
Indian Pride in Engineering and Consultancy



Provide Outsourcing services
In the areas of

Engineering Design &
Project Management
Consultancy Services

INDCON'S Business Objectives

- **Multi-discipline Engineering and Design Consultancy Company**
- **Execution of Grass-root projects, Plant Engineering and De-Bottlenecking Projects**
- **Specialized Skill based Consultancy and Project Management and Construction Management Services**
- **Services provided on Lump-Sum or Man-hour (cost plus) basis**

INDCON'S Services – Why important for You?

- **Extended Arm for Manufacturing Companies**
To serve as your own Projects and Plant Engineering Group
- **Extended Arm for EPC Companies**
To serve as your own Engineering and Consultancy Group
- **Extended Arm for Construction Companies**
To serve as your own Inspection and Construction Management Group
- **Extended Arm for Consultancy Companies**
To serve as your own Design Group
- **Extended Arm for Equipment Fabrication Companies**
To serve as your own Design and Drawing Preparation Group

INDCON'S Services – To Meet your Resource Issues



**Managing and Maintaining diverse and qualified
Technical Resources today is a big challenge...**

**...Leave it to INDCON and you can concentrate on your core
business**

INDCON'S Services – To Meet your Schedule Issues

- **You may be extremely busy and tied up with your own routine business requirements...It may strain schedule of your new or upgrade projects...**

...Leave it to INDCON and we will provide you firm commitment to complete the project meeting your tight schedule requirements.

INDCON'S Services – To Meet Your Cost Issues

- **Managing Cost of your project is most critical when “Engineering and Design” is only one small element of the entire project...**

...Leave it to INDCON as we have comprehensive Technical Resources and knowledge to help you complete your project in cost effective and timely manner

INDCON'S Organizational Set-up

- **Incorporated in July 2005 at Mumbai , India - a hub for Technical Resources**
- **Mumbai Office located at Borivali- a major suburb, on Western Express Highway, About 9 km from Mumbai International Airport**
- **Strong In-house Management and Engineering Design Resources**
- **Network of Mumbai based associates for complete Engineering and Design Solutions to complement INDCON resources when needed**

INDCON'S Promoters

➤ **Rashesh M Shah – Director**

Instrumentation and Control Systems Specialist with more than 25 years of Experience in Engineering, Design and Project Management

Managed and Executed Several large size grass root projects, Control System and Instrumentation upgrade Projects, DCS and ESD Systems projects

Executed several Automation projects including PLC and SCADA systems engineering, application programming and commissioning

Worked in Middle East for about 14 years

INDCON'S Promoters



Krovvidi Rama Apparao – Director

Mechanical and Piping Specialist with more than 25 years of Experience in Engineering, Design and Project Management

Worked as a Plant Engineering Manager for one of the largest Petrochemical complexes in Middle East

Managed and Executed several large size grass-root and plant engineering projects

Worked in Middle East for about 15 years

INDCON'S Expertise

- **Project Management**
- **Basic Engineering Design**
- **Detailed Engineering and Design**
- **Procurement Management**
- **Construction Management**

INDCON'S Domain Experience

- **Oil and Gas including Off-Shore, GOSP and Sweetening Plants**
- **Petrochemicals including Ethylene, Olefins, PVC/VCM, Polystyrene, HDPE etc**
- **Refineries De-bottlenecking**
- **Pharmaceuticals**
- **Steel Plant Automation**
- **Power Generation, Substations and Distributions**
- **Utilities and Off-sites**
- **Tank Farms**

INDCON'S Consultancy Engineering Services

We offer multi-discipline engineering services in the following areas:

- Piping (layouts, isometrics, stress analysis, pipe support selection, BOQ etc.)
- Process Engineering (PFD, P & ID, Line Sizing, Simulation, Heat exchanger sizing, heat and mass balance etc.)
- Stationary Equipment (design, preparation of specifications, fabrication dwg preparation and/or vendor drawing review)
- We also undertake design and preparation of fabrication drawings for stationary equipment fabricators
- Instrumentation and Control systems engineering
- Civil / structural engineering (with support from associates where needed)
- Electrical basic and detailed engineering

INDCON'S Skill Set - Process

- **Process Simulation, Process Engineering Design, Process Development, Detailed Engineering and Trouble- shooting of Process plants including pharmaceutical processes**
- **Consultancy Services for Energy Management, Safety, Hazard and Risk Management, Air Pollution, Gas Cleaning and Treatment**
- **Experienced in several projects involving Separation Technology, Solvent Recovery Systems, Mixing Technology and Fluid Dynamics, Process Operation and Yield Optimization, Heat Transfer Technology etc.**
- **Experienced in several projects involving Energy Management, Air Pollution and Gas Cleaning**

INDCON'S Skill Set - Mechanical

- **Large Size Tanks and Storage Equipments (Up to 10000 m³ tanks and 6000 m³ storage spheres)**
- **Several plant de-bottlenecking projects for hydrocarbon and polymer plants**
- **Several projects for mega size refrigeration systems upgrade**
- **Several New as well as upgrades of Incinerator Systems**
- **Design of various large size process equipments such as columns, pressure vessels, reactors, heat exchangers, silos etc as per IS / International Standards**

INDCON'S Skill Set – Equipment Design and Drawings

- **Design and Fabrication drawings for Pressure Vessels, Reactors, Columns, Heat Exchangers, Tanks, Silos, Chimneys etc.**
- **Pressure Vessels as per ASME Section VIII and IS 2825**
- **Heat Exchangers as per TEMA**
- **Tanks as per API-650 and IS 803**
- **Boilers as per IBR 1950**
- **Chimney as per IS 6533**

INDCON'S Skill Set - Piping

- **Managed and Executed projects with complex piping systems**
- **Engineered and Executed both process and Utilities Piping as large as 36" Size and from cryogenic to high temperature VHP steam**
- **Engineered Piping systems for different materials like CS, SS, Duplex, Lined piping, FRP etc**
- **Engineered Piping Systems for congested areas as well as skid mounted piping systems**
- **3D (PDMS) model review for large size petrochemical plant**

INDCON'S Skill Set – Instrumentation and Controls

- **Several large size DCS and Control Systems Upgrade Projects (5000 plus I/O points) with integration of several third party systems**
- **Several Projects for Design of Field instrumentation and Analyzer Systems – Largest is for 1 million TPA Ethylene Plant**
- **Several Plant Engineering Projects for modifications and upgrades of the plants including projects for environment compliances**
- **Design of SCADA systems for Electrical Utilities**
- **Construction Management and support of several projects**

INDCON'S Skill Set - Electrical

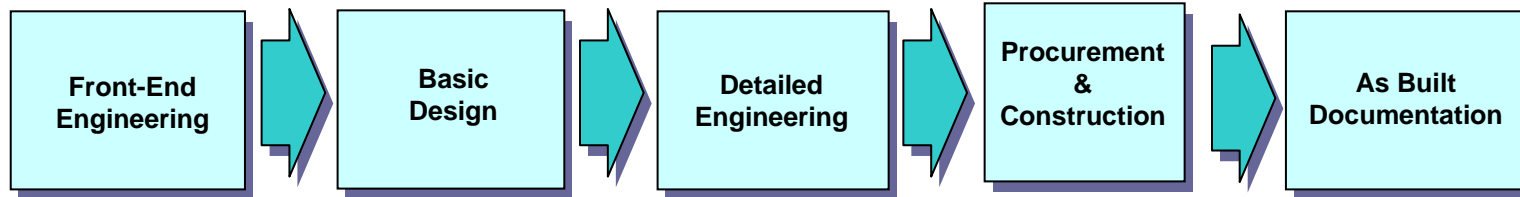
- **Experienced in several projects in Water supply, Sewerage System, Plumbing, Fire Fighting, HVAC, Security, Telephone & Allied Services, Building Management Services for Industrial Plants and Commercial Complexes**
- **Electrical Master Plan Work including 110 KV / 33 KV, 25 MVA x 2 Nos., Ring System @ about 25 Sub – Stations for 10,000 Acres infrastructure development project**
- **Electrical System involving 20/26.5 MVA transformer, H. T. System, L. T. System, Hazardous area classification, Lighting, Earthing, D. C. System, UPS etc for Refinery**

INDCON'S Engineering Resource List

➤	Senior Managers (25 years + experience)	----	5
➤	Consultants / Specialists	----	3
➤	Engineers (Instrumentation)	----	11
➤	Engineers (Mechanical/Piping)	----	7
➤	Engineers (Electrical)	----	5
➤	Engineers (Process)	----	3
➤	Designers / CADD Operators	----	19
➤	Account / Administration	----	3

INDCON'S Engg and Project Mgt Services

Engineering Solutions For Every Phase of the Project



INDCON'S Capabilities

Front-End Engineering & Design / Basic Design

- ✓ Site survey and collection of data
- ✓ Feasibility Studies
- ✓ Cost Estimates and Return On Investment Analysis
- ✓ P&ID as-built
- ✓ Process calculations
- ✓ Development of PFD and P & ID
- ✓ Thermal design and sizing of Heat Exchangers
- ✓ Development of Process data sheets
- ✓ Plot plan and layout
- ✓ Control System Philosophy
- ✓ Shutdown System Philosophy

INDCON'S Capabilities

Front-End Engineering & Design / Basic Design (contd..)

- ✓ **Control System Schematics and Narratives**
- ✓ **Sizing and Selections of Equipments, Piping, Motors and Instruments**
- ✓ **Specifications and ITB Documents**
- ✓ **FOUNDATION FIELDBUS Planning**
- ✓ **HAZOP and Safety Analysis**
- ✓ **Electrical Single Line Diagram**

INDCON'S Capabilities

Detailed Engineering and Design

- ✓ Process Engineering and Support
- ✓ Technical Specifications and Datasheets
- ✓ Plot plans, General Layouts and Equipment Layouts
- ✓ Piping Layouts, Isometrics and MTO
- ✓ Piping Stress Analysis
- ✓ Civil, Structural & Foundation Design
- ✓ Field Instrumentation Design
- ✓ Cable sizing and layout
- ✓ Control Room layout and Marshalling Design
- ✓ FOUNDATION FIELDBUS Implementation

INDCON'S Capabilities

Detailed Engineering and Design (contd..)

- ✓ Power supply Distribution Design
- ✓ Electrical systems (HT and LT) design
- ✓ HVAC and Other Package Items
- ✓ Fire Protection Systems

INDCON'S Capabilities

Procurement, Construction and As-Built

- ✓ Procurement Packages and Technical Bid Evaluation
- ✓ Vendor Pre-qualification
- ✓ Vendor shop & Quality Manual approval
- ✓ Vendor drawing review
- ✓ Coordination with Vendors
- ✓ Third party Inspection and Expediting Services
- ✓ Construction Specifications and test procedures
- ✓ Construction management and supervision
- ✓ Construction Inspection and QA/QC
- ✓ FAT and SAT Procedures
- ✓ Start-up Assistance
- ✓ As-Built services
- ✓ Project closeout assistance

INDCON'S Consultancy Expertise Services

We offer specialized services in the areas such as

- **Special designs for stationary equipment such as stress analysis, fatigue analysis, thermal transients etc.)**
- **Heat exchanger thermal design**
- **DCS/PLC systems selection and design**
- **DCS/Control system Upgrades**
- **Emergency shutdown systems selection and design**
- **Foundation Field-bus planning and design**
- **Acoustic / Plant Noise Study and recommendations**

INDCON'S Tools

- **AutoCAD for Drafting**
- **Process Simulation Software**
- **Instrumentation Engineering Software**
- **ISA sizing programs for Control valves, Safety valves and Flow elements sizing**
- **Equipment Design Software**
- **Electrical Engineering Programs (In-house development)**
- **AutoLISP Programs for Equipment Design and Drawing**
- **Microsoft Project for Planning and Scheduling**

INDCON'S Engineering Versatility

INDCON has expertise in various American and international Codes and Standards such as:

- ✓ **ASME / ANSI / ASTM**
- ✓ **API**
- ✓ **BS / IS**
- ✓ **NFPA**
- ✓ **ISA / IEEE**
- ✓ **Other Statutory & ISO Codes.**

INDCON'S Management and Planning

Project Planning

- ◆ Work forecasting, capacity planning, estimation
- ◆ Scope management
- ◆ Work authorization, budgets, baselines
- ◆ Resource plans, labor-hour budgets & tracking

Project Controls

- ◆ Project status reports (Weekly)
 - Key Issues
 - Man hours -- YTD, Estimated Till Completion vs. budget
 - Input & deliverable logs
- ◆ Change control

INDCON'S Management and Planning

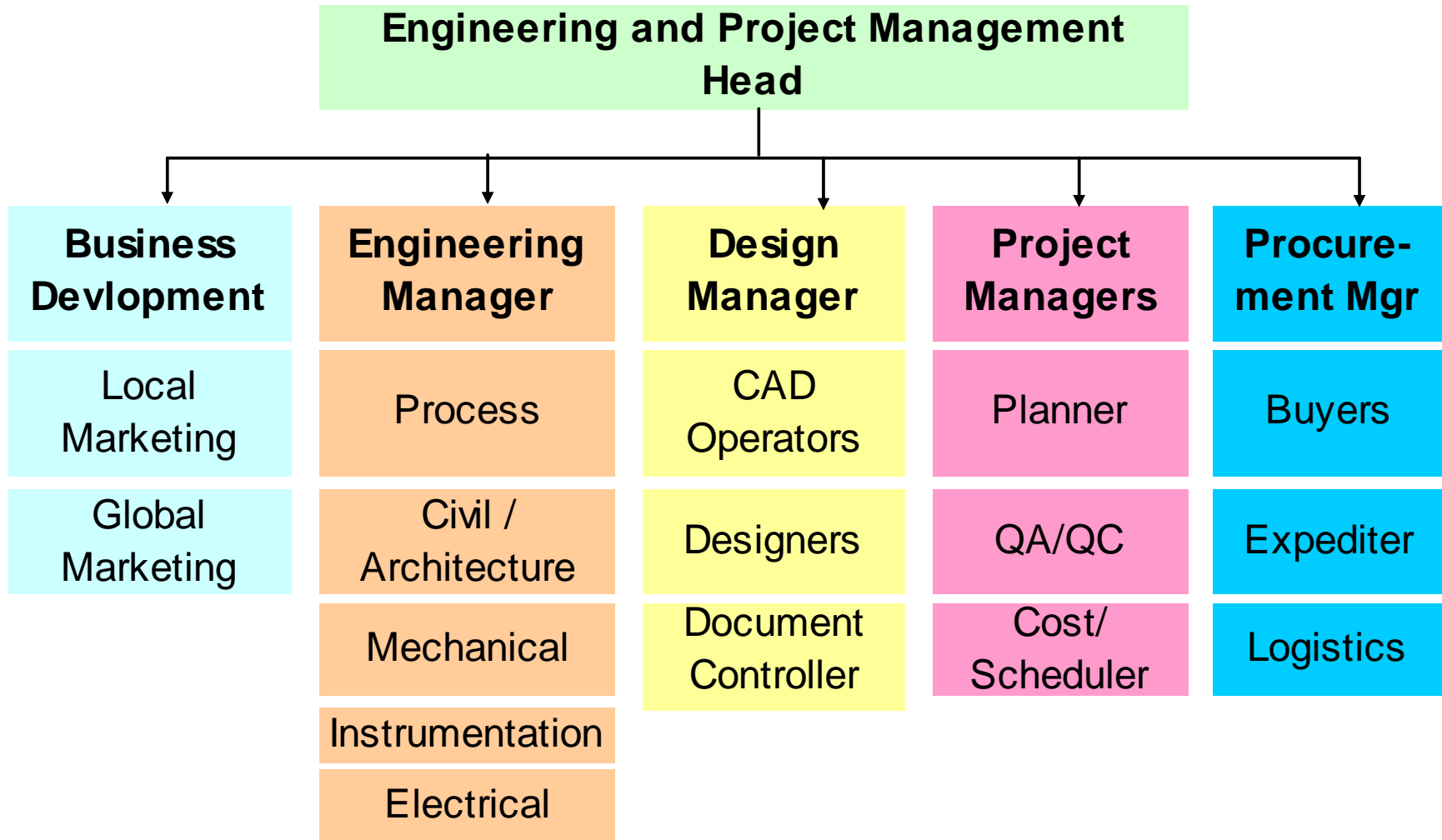
Input & Deliverable Management

- ◆ Work package based tracking & scheduling
- ◆ Inputs received reconciliation & validity checking
- ◆ Query generation & clarifications

Project Communication

- ◆ Online INTERNET enabled tools
 - Work up-date, comments & review
 - Work approval & sign-off
- ◆ Video conferencing
- ◆ Face-to-face meetings
- ◆ On-site resident engineer (As required)

INDCON'S Project Execution Chart (Typical for each project)



INDCON'S Major Client List

- **SABIC– Petrochemical Complexes, Saudi Arabia**
- **Yokogawa Middle East, Bahrain**
- **HQCEC, China**
- **Saudi Formaldehyde Company, Saudi Arabia**
- **Citec Engineering, Europe and India**
- **I3nanotech, USA**
- **Weldcon, Kenya**
- **Kesar Enterprise, India**
- **Dar-Al-Riyadh Consulting, Saudi Arabia**
- **Saudi Engineering and Design Company, Saudi Arabia**
- **Fabrication Contractors, Canada**
- **Fabrication Contractors, Saudi Arabia**
- **Fabrication Contractors, India**

- **More than 100 projects executed by INDCON's Associate partners (Separate list is available)**

INDCON'S Resources (contd..)



INDCON'S Contact Details

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INDCON IS READY TO SERVE YOU...

TAHNK YOU