings of Concrete Hinge 4 lane, 330m

Central Railway – FOB, Asangaon

2000

CIDCO – FOB, Juinagar, Navi Mumbai

1997 90m Arch

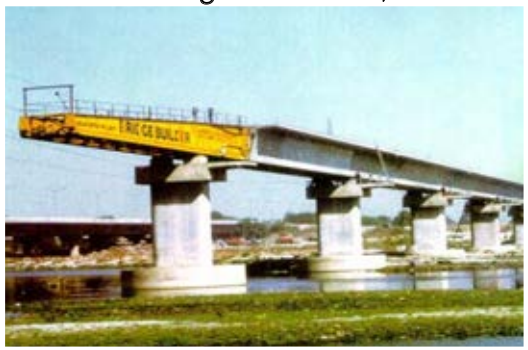
DMRC - Elevated Viaduct, New Delhi

1998 Proof Checking

Narmada Bridge, Bharuch

1996 Proof Checking

DMRC–Metro Bridge on Yamuna, New Delhi



1998 Proof Checking

Coimbatore by-pass Flyover, Noyyal

1999 Proof Checking

Bridges

Station Buildings

L&T – Monorail Stations (10 Nos) Mumbai

2012 – On going 2,000m^2 Each

VAG– Metro Stations (12 Nos), Mumbai

2013 Each Station area varies

IL&FS – Metro Stations (6Nos), Gurgaon

2013 Structural Concept Designer

DMRC - Dwarka Subcity Metro Stations (7 Nos), New Delhi

2004

3,000m^2 Each

DMRC - Tis Hazari Station, New Delhi

1999

25,000m^2

DMRC- ISBT Station, New Delhi

1999 36,000m^2

Stations Buildings

CIDCO -Rabale Station, Navi Mumbai

2006

90,000m²

CIDCO - Kharghar Station -Navi Mumbai

1997

35,000m²

CIDCO -Nerul Station - Navi Mumbai

1995

31,000m²

CIDCO–Juinagar Station, Navi Mumbai

1991

40,000m²

CIDCO –Sanpada Station, Navi Mumbai

1996

39,000m²

Stations Buildings

IT Parks

Panchshil – BTS Campus for Cummins, Pune

2012 - On going

Towers using Precast Beams and Hollow Core Slabs

235,000m^2

Panchshil –Tech Park 2 , Pune

2008-On going 270,000m^2

Panchshil –Bajaj at Wakdewadi, Pune

2011 30,000m^2

Panchshil –Tech Park at Kharadi , Pune

2012 18,000m^2

Panchshil – Viman Nagar, Pune

2011 14,000m^2

Panchshil – UGS at Hingewadi, Pune

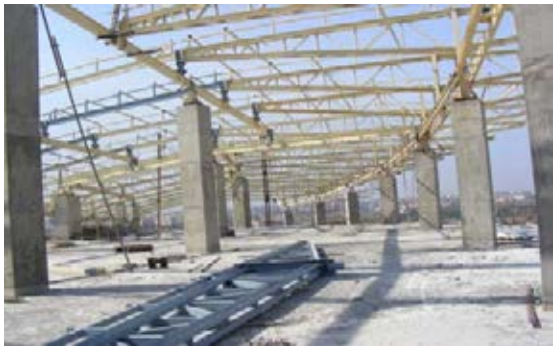
2007 35,000m^2

Panchshil –Tech Park 1, Pune

2006 100,000m^2

IT Parks

Panchshil - Eon Software Park at Kahradi, Pune



Recipient of 3rd Most Outstanding Structural Steel Design for Roof from Institute for Steel Development & Growth (INSDAG), 2012

2006 - On going

575,000m^2

IT Parks

Hangars

Jet Airways - Hangar, Mumbai

2006 — 13,000m²

ESSAR – Hangar, Mumbai

2004 — 2,200m²

TAJ Air - Hangar, Mumbai

2004 — 3,000m²

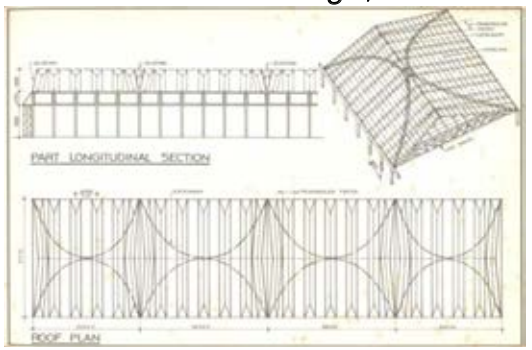
Jet Airways – A R C Hangar, New Delhi

2001 — Up-gradation 12,500m²

HAL – ASTE Hangar, Bangalore

1981 — 45m x 90m Roof Fully Fabricated at Ground and lifted without cranes — 2 Nos 4580m²

HAL – Overhaul Hangar, Nashik



1970 & 1973 — 9,000m²

Hangars

Hydraulic & Marine Structures

Cochin Shipyard–Intermediate Gate, Kerala

2008 & 2011 11m ht & 45m length

Pipavav Shipyard – Intermediate Gate

2012 12m ht & 65m length

L & T - Slipway, Hazira

2007

Cooling Water Intake Well, Visakhapatnam

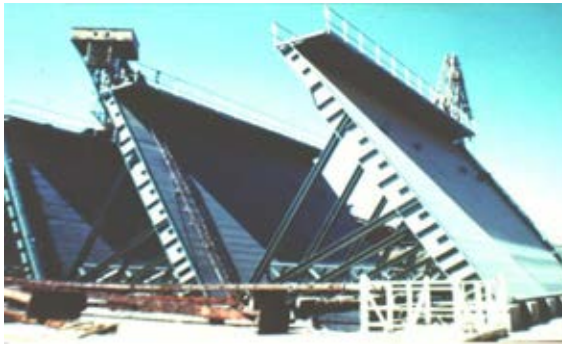
2000

20m Dia

Jetty for Make-up Water System, Vizag

2000 400m Length

HSL - Intermediate Dock Gate, Dock Cover Building & Main Dock Gate, Visakhapatnam



1987 Intermediate Gate 10m ht, 55m length

Covered area of shed 18,800m^2

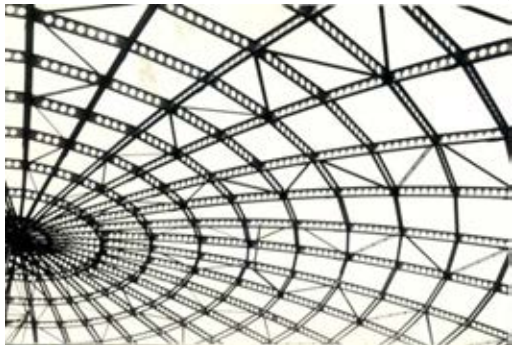
Main Gate10m ht, 55m length

Hydraulic & Marine Structures

L&T - Quay Wall Extension, Hazira

1997

Steel Water Tanks, Raoli Hill - Mumbai



1974

44m Dia, 2 Tanks, 12.5 ML each

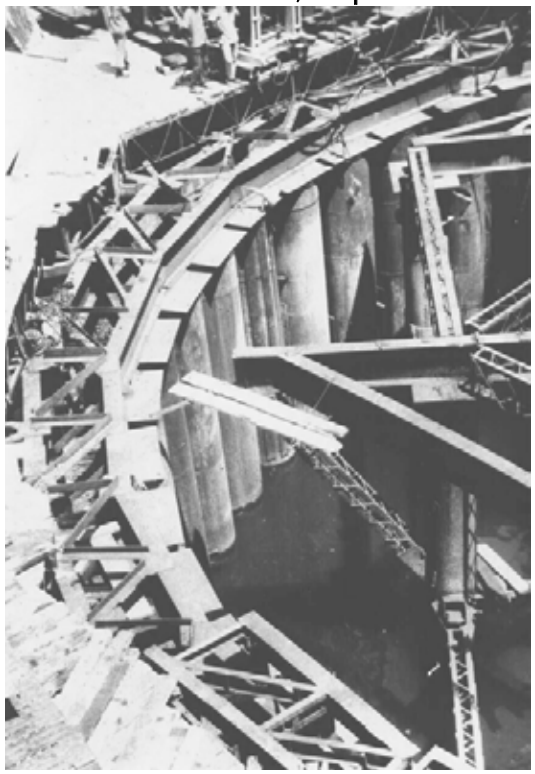
Const. Gantry for a Jetty, Kalpakkam

1970 8.5m width x 37.5m length

Fertiliser Berth, Visakhapatnam

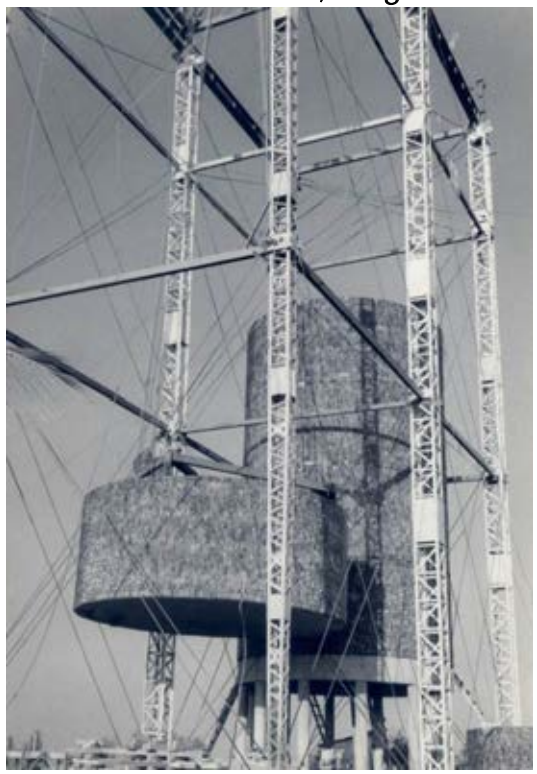
1967 15m width x 168m length

Intake Cofferdam, Kalpakkam



1972 20m Dia

L&T – Water Tower, Bangalore



6 Nos Precast Tanks stacked one above

1976 80,000 Litres each

Hydraulic & Marine Structures

Rehabilitations & Restoration

South Mumbai Storm Water Mains

2012 Repairs of Storm Water Mains

M&M – Gateway Office, Mumbai

2007 Repairs & Up-gradation

Prince of Wales Museum, Mumbai

2004 Up-gradation of Heritage Building

Petit Hall, Mumbai

2000 Repairs

Buckley Court, Mumbai

2001 Heritage Preservation

Jamat Khana, Mumbai

2002 Repairs & Up-gradation

Falaknuma Palace, Hyderabad

2002 Structural Condition Survey

Central Railway – Thane Creek Bridge, Thane

2001 Structural Condition Survey & Repairs

SPA

Rehabilitation & Restoration

Township

SKODA - Factory Housing, Aurangabad

2006

16,000m^2

MMRDA – JVLR Mass Housing, Mumbai

2002 (With PMC) 1076 Tenements

NNP – Dindoshi Mass Housing, Mumbai

2002 (With PMC) 5040 Tenements

Institutional Quarters, Dabhol

1998 14,000m^2

CIDCO – Vasai-Virar Development Plan

1996 4,250 hectares

TATA Chemicals – Housing at Babrala, U.P.

1992 & 1996 90,000 m^2

CIDCO–Belapur Mass Housing, Navi Mumbai

1997 (With PMC) 1048 Tenements

Andheri Precast Mass Housing, Mumbai

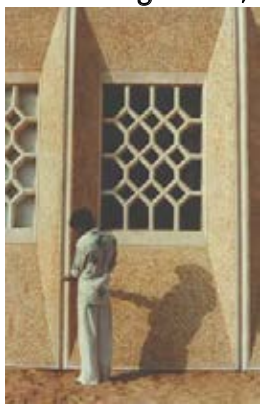
1971 896 Tenements

SPA

Township

International

Precast Cladding Panels, Abu Dhabi



1992

Railway Workshop, Aqaba - Jordon

1993 4,400m²

Precast Mosques, Abu Dhabi

1992

Ramada Hotel, Dubai

1980 27,000m²

Precast Cladding Panels for Airport, Abu Dhabi

1979

Yemen Dairy & Juice Industries, Hodeidah

1979 5,900m²

International

Project Management

MMRDA - Katai Naka, SH-43, Badlapur

2012 – On going 19.20 Km

Residential Building, Mulund - Mumbai

2012 – On going

Sumer – Housing Complex, Indore

2012 40,000m^2

Ozone Tower, Mumbai Central

2013 – On going 45,000m^2

Sumer – Resorts, Alibaug

2012 – On going

Sumer – Villa Complex, Goa

2012 – On going

Sumer – SRA Scheme at Chandivili, Mumbai

2007 - On going

12,130 Tenements

RNA–Building at Chembur, Mumbai

2012 5,500m^2

Project Management

PMC for Suman Nagar Flyover, Mumbai

2012 3 lane , 510m

MMRDA- JVLR Mass Housing, Mumbai

2006 1076 Tenements

NNP - Mass Housing at Dindoshi, Mumbai

2002 5040 Tenements

SPPL – SRA Scheme at Dindoshi, Mumbai

2005

4,400 Tenements

PMC for Khandeshwar Flyover

2000 4 lane, 645m long

PMC for Juinagar FOB, Navi Mumbai

1998 90m Arch FOB

CIDCO – Mass Housing at Nerul

1995 1120 Tenements

CIDCO – Mass Housing at Belapur

1996 1048 Tenements

Project Management

Curriculum Vitae – Key Personnel

Shirish B Patel
Chairman - Emeritus

Email : shirish@spacpl.com

Introduction

Shirish B Patel is a Civil Engineer with interests that extend to the engineering design of public works, notably dams, bridges, and marine structures; urban planning and urban affairs; the planning of factories, and other complexes that benefit from an inter-disciplinary approach; solar energy research; and software development.

He founded the firm, in 1960.

Professional Background

Mechanical Sciences Tripos Parts I & II, M A (Hons) University of Cambridge
Fellow of ICE, IE(I), ACI
Member of ASCE, IABSE, CEA(I), ACM
Associate Member of IASSS

Representative Project Experience

- Was one of the three original authors of a plan to develop a 350 km^2 new city (New Bombay) across the harbour (1965). Employed by the Government of Maharashtra for 5 years, in the role of Chief Planner for the new city, responsible for co-ordinating the work of a multi-disciplinary team consisting of economists, sociologists, transportation and city planners, architects and engineers, as well as the construction team. (1970-1974).
- Principal designer for Large-panel precast residential buildings at Petit Hall, Bombay with lowest 3 stores cast-in-situ and 27 upper stories fully precast. To test the adequacy of the precast system, a 3-storey high full-scale mock-up using large panels and joints as proposed in the final construction was first built and tested. (1966-1970)
- Invented Vertical axis louvers for Ventilation, Humidification using 'Khus infill in galvanised iron frames, Strip Skylight for roof using figured glass (patented) instead of conventional North light for factories, Light reflectors. These inventions are widely used in various factories designed by SPA.
- Mumbai Heritage Conservation Committee (1996-1999)
- Solar Energy Research **:** Since 1980 in Land Research Institute, a not-for-profit Trust, of which Mr Patel is the founder and President. Recent work in collaboration with the University Department of Chemical Technology has led to the development of a cooking pot that promises dramatic savings in fuel consumption for cooking. (1980-to date)
- Executive Committee Bombay Metropolitan Regional Development Authority (1983-96)
- Kariba Dam, Zambezi river : Worked with Coyne & Bellier, Consulting Engineers, Paris on the design of Kariba Dam on the Zambezi. Conducted 1:100 scale plaster-of-paris model studies, loading the dam with mercury and measuring strains. Also developed the specifications and measurement practices for the cooling of concrete in the dam. (1955-1956)
- Koyna Dam : Senior civil engineer with the Contractors for Koyna Dam, in charge of planning, and design and supervision of all temporary works, including cable crane foundations. (1956-1958)
- Calico Mills, Bombay : As Chief Civil Engineer, in charge of planning, design and construction supervision of two new chemicals factories. (1958-1960)

Vasudev V Nori
Chairman

Email : nori@spacpl.com

Introduction

Vasudev V Nori is a Civil Engineer whose interests include :

- Planning and development of innovative structural designs of a variety of structures
- Setting out office procedures for design, analysis and drafting procedures with a view to render high quality professional service.
- interaction with academic institutions as an external examiner, members of board of studies, delivering invited lectures on special topics

He joined the firm in 1965 as a Senior Engineer.

Professional Background

B E Civil (Hons),1957 VJTI Bombay University,
D Sc Tech, 1965, EPFL, Lausanne (Switzerland),
Fellow, Institution of Engineers India
Life Member, Consulting Engineer's Association of India
Life Member, Indian Concrete Institute

Awards

- 1993 -National Design Award - Institution of Engineers (India)
- 1994 -FIP award for Most Outstanding Structure Washington at XIIth FIP Congress
- 2003 -Felicitations by Dr Adam Neville for Excellence in Design of Concrete structures - American Concrete Institute - India Chapter
- 2005 Outstanding Concrete Technologist Award - Indian Concrete Institute
- 2009 S B Joshi Memorial Award for Excellence in Structural and Bridge Engineering, Pune
- 2011 Life Time Achievement Award Indian Concrete Institute (Maharashtra Chapter)
- 2012 Gourav Award "Most Significant Contributions to Civil Engineering Consultancy - Association of Consulting Civil Engineers (India).

Representative Project Experience

Design and overall charge of a variety of innovative structures "First time application in India "

- incremental launching for a 423 m long prestressed concrete bridge with 40 m spans and with tall pier heights up to 65 m above the river bed. Panval Nadi Viaduct, Konkan Railway Corporation. (Winner of ACI India Chapter Award 1995)
- Factory building in Precast concrete using pretensioned hypar shells (2.5 m wide 20 m span), with 20 m x 20 m column spacing and 14.5 m high precast panels designed for future extensions for L&T Bangalore. (1975)
- Factory building in Precast concrete with funicular trusses 30 m spans, 12 m span pretensioned purlins and 17 m high precast branched columns for Bharat Heavy Electricals Hyderabad. (1983)
- Precast Prestressed Elevated Viaduct 7 km long with integral form of construction in Dwarka sub city for Delhi Metro Rail Corporation. (2004)
- Precast Prestressed Elevated Viaduct four lane flyover with metro viaduct running above supported on a single pier at Jaipur for Delhi Metro Rail Corporation. (2013)
- 45 m x 90m aircraft hangars in structural steel fabricated at ground level and lifted to final position about 12 m above ground level (1981)
- Administrative building for ECC -L&T at Madras: The upper four storeys of the structure are supported on four overlapping prestressed hollow pyramids and four hollow piers. (Winner of FIP Award 1994)

Narendra M Ajugia
Managing Director

Email : ajugia@spacpl.com

Introduction

N M Ajugia is a Civil and Structural Engineer whose interests include:

- the structural design of various structure
- quality control and construction planning

He joined the firm, in 1982.

Professional Background

B E (Civil Engineering) with Honours, University of Bombay 1981
Fellow, Institution of Engineers India

Representative Project Experience

- Design of various multi-storeyed buildings for Residential, Hotels, IT Parks ranging above 15 storied with transfer girders. At present under design & execution & 70 storied building at Mumbai with Out Triggered Trusses for improving lateral load system.
- Design including preparation of mould drawings for Precast Industrial building for Railway Workshop at Aqaba, Jordon having precast elements like shell, folded plate, column, gantry girders.
- Design, preparation of estimates and contracts, project co-ordination for Industrial Complex at Nashik for M & M Ltd. The total area of project is 100,000 Sqm for manufacturing of Jeeps and Escort cars.
- Design, preparation of estimates and contracts, project co-ordination for Industrial Complex at Igatpuri for M & M Ltd. The total area of project is 40,000 Sqm for manufacturing of Jeep Engines.
- Design, preparation of estimation for Polyester plant at Hazira for Reliance Industries Ltd having two Industrial buildings with total area of 200,000 Sqm. The project includes heavy machines, silos, conveyors located at various levels.
- Computerization of Town Planning maps for Vasai- Virar Sub- region at Bombay.

CV - Key Personnel

P S Badrinarayan
Senior Associate

Email : badri@spacpl.com

Introduction

P S Badrinarayan is a Civil and Structural Engineer whose interests include:

- Planning, management and co-ordination, design, detailing, estimation, inviting tenders, supervision of RCC & steel structures

He joined the firm, in 1981.

Professional Background

B Tech (Civil Engineering) Indian Institute of Technology, Madras
Fellow, Institution of Engineers India

Representative Project Experience

- Staff quarters, club-house and service structures for a Cement Plant in Maharashtra.
- Industrial sheds, office buildings, heavy machine foundations, etc for an iron and steel plant in Bombay.
- Multi-storey RCC framed structure for a fertiliser company in Karnataka.
- Resitement of Grease Plant at New Bombay.
- Primary Reformer Structures for several Fertiliser Plants involving modular steel construction.
- Multi-storeyed Complex for HUDCO at New Delhi.
- Pharmaceutical Plants at Aurangabad
- Up-gradation of Cement Plant in Maharashtra.
- Structural works for several petrochemical plants involving foundations for large cryogenic tanks such as ethylene, propylene, LPG etc.
- Institutional facilities at Dabhol namely school, Industrial Training Institute
- Design of Kharghar Railway Station & Rabale Railway Station for CIDCO

Haroon Shaikh
Associate

Email : haroon@spacpl.com

Introduction

Haroon Shaikh is a Civil and Structural Engineer whose interests include:

- Design, detailing, estimation, Co-ordination of RCC & Prestressed structures

He joined the firm, in 2003.

Professional Background

M E Civil (Structures), University of Pune, 1998
B E Civil, University of Pune, 1994

Representative Project Experience

- Design of 6.6 km, elevated metro link -Sikanderpur-Sec 56
- Design of 5.65 Km Road cum Metro project in Jaipur. For 1.56 Km, viaduct supports four-Lane Road at 1st level & Metro Railway at 2nd level. This double level flyover is first of its kind in India.
- Design of 12 Elevated Metro stations & Sub-structure design of 11.4 Km elevated viaduct of Versova-Andheri-Ghatkopar (VAG) Corridor MRTS, Mumbai.
- Design of 8 Km elevated viaduct (Dwarka sub City) for Delhi Metro Rail Corporation.
- Design of integral bridges (total length 2.3 Km) and checking of solid approaches (total length 5.2 Km) in Jharkhand State for Konkan Railway Corporation Ltd.
- Design of Jetty for L & T, Hazira.
- Design of Shopping malls, Hospitals, Commercial building in Kingdom of Saudi Arabia.

CV - Key Personnel

Joseph F Desouza
Associate - PMC

Email : joseph@spacpl.com

Introduction

Joseph F Desouza is a Civil Engineer whose interests include:

- Construction planning, Co-ordination of Execution schedules integrated with cash flows, inventory controls and quality assurances of Industrial Structures, Commercial & Residential complexes

He rejoined the firm, in 2003. Earlier he was with firm from 1980 to 1983.

Professional Background

B E (Civil Engineering), Shivaji University, Kolhapur, 1967

Representative Project Experience

- Joined in 1980 as construction interface for industrial projects.
- Replacement of structurally fatigued gantry girders in a running plant for Mukand Iron and Steel Ltd.
- Resigned in 1983 to focus on execution and during the period upto 2004, completed pick up weir project, Airport runaway project, Mass Housing projects and industrial projects involving extensive structural fabrication and erection.
- Rejoined SPA in 2004.
- Project Manager for the Revamping of Kala Academy at Goa, a multi disciplinary project costing Rs.25 crore completed in 135 days on start to finish concept.
- Management coordination for widening and strengthening of EEH between Sion and Ghatkopar at Mumbai.
- Quality Auditing for MCGM roads in city and Extended suburbs.

CV - Key Personnel

Deepak S Gadkari
Associate

Email : deepak@spacpl.com

Introduction

Deepak S Gadkari is a Civil and Structural Engineer whose interests include:

- Design detailing, estimation, co-ordination of Bridges, Flyovers, Elevated Viaducts and structures like Hotels, Malls, IT parks etc.

He joined the firm, in 2006.

Professional Background

B E (Civil) with Honours, University of Mumbai, 1996
Diploma in Civil Engineering, University of Mumbai, 1993

Representative Project Experience

- Widening lengthening existing road over bridge with metro viaduct running above for Delhi Metro Rail Corporation, Kochi.
- Rapid Metro Rail Gurgaon Phase I with pretensioned box girders, special spans in structural steel.
- Substructure for Mand River bridge.
- Design of proof checking of load out quay walls.
- Design of Commercial, Institutional, Factory and Administration buildings, Corporation buildings and restoration of heritage structure.
- Proof checking - Design of prestressed pre-tension and post-tension I-girder & Box girder, Design of piers, Design of open well and pile foundation.
- Design of Steel Structure for Multi-storeyed buildings, Commercial & Industrial structures.
- Design of RCC Structures – Multi-storeyed Residential buildings.

CV - Key Personnel

Mahesh S Tharval
Associate

Email : mahesh@spacpl.com

Introduction

Mahesh S Tharval is a Civil and Structural Engineer whose interests include:

- Design of various civil engineering structures
- Infrastructure planning and development
- Automation of design procedures

He joined the firm, in 2004

Professional Background

B E (Civil), University of Mumbai, 1997

Representative Project Experience

- Design of Standard Spans Segmental Box girders for Delhi Metro Corporation Limited (Phase III)
- Suman Nagar Flyover : Prestressed Concrete Continuous bridge on curves with monolithic piers
- Foot bridge with inclined arches (Jharkhand – not yet built)
- Design of Subway, Design of various types of retaining walls & Abutments.
- Design of buildings for Commercial, Institutional & Administration, residential usages.
- Design of Forging Shop with heavy EOT cranes, Machine foundations at Hazira.
- Proof checking of prestressed pre-tensioned and post-tensioned girders & Box girders, piers, pen well and pile foundations.

CV - Key Personnel

Contacts

Contacts

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P S Badrinarayan, Senior Associate badri@spacpl.com