



# AV ENGINEERING INC

ONE STOP SOLUTION



[www.avengineeringinc.com](http://www.avengineeringinc.com)



## We Provide Universal Engineering and Product Solution.

AV Engineering's core objective is to embark on all the confront in the fields as point out above, to develop as a cost effective and efficient outcomes. We Provide Universal Engineering and Product Solution.

We facilitate new organization to fabricate their acquisition ability with global Engineering Services and supplies, help them to create their own product repo overseas. By looking at the present scenario, there are lot many companies around the world searching for the option to survive in global market by proving themselves as a worthwhile Service & product provider; however some of them might not have expertise and facility on such type of quality and intricate Engineering Skills.

Our Company offer Productive Business Resolution, Skilled Engineering Solution, Services and Logistic in every manner, develop your strategy worldwide, Design and promoting of whole project.

Support with knowledgeable workforce, AV Engineering INC is known to provide quality Services and Products to national and international clients and facilitate wide coverage reaching inaccessible projects and responding to client's prerequisite

## Complete Engineering Services

### Process Design , Engineering and Simulation

- Process Equipment Sizing – Preparation of Line & Equipment List, Sizing and Specification
- Thermal Design – Shell & Tube Heat Exchanger Design(HTRI/HTFS), Pressure Vessels, Columns, Reactors, Tanks, Bullets, Filters, Dryers and Agitators
- Process Design optimization – Conceptual Process Scheme and simulation model of process plant
- Development of PFD and P&ID – Process Flow Diagram with heat & mass balance and Piping & Instrumentation Diagram
- Concept block flow diagrams
- Detailed CAD drawings
- Audits and system analysis
- Project estimating and schedule
- General assembly drawings
- Component equipment lists
- Operating and maintenance manuals
- Process control panel design
- Turnkey process and utility system plans



### Mechanical Engineering

Mechanical Design of following Including Generation of Specification, Data Sheet, GA Drawings, Fabrication drawings, and Design Calculation

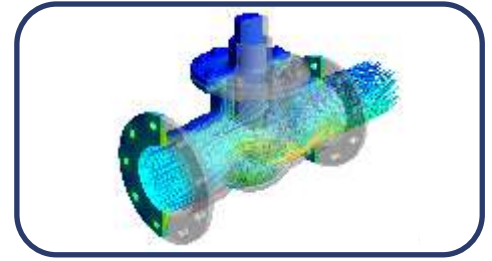
- Ejectors
- Heat Exchangers
- Crystallizers
- Reactors, Columns & Tall Towers
- Evaporators
- Pressure Vessels
- Water Coolers & Gas Coolers
- Pulsation Dampeners & Volume Bottles
- Condenser
- Feed Water Heaters
- Exhaust Gas Structure
- Receivers, Tanks & Cryogenics
- Structural items such as skids, supports of vessels / exchangers i.e. skirt with base chair, legs, lugs, pipe supports, saddles and their bolting etc. and lifting elements such as lifting lugs, tailing lugs etc.





## Design Analysis

- Finite Element Analysis(FEA)
- Computational Fluid Dynamics (CFD)
- Thermal Stress Analysis
- Wind Analysis
- Seismic Analysis
- Local Load Analysis
- Zick Analysis
- Rigging Analysis
- Clip Analysis
- Lifting lug analysis



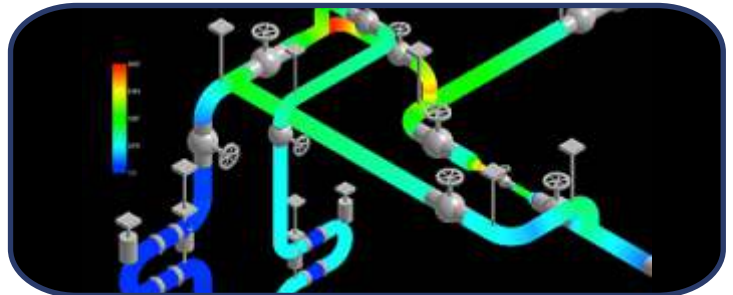
## Piping Design Engineering

- Generation of Equipment Layout, Piping General Arrangement Drawings, Piping Routing Layout and Isometrics.
- Pipe wall Thickness calculation, sizing and pressure drop calculation.
- Pipe Rack Design and Tank farm Design.
- Preparation of Tendering and Material Takeoff (MTO) for all piping items.
- Preparation of Data Sheets for Piping, Fittings, Valves, Strainers and all other Piping items.
- Generation of 3D model of the complete Plant



## Piping Stress Analysis

- Seismic, Static & Dynamic load Analysis
- Pipe support(s) selection & Design
- Spring & Special Support Design
- Flange leakage checking
- Piping Flexibility calculation
- Analysis of Jacketed Piping Ducting, Buried Piping
- Solution on Piping Vibration problems.



## Statutory Approvals

### Statutory Approvals, Inspection and Translation Service

- Complete solution on Approvals & Certification for Different Country
- GOST TRCU Certificates of Conformity Custom Unions of Russia
- CE marking on product for Europe
- Explosion-proof Certificates
- Technical Passports
- ASME U stamp
- DOSH and MOM Certificate for Malaysia and Singapore
- CRN Approvals for Canada
- Technical Translation and Editing for all language
- Preparation and Review of Technical Documents Packages
- Manufacturer Inspection and Audits



## Civil and Structure Engineering



- Civil and Structural Design, Calculation and Analysis
- Structure Foundation Design
- Design of Module Mounting structure, Equipment Supporting Structure, Pipe Rack routing and support design.
- Geotechnical Investigation and Topographical Survey.

## Instrumentation Engineering



- Preparation of Instrument list, Wiring diagram and Cable Schedule.
- Preparation of Instrumentation - automation Philosophy and Control Narratives.
- Junction box Designing
- Advanced process control (APC) and Distributed control systems (DCS)
- PLC and SCADA

## Electrical Engineering



- Feasibility Study, Project Concept and Formulation
- Comprehensive Project Report
- Simulation Modeling and Analysis
- Engineering - Design & Selection of Power Plant equipment - Preparation of single line diagrams, Plant Layout, Substation diagram, Wiring Diagram, Earthing diagram, Cable schedule, Cable Trench Layout and power evacuation plans.
- Solar Power Plant – Energy solutions for MW to kW Utility scale and Roof top Solar Power Plant Project

## Project Management Consultancy (PMC)



- Project Planning and scheduling
- Identification and management of project critical activities.
- Time/Duration, Cost/Price, Resource and QC/QA Management.
- Progress Monitoring, Anticipation of delay and trouble shooting.
- Interfacing multiple agencies incl. contractors, vendors, government authorities, statutory bodies and others involve at project site.
- Work completion certification, disbursement compliance and overall control.





## Plates and Coils

All kind of Stainless Steel, Carbon Steel, Aluminum, Brass, Nickel, Alloy Plates and Coils



## Pipes, Tubes and Fittings

Stainless Steel, Carbon Steel, Alloy Seamless and Welded Longitudinally Welded Saw, Spiral Welded, Electric Resistance Welded (ERW) and High Frequency Induction (HFI) Welded Pipe



## Gaskets

Non-Metallic, Semi-Metallic and Metallic Types CAF, CNAF, Spiral Wound, Ring Joint Asbestos free Soft Cut Gaskets as per ASME, ANSI, API Flange requirements



## Flanges

SS, CS and Alloy Steel – Forged and Plate. Welding Neck, Slip On, Socket Weld, Lap Joint, Threaded and Blind Flange



## Casting

Centrifugal, Investment, Die, Sand, Gravity, Squeeze, Permanent Mold & Shell Mold, Lost Foam & Lost Wax



## Forging

Hot & Cold Forgings – CS, SS and Alloy Steel

## Complete Range of Valves



Gate Valve  
Globe Valve  
Ball Valve

Plug Valve  
Butterfly Valve  
Check Valve

Bellows sealed Valve  
pressure seal Valve  
Breather Valve

Orbit Valve  
ARV or ARC Valve  
Pressure Relief Valve

Rupture Disks  
Control Valve  
Turbine Bypass Valve

## Control Instruments



All types of Gauges, Meters, Actuators, Transmitters, Transducers, Thermowell, Thermocouple and Manifolds

## Special Components



Strainer - Y-Type & Basket, Expansion Joints  
Orifice Plates, Flow Measurement  
Venturi Flow Meters, Flow Nozzles  
Flow Orifice Plates

## Electrical control & Automation Panel



Instrumentation Panel, PLC Based Systems & Micro controller Based Control Panels, Hazardous Area Panels – Flame proof & Pressurized Panels, SCADA Systems and Junction box

## Fasteners



CS, SS, Alloys, Duplex, Super Duplex, Monel, High Nickel  
Stud, Bolts, Nuts, Washers, Threaded Roll, Socket Screw and Hex Bolt

## CNC Machining Components



We offer latest CNC equipments with large varieties of different machine sizes which cover almost any shape and sizes of the jobs with simple 2D machining to 5-axis machining capabilities. Materials we offer – Carbon Steels, Stainless steel, Alloy Steels, Aluminum, Brass, Plastic and any other materials as per customer requirement. We also offer secondary operations like finish process (various plating/ passivation/corrosion prevention etc) and heat treatment as per customer specifications for above material.



### Pressure Reducing Station (PRS) and Metering Skid



- PRS , PRDS, Flow Control Skid, Metering Skid, Filtration Skid and Pressure Regulation Skid
- Serving for Power, Oil, Gas, Pharma, Dairy, Textile and Chemical Industry.

### Process Equipment

- All kind of Pressure vessel and Heat Exchanger.
- Available in CS, SS, Graphite, Teflon and all other Exotic material.



## Pharma Grade Equipment and Steam Accessories

### Equipments & Pressure Vessels



- Fermentor (Bioreactor)
- Bio-reactors
- SIP (Sterilization-In-Place),
- CIP (Clean-in-Place) Equipment
- Pressure Vessels

### Pharma grade valves (Sanitary Valves)

- Sanitary Valves
- Sanitary Pressure Regulating Valve and Pressure Regulator
- Sanitary Steam Traps and other Steam Accessories



### Dairy Equipment & Accessories



- Dairy and Milk Processing Equipment
- Milk Product Processing Line
- Pretreatment line
- Dairy Equipment Accessories such as Valves, Instruments etc.



## Asia Office

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