

## A BRIEF DESCRIPTION OF THE PROFESSIONAL CAREER

During five decades of my professional career I was associated with the following organizations:

1. M/s. Heavy Engineering Corporation, Ranchi - An organisation for design engineering and manufacture of equipment for steel, mining and engineering Industries - (19 years).
2. M/s. Chowgule & Co. Pvt.Ltd., Goa - An organisation primarily engaged in mining, processing, palletising and exporting of iron ore (2 years).
3. M/s. M.N. Dastur & Co. Ltd., Calcutta - A consultancy organization of international repute in the field of iron and steel making (19 years).
4. M/s Netguru Ltd.- A Kolkata based Software Development and Design Engineering Consultancy Services organization for commercial and industrial application. Famous for creation of software- STAAD PRO for structural analysis and design. Worked in the capacity of Head of Engineering Division & Director of the company-11 years.

The nature of assignments handled during association with the above organisations and as independent consultant are as follows:

### A. **CIVIL ENGINEERING (Concrete Construction):**

Design, estimation and supervision of construction of multistoried concrete framed residential buildings. Foundation for industrial structure, concrete silo's

### B. **STRUCTURAL ENGINEERING (Steel Construction):**

- i) Design and engineering of steel work for housing, supporting and servicing of steel plant and allied industrial installations like Converters, Continuous Casting Machine, Electric Arc Furnace, Ladle Furnace, Desulphurisation Plant, Air Separation Plant, Lime Calcining Plant, Producer Gas Plant, Captive Power Plant, Repair Shops, Stores etc. Design and engineering of steel work connected to bulk material handling, and those connected to pollution control installations like Bunker, Silo's, ESP support, Bag Filter House, Chimney and overhead yard piping.
- ii) Design and engineering of steel work for cylindrical storage tank, spherical pressure vessels. Equipment structures like general & special purpose EOT cranes, Bridge re-loaders, Skip hoists, Sacker-cum-reclaimer.
- iii) Stability analysis of structural system, strength assessment of structural components to accommodate higher production facilities in industrial complex. Modification, strengthening and extension of existing steel work.

Working out details for rectification of manufacturing defects. Site visit, supervision of fabrication & erection.

- iv) Making technical specification of structural steel work for turnkey execution of projects, seeking clarification from bidders, making technical appraisal of offers. Scrutiny review and approval of vendors drawing and design calculations.
- v) Making structural steel work quantity/cost estimation for feasibility study, bid preparation & advance procurement of steel items . Standardisation of structural connection and component details. Compilation of structural data bank.

**C. MECHANICAL ENGINEERING :**

- i. Design and engineering of mechanical elements for general and special purpose EOT cranes including calculation for determining motor power & breaking torque for hoisting and travelling mechanisms. Finalising assemblies with fits and tolerances as per Soviet Norms.
- ii. Design of Belt conveyor system including calculation of motor power, pulley and idler assemblies, making selection and specification for bought out items.

**LIST OF UNITS FOR VARIOUS PROJECTS FOR WHICH DESIGN & ENGINEERING ASSIGNMENTS WERE HANDLED ARE AS FOLLOWS:**

Design and engineering of Converter & Continuous Casting shop, Desulphurisation Plant, Ladle Repair shop, Utility Pipe & ESP supporting Structures.	Vizag Steet Plant, Vizag
Design & Engineering of Steel Melt and Continuous Casting Shop, Oxygen Plant, Boiler Plant Raw - Material Handling System	Sunflag Iron & Steel Project Project, Nagpur.
Design & Engineering of Steel Melt Shop	Indian Seamless Steel and Alloys (ISSAL), Pune
Design & Engineering of Captive Power Plant	Nagpur Alloy & Steel Casting Project (NACAST), Raipur
Design & Engineering of Steel Melt Shop	Ispat India Project (DOLVI)
Design & Engineering of Oxygen Plant,	Arab Company for Special

Boiler Plant, Electric Power receiving Station, Repair Shops, Stores etc	Steel Project, Egypt & Southern Iron & Steel Co. Salem, Madras
Refining Casting & Conditioning Shop	Southern Iron & Steel Co. Salem, Madras.
Design & Engineering activities connected to turkey execution of Oxygen Plant, Ladle Repair Shop, Basic Oxygen Furnace Shop	Rourkela Steel Plant, modernization, Rourkela
Design & Engineering of Steel work for Producer Gas Plant	Usha Martin Industries Jamshedpur
Design & Engineering of Steel Melt Shop Design & Supervision of R.C. framed residential buildings, foundation for industrial structures. Modification, strengthening and extension of existing steel work	Bellary Integrated Steel Plant, Bellary Registered Co-Operative Building at Salt Lake, Calcutta. Heavy Engineer Corporation, Ranchi, Mandovi Pallet Plant, Goa, Rourkela Steel Plant, Rourkela.
Steel work estimation and bid preparation	Talcher Super Thermal Power project Ph-2 NTPC, Crome Ore Project under Orissa Mining Corporation Continuous casting and ladle furnace complex of BSL 7 mt <b>EXPN.</b>
Design & Engineering of General & Special purpose of EOT cranes	Bhilai Steel Pant, Bhilai
Design & Engineering of Bridge RE-Loaders	Mining project in Cuba
Design & Engineering of Stacker-cum-Reclaimer	Bongaigon Thermal Power Project, Bongaigoan
Design & Engineering of Spherical Storage Vessel	Baruni Refinery, Baruni
Mechanical design of conveyors	Tribeni Engineering & Bhusan Steel Co.
Concrete Silo	Dahibari Coal Washery, MBE/ACB