

## CURRICULUM VITAE

**Name:**           **Hirak Subhashchandra Vohra**

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### **Career objectives:**

Providing strength, stability and innovation to the structure by implementation of structural engineering fundamentals through design for safe, economize and environmental nurturing solution.

**Qualification:**   **M.Tech. (Structural Design Engineering)**

**Total Exp.:**     **16.0** years

**Designation:**   **Civil Structural Engineer - Consultant**

**Paramount Ltd.** Vadodara, Gujarat

ranked 13<sup>th</sup> in GPSC (Gujarat Public Service Commission) direct recruitment for **Assistant Engineer (civil) – Class - 2** in all over the Gujarat state. “**Patnagar Yojna Bhavan - Gandhinagar**” was allotted as a service location.

**Degree :**       **M.Tech. ( Structural Design Engineering )**

**College :**      School of Building Science & Technology, (SBST)  
                    **Centre for Environment Planning & Technology (CEPT)**

**University :**   CEPT University. Ahmedabad.

**Degree :**       **B.E. (Civil)**

**College :**      **Birla Vishvakarma Mahavidyalya – BVM Engg. College V.V.Nagar.**

**University :**   Sardar Patel University. V.V.Nagar – Anand

## **Work profile**

**(1) Paramount Ltd. May 2023**

Natubhai circle, Subhanpura, Vadodara

Designation: **Structural Civil engineering Consultant**

Department: **Civil Structural Architecture**

Reporting to: Managing Director - Keval Tuli

**(2) IPS-Mehtalia Pvt. Ltd. July 2019**

Near Manisha circle, Vasna-Bhayli road, Vadodara

Designation: **Sr. Manager**

Department: Structural Engineering

Reporting to: HOD- Civil - Bombay

### **Projects:**

- Vadilal Industries Ltd. Main plant, Pundhra , Mehsana- Expansion
- Vadilal Old Plant, Dudheshwar, Ahmedabad – Repair & Retrofitting  
Work of G+3 plant structure
- UPL – United Phosphorus Limited, BF-20 new plant design & modification of existing plant Ankleshwar.
- Hester Bio Pharma, Kadi
- Aarti Industries Ltd. Jhaghadia, Bharuch
- Ware House building of United Spirit Limited, Nasik
- Finar Ltd. Changodar GIDC Ahmedabad
- CEAT Tyre Project.

**(3) Sintex Infrastructure Ltd.**

**March 2015 - July 2019**

Sintex Industries Ltd. Head office Kalol

Designation: **Manager (Civil & Structural Design)**

Department: Design & Development

Reporting to: Sr. President (Engineering)

**Projects**

- All India level plant expansion activities of Sintex Industries.
- Design & projects team development
- Research & New Development
- Power plant structure projects design & co-ordination
- Co-ordination in checking of drawing of external design consultants
- New product development & enhancement of supporting mechanism of current product technically past data research & new development strategy.
- Policy making of engineering design , hierarchical approach and project planning & scheduling

**(4) FLSmidth India Ltd.**

**December 2012 – Feb 2015**

FLSmidth India Pvt. Ltd. Global Civil Design Unit - Thane

Designation: **Senior Lead Engineer**

Department: Civil & Structural Design

Reporting to: General Manager (Design)

**Projects:**

- **Design of Material Handling structure for Caxitu cement plant Brazil,**
  - **Design including belt conveyor supporting structures, Conveyor gallery, VGTU – vertical Gravity, HGTU and trestle supports, Transfer Towers, various platforms ,conveyor drive mechanism & other equipment & machine loads**
- **Cement Plant Structures**
- **Bag filter**
- **Industrial Structures**

**ESSAR Project India Ltd. ( EPIL )****June 2010 to Dec. 2012**

Vadinar – Jamnagar

Designation: **Deputy Manager (Design Section)**

Area: Structures &amp; Heaters Unit - Mechanical Dept.

Report to: Senior Manager (Structures &amp; Heaters)

**Task & job profile:**

- Prepare sketch of structural steel drawings from the design drawings received from Toyo Eng. India Ltd. (TEIL), AKPG (Aker Power Gas), Technip & EESL (ESSAR Eng. Service Ltd.)
- Design & detail domestic structures like ,**water tank ( <= 300000 liter )**, **Shed** , **Ware house**, **Earth retaining walls**, **Utility buildings** etc.
- Analysis by **STADD pro.**, or by manual calculation but design manually.
- Preparation of sketches to detail as per **EIL (Engineering India Ltd.) & EESL** standards and check them before release on site.
- After checking these drawing, I release those on site.
- Providing bill of material to fabrication and site.

Refinery units with which I was associated:

- Isomerisation ( ISOM)
- Sulfur Recovery Unit ( SRU )
- Amine & Regeneration Unit ( ARU )
- Hydrogen Manufacturing Unit ( HMU )
- Sulfur Recovery Unit – Revamp ( SRU – Revamp )
- Vacuum Gas & Oil ( VGO )
- Flair Structure
- OSBL Pipe Rack ( Out Side Battery Limit )
- Delayed Cocker Unit ( DCU )
- Sour Water Unit ( SWU)
- Crude Distillation Unit ( CDU ) & Vacuum Distillation unit (VDU)
- Sulfur Storage & Handling ( SS & H )

Structural steel drawings for following structures of above units were done.

Other structures which were designed,

- a. Pipe Supports, Pipe Racks
- b. Technological Structures – TS

**( 3 ) Jord Engineers India Ltd., ( September 2008 to June 2010 )**

Aasoj, Baroda-Halol highway, Baroda

Designation: **Senior Structural Engineer**

Department : Design & Technical Services

Reporting to: General Manager

**Task & job profile:**

- Design of supporting structure of **Air Cooled Heat Exchanger, Steel structure and steel guyed chimney.**
- Cross disciplinary design discussion for Plenum chamber, electrical cable tray layout and pneumatic piping.
- With wind and earthquake forces IS : 800 – 1984, IS : 875, IS : 1893 part-3 and AISC Manuals.
- Design of rcc structure and foundation with IS 456 : 2000 and ACI : 318

**Project done by me:**

- Kestroy project : Air Cooled Heat Exchanger
- Engineering india ltd. (EIL) & TOYO are involved
- Numaligadh Refinery
- Engineering India ltd. was involved
- Kestroy project : Air Cooled Heat Exchanger – unit
- IOCL project Baroda
- BPCL project, Bombay

**Jord Water & Outsourcing Projects :**

● Residential, Infrastructural, **ETP, STP, Over Head Water Tank**, Industrial buildings made up of steel, wood & r.c.c Within India with **IS : 3370, IS : 456 – 2000, IS : 1893 part 1 and 3** codes.

- **Water, ETP, STP, Over Head Tank (ESR), Underground Sump, CETP, Sewerage line Network for JNNURM Skim - Jawaharlal Nehru National Urban Renewal Mission**

- **8 no. Of ESR (Elevated Storage Reservoir) of INTZ type & Cylindrical type**
  - (1) **ESR (INTZ type) @ Vraj Textile Park Kheda. - 350000 liter capacity with Solid Raft Foundation**
  - (2) **ESR (cylindrical) @ Sawai Madhopur - Rajasthan – 3 laks Liter capacity with Annular Raft foundation**
  - (3) **2 no. of Surge Tank (cylindrical) @ Sawai Madhopur Rajasthan – 2.5 lacs liter capacity**
  - (4) **ESR (INTZ type) near V.S. Hostpital of 11,50,000 liter capacity (Under the process of design) at Ahmadabad**
- **7 waste water treatment plant were also designed by me,**
  1. **Sewage pumping station & screen chamber at Vesu - Surat JNNURM Project, Surat Municipal Corporation - SMC projects, Surat, Gujarat.**
  2. **Sewage Treatment plant at Altadra , Vadodara Municipal Corporation - VMC Projects, Vadodara, Gujarat.**

Vadodra Municipal Corporation increased the capacity of the current sewerage system at Ataladra to provide sewerage service to 90 % of the population and 100 % stoppage of raw sewage overflow from manholes, pipes, etc. in open. The Sewage used to be collected from Drainage Zone III of all area to the West of river Vishwamitri and treated at Ataladara Sewage Treatment Plant then being disposed off in river Vishwamitri. To improve performance a new sewage treatment plant to treat 43 mLD average flow (Peak factor = 2.0) and based on Upflow Anaerobic Sludge Blanket (UASB) process has been set up and commissioned on EPC basis under JnNURM Programme.

- (1) **Sewage Pumping station at Nimeta, Vadodara Municipal Corporation - VMC Projects, Vadodara, Gujarat.**
- (2) **STP & Pumping station at Vasna - Pirana, Ahmedabad Urban Development Authority - AUDA Projects, Ahmedabad , Gujarat**
- (3) **180mld capacity STP( Sewage Treatment Plant) in Pirana area.**

The STP is based on Activated Sludge Process with fine bubble diffused aeration system. By providing treatment, facility pollution caused due to disposal of untreated sewage in River Sabarmati will be stopped and wastewater will be used for irrigation.

**Aerocraft Engineers indian unit of Russell and Dowson Architectures,  
East Hart ford, USA 2007 July 2008 August**

Designation: **Structural Engineer**

Department : **Design**

Reporting to: **P.E. Structural Engineer, Mike J. Sirrak**

**Projects doen were,**

- (1) Veterans Terrace buildings, Wisconsin
- (2) Vine vault buildings
- (3) Hotel Comfort Inn, USA
- (4) Catholic school, Sanhose.
- (5) Pharmaceutical building
- (6) VKT Thermal Power Plant structure
- (7) Police & Security Staff quarters of Power Plant , USA
- (8) Mala Bosa Departmental store building

**Code Used,**

- **NDS National Design Specifications**
- **AWC,**
- **ACI 318 and**
- **IBC were used for RCC design**
- **SDPWS for Wind and Earthquake**
- **Some wood frame construction manuals**
- **Design of sawn lumber and laminated Glue lumber**
- **Design of rivets and fasteners.**
- **Design by ASD and LRFD both.**

**Lumber Design, Rivetted connectiona and single and two directional pitch roof**

**1. Performing, analysis & design of**

- **critical structures,**
- **Earthquake analysis & design,**
- **Wind & Process load analysis, by ACI, AISC , IBC or any foreign code**

- **Criticality& resolution of critical design issues, personally.**

<b>Industrial training /Educational training / Working experience</b>
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**(1) Pithawadian & Partners Chennai (Madras),**

For 3 months within Industrial training during post graduation programme.

- Industrial, Residential, Dairy & Educational Buildings.

Projects were designed :

- **Computer & IT Dept. Of Annamalai University** designed with **flat slabs**
- **Haddo Warf structure** – on shore structure
- **Dairy building of Chennarayapatna** – Steel + R.c.c.
- **Dairy of Belgam** – Steel + R.c.c.

**(2) Mott Mcdonald Pvt. Ltd. ( MNC )**

**Sakar building, Ahmedabad.**

For 3 months within Industrial training during post graduation programme

**Industrial training during p.g. prog.**

- **Area of design**
- Industrial & Administrative buildings of Dishman pharma,
- Industrial & Admin buildings of Claris ,
- Kirloskar Power Transformers

**D.o.b:** 12<sup>th</sup> October 1982      **sex :** male



**Computer skills:**

- \* STADD. PRO. V8I
- \* AUTOCAD
- \* SAP ( FEM )
- \* TEKLA
- \* “ C “ , C ++
- \* FORTRAN Prog. Language

**Thesis / Desertation toppic in M.Tech. Programme:**

**REPAIR & RETROFITTING OF R.C.C. STRUCTURE BY CFRP WRAPPING –  
IN BOTH FLEXURE & SHEAR**

**Office practice / Project training ( during M.Tech.) :**

- (1) **Pithawadian & Partners.** Designers, Engineers ,Architects & Planners . College road , Chennai. ( Madras).
- (2) **Mott Mcdonal pvt. ltd.** ( previously Dalal consultant)  
Sakar 2 complex Ahmedabad.

**Studios & electives (During M.Tech.) :**

- **Design of R.c.c. Chimneys @ Hasan Karnataka of 75 m ht.** considering wind in along wind & across wind direction.
- **Design of G+9 storey r.c.c. building for vertical loads & Earthquake loads (dynamical analysis) with software STADD pro.**
- **G+ 5 storey building with manual analysis.**
- **Underground & Over head Water tanks (reservoir).**

## **Seminars & project reviews:**

- Seminar **failure, repair & retrofitting** of r.c.c. Jetty situated @ Okha & Bhavnagar port
- **Nuclear power plant & atomic reactor design esp. The containment structure.**
- **Kansai airport** – the **floating & sinking air port** situated at Osaka bay Japan. **Problems, reasons & geotechnical solution for its sinking & settling**
- **Repair & retrofitting of r.c.c. chimneys located @ Dhuwaran Power plant, reasons & remedies.**

<b>Seminars &amp; Project reviews ( during B.E.) :</b>
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### **Elective Subjects :**

- # Earthquake Eng.
- # Urban Transportation Planning

### **Edu. Exp./ Trips ( during B.E.) :**

- # Vanakbori-Weir & Aquaduct
- # Kandala port, Bhuj-Eq.proof. hospial, Adani port
- # Central Road Research Institute Delhi
- # Transportatin Dept. IIT Roorkee
- # Kevadiya colony Sardar Sarovar Dam Project

### **Seminars & Presentations :**

- \* linking of canals by Er. & recent Energy Minister Jaynarayan Vyas
- \* Blended concrete and fly ash by L & T

**EDUCATION DEGREE COLLEGE DETAILS :**

NO	CLASS	BOAR D	YEAR	UNIVERSITY	PERCEN
					/ C.P.I.
1	M.TECH ( STRUCTURAL DESIGN )	SBST > CEPT > AHMEDABAD	OCT 2007	CEPT UNIVERSITY AHMEDABAD	59%
2	B.E.(CIVIL)	BIRLA VISHVAKARMA MAHAVIDYALAYA V.V.NAGAR - ANAND	JULY 2005	S.P.(SARDAR PATEL) UNIVERSITY	5.5 CPI 55%
3	H.S.C.E	DAXINAMURTI VINAY MANDIR - BHAVNAGAR	MARCH 2000	GSEB	60%
4	S.S.C.E	DAXINAMURTI VINAY MANDIR - BHAVNAGAR	MARCH 1998	GSEB	74%