

### **About Us**

EE KEY INDUSTRIES Is A Partnership Firm. The Registered Office 308, 3rd Floor, Darpan Apartment, R. C. Dutt Road, Alkapuri, Vadodara – 390 007, Gujarat, India. The Firm Commenced Its Operation From 1st April, 2014.

The Company Is In The Business Of Providing Turnkey Solutions In The Field Of Manufacturing Of Process House Equipments & Material Handling System For Sugar, Cement. Chemical, Fertilizers & Ethanol Plants, Minerals Industry & General Heavy Fabrication. The Company Has Its Head Office At Vadodara [Gujarat State]. The Company Operates With The Strength Of 40 Members Of Staff As Well As Supervisory / Labour Group Specializing In Engineering, Material Management, Market Intelligence Studies And Business Promotion In Particular. The Field Staff For Updating The Requirement Of Each Client.

The Company Has A Cohesive Team Of Highly Specialized Managerial And Technical Experts In Their Respective Fields To Assist The Organization In Its Performance And After Sales Services. The Company Also Draws On The Services Of Associated Experts In The Field Of Power Transmission Line & Sub-Stations To Sugar Machinery/Process Equipment, Electrification, Civil Engineering, And Agricultural Machinery.

The Man Power Potential Of The Company And The One It Proposes To Deploy For The Proposed Project Are Discussed Inside. With These Accomplishments, VEE KEY INDUSTRIES Is Poised For Further Era Of Growth. VEE KEY INDUSTRIES Provides "Design Built" Or "Trunkey" EPC Solutions In Major Engineering Discipline Including Civil/Structural Plant Design / Mechanical, Electrical, ProComm Control/Automation

Playing Critical Role In The Core Sectors Of Industries. As Per As VEE KEY INDUSTRIES Technology And Engineering Practices Are Concerned, The

Emphasis Is Given To Nurture Research And Development And Also To Encourage New Ideas. The Emphasis Has Also Been On Providing The Tailor Made Solutions To Meet Different Conditions And Requirements Of The Clients. The Engineering Team Ensures That All Plant; Machinery And Associated Equipments Are Designed, Fabricated And Erected Based On The Following International Standards Such As ASME / API / TEAM / DIN / JIS For Mechanical Designs. ISA / IEEE Codes For Electrical And Instrumentation. , Civil & Structural Design Conforming To Local Country Code & Good Engineering Practices. Architecture And Aesthetics In Line With International Developments As Per International Practices And Finishing.

### **Strategy**

Our Business Strategy Is To Provide Superior Engineering Offerings And Consultancy Services That Rely On Innovation As A Core Differentiator. We Take A Holistic Approach To The Critical Elements That Customers Require. The Elements Of Our Business Strategy Include:

Innovation: We Rely On Going Innovation In Engineering Planning And Design, Engineering, Project Implementation, Project Management And Support Services To Ensure Continuing Engineering Leadership, Which Our Customers Experience In The Form Of Greater Cost Efficiencies.

**Solutions-Based Selling Model:** We Use A Solution-Based Selling Model That Emphasize On Tailor-Making Solutions To Address Unique Customers Business Requirements And Needs

#### **Core values**

Management And Staff At VEE KEY INDUSTRIES Subscribe And Commit Themselves To The Following Values:

- To Respect The Rights Of All Clients, Tenants And Employees.
- To Never Breach The Confidentiality Of A Client.
- To Respect Client's Expectation Of A Professional Service.
- To Operate In A Non-Discriminatory And Non-Partisan Manner.
- To Strive To Provide An Excellent Service At All Times To Clients And Tenants
- To Promote Transparency And Avoided Favoritism, Corruption And Conflict Of Interest.
- To Operate In A Manner Which Will Reflect Our Integrity And Honesty.
- To Be Committed To The Empowerment Of The Disadvantaged People Of The Region.

### **Quality Statement**

VEE KEY INDUSTRIES Is Committed To Consistently Provide Quality Services And Products That Meet And Exceed Customer And Regulatory Requirements Through Continuous Improvement To The Effectiveness Of The Quality Management System. We Adhere Strictly To International Quality And Safety Norms Across Our Office And Manufacturing Facilities.

### **Skills Development**

We Actively Encourage Growth And Development In All Our Staff And View Skills Development And Capacity Building As A Critical Component Of Our Business. In Addition To On The Job Training And Close Mentorship, We Find Short Training Courses As Well As College Diplomas For Any Of Our Staff Interested In Further Studies And Personal Development.

#### **Product Portfolio**

#### [A] SUGAR PLANT MACHINERY Such As

- 01. Rotary Vacuum Cane Mud Filter.
- 02. Cane Juice Clarifier [Multi Tray + Single Tray]
- 03. Juice Heater High Velocity / Dynamic / Vapour Line
- 04. Juice Sulphiter / Syrup Sulphiter
- 05. Semi-Kestner / Evaporator [ Central / Multi Down Take ]
- 06. Batch Type Vacuum Pan Multi-Down Take Type
- 07. Continues Vacuum Pan For A, B & C Massecuite.
- 08. Crystallizers-Air Cooled / Water Cooled / Vacuum Seed.
- 09. Pug Mills, Magma Mixers. Molasses Conditioners, Sugar Melters.

#### [B] SUGAR HOUSE EQUIPMENT

- 01. Sugar Elevators / Hopper / Conveyor.
- 02. Sugar Silo System with Auto Weighing And Conveying System.
- 03. Sugar Bag System from Sugar House To Godown.

#### [C] MILLING HOUSE

- Bagasse Elevators.
- 02. Bagasse Carriers, Return Bagasse Carrier.
- 03. Rake Elevator.
- 04. Cane Carriers.

#### [D] CO-GENERATION

- 01. Complete Bagasse, coal handling system.
- 02. Pneumatically / mechanically / ash handling system.

#### [E] CHEMICAL PLANT

- Leaching reactor.
- 02. Pressure vessel / column.
- 03. Batch reactor.
- 04. Storage tanks.
- 05. Rotary dryer.

[F] AUTOCLAVED AERATED CONCRETE PLANT [AAC]

[G] GENERAL HEAVY FABRICATION

[H] GRIT BLASTING, PAINTING & METALAIZING

[I] BUFFING, PICKLING & ELECTRO POLISHING

### **Other Technical Assumptions**

- The Installed Capacity Of The Machines Would Be 250 to 300 M.T. Per Month As Per The Installation Of The Available Machineries.
- Maximum Production Is Estimated To Be At Above 80 % Since The Partner Has Adequate Experience And Well Established Infrastructure.
- There Will Be 2 Working Shifts Of 8 Hours Each Per Day And 360 Working Days In The Year.







#### **Rotary Vacuum Cane Mud Filter**

Vee key Industries manufacturer of rotary vacuum cane mud filters, which are offered in various materials and drum constructions. These most advanced filtration systems are mainly utilized in sugar industry. As per the construction material of the drum, each filter is provided with stainless steel screens and polypropylene or stainless steel ribbed brass decking's. In order to maintain a complete vacuum seal, the drum is separated by divisional as well as caulking strips.



Vee key Industries manufacture highly effective multi tray as well as single tray juice clarifier, providing single type to 555 types with separate juice inlet through the central shaft. Separate juice outlet and separate mud outlet from each compartment. The clarifier will be two juice withdrawals diametrically opposite in each compartment to minimize turbulence the juice withdrawal will through the take - off pipe of semi-circular, shape located inside each compartment of clarifier provided. The juice withdraws through take off pipe of hexagonal shape located inside each compartment of clarifier. One mud withdrawal shall be provided equal distance from the clear juice.

#### **Juice Heater**

VEE KEY INDUSTRIES Is Counted Among The Leading Firms Offering Juice Heaters. The Offered Heaters Are Widely Used For Heating Juice During The Process. These Heaters Conform Their Accordance To The International Standards.

We Offer Our Clients A Wide Range Of Juice Heaters Such As:

- Dynamic Juice Heaters
- Vapor Line Juice Heaters
- High Velocity Juice Heaters



Rotary Vacuum Cane Mud Filter



Cane Juice Clarifier



Juice Heater





#### **Juice Sulphiter**

Vee Key Industries Is Dealing In Manufacturing, Supplying And Exporting Efficient Juice Sulphiter. Our Juice Sulphiter Is Fabricated From M.S. Or S.S., Depending On The Requirement of Client. Our Juice Sulphiter Is Manufactured Using Superior Quality Raw Materials Which Meet The Requirements Of The Sugar Industry. Our Juice Sulphiter Is Available In Various Capacities Ranging From 45 Hl To 500 Hl. Our Juice Sulphiter Ensures High Performance For Life Long Work. Our Juice Sulphiter, Are Designed In Such A Way That They Provide Efficient And Trouble Free Operations.

#### **Syrup Sulphiter**

Vee Key Industries Offering Our Syrup Sulphiter In The Capacity Range From 10 HL To 120 HL. It Successfully Caters To The Requirements Of Sulphitation Of Syrup. Syrup Sulphiter Manufactured By Us Provides Efficient Work Output For Long Life. Our Syrup Sulphiter Is Manufactured From M.S. Or S.S. We Also Offer Our Syrup Sulphiter In Different Sizes To Our Valued Clients In Order To Suit Their Specific Needs. Our Syrup Sulphiter Is Design Is Such A Way That They Provide Efficient And Trouble Free Operations.

#### **Semi Kestner**

Vee Key Industries Manufacture The Equipment As Per The Requirements Of Customers; We Are Manufacturer Of Best Quality Of Semi Kestner. Our Product Are Easy To Use In Suitable Applications. The Advantages of This Equipment Less Space Required Due To Long Tube Length, Capacity Increases By 15 – 20% Higher Heat Transfer & High Velocity Of Juice Less Inversion Losses Because Of Less Retention Time Of Juice At High Temperature. We Can Designed Calandria With Min. 4.0 Mrs. Long Tubes Up To 6.0 Mrs. Long Tube As Per Customers Requirement & Availability Of Exhaust Back Pressure Of Power House Turbine. Calandria Is Designed By Keeping Sufficient Annular Space & To Give the Tangential Steam Entry Of Exhaust And Non Condensate Gasses Are Taken Out From Centre.



**Juice Sulphiter** 



Syrup Sulphiter



Semi Kestner



#### **Evaporator**

Vee Key Industries Manufacture The Equipment An Assortment Of Evaporators At Industry Leading Prices. This Range Of Products Is Widely Made Use Of In Mitigating The Product Volume, Enhancing The Product Storage Life And In Eliminating Water Before Drying A Well. The Evaporation Process Is Regarded As The Basic Method For Production Of Concentrates, Because It Can Eliminate Water Or Liquids In The Best Energy Efficient Manner. Further, Through Using Higher Temperatures Or Through Allocating The Liquid To A Wider Surface Area, The Process Time Can Be Lessened To A Great Extent. Yet, The Manufacturer Must Take Precaution On The Truth That High Temperatures Together With Longer Preservation Time Can Result In Degradation Of The Foodstuffs That Are Being Processed.

Evaporator Body With Multi Down Take: The Juice Coming Out From Clarifier Is Known As Clear Juice & Is Of 140 Brix To 180 Brix. This Juice Is Concentrated For The Formation Of Crystal Sugar From 150 Brix. To 600 Brix. In The Form Of Syrup And For This Set Of Evaporator Is Used.

#### Batch Type Vacuum Pan Multi-Down Take Type

Vee Key Industries Manufacture The Equipment & Offer Wide Range Of Quality Batch Pans. In The Sugar Industry The Pan Boiling Is Batch Type. The Operation Involves Taking The Feed Boiling To Develop The Sugar Crystals And Dropping The Material After Attaining The Desired Crystal Size.

The Whole Operation Is Manual And Product Depends On The Quality Of The Feed And The Skill Of The Operating People. If The Product Is Good And The Pan Man Is Good The Sugar Quality Also Will Be Better And The Results Otherwise Will Be Vice Versa. In The Case Of Batch Pan There Is Always Human Errors, Loss Of Times, Loss Of Energy And Uncontrolled Water Usage And Additional Man Power.

#### **Continues Vacuum Pan**

Vee Key Industries Manufacture / Offer Continuous Vacuum Pan Design Produces High Massecuite Exhaustion, Consistent Crystal Size And Improves Energy Efficiency. Continuous Vacuum Pan Designs Are Suitable For A, B And C Massecuite And Are Configured To Optimize Upstream And Downstream Plant Capabilities.

Continuous Vacuum Pans Are Designed To:

• Produce Strong Massecuite Circulation • Provide Uniform Conditions For Crystal Growth At Any Section Along The Pan • Generate Narrow Crystal Size Distribution • Minimize The Number Of Control Instruments • Provide Easy Access To Calandria For Maintenance • Simplify Valving And Feed Pipe work • Augment Production Capacity By The Addition Of An Extra Module • Maintain Consistent Production Performance With Minimal Operator Supervision • Produce Rapid And Simple Emptying, Boil out And Restart Operations.



**Evaporator** 



Batch Type Vacuum Pan Multi-Down Take Type



Continues Vacuum Pan



#### **Air Cooled Crystallizer**

With Our-In Depth Knowledge in The Relevant Industry, We Are Supplying Quality Assured Range Of Air Cooled Crystallizer For Sugar Mill With Capacity of 30 Ton to 100 Ton Etc. Offered Crystallizer Is Tested In Terms Of Quality In Order To Deliver A Flawless Range. This Crystallizer Is Designed Using Supreme Class Material And Cutting Edge Technology At Par With International Standards. Also, We Offer This Crystallizer In Different Capacities As Per The Needs Of Customers.



As Per The Requirements Of The Customers, We Are Involved In Offering Best Quality Of Water Cooled Crystallizers. This Water Cooled Crystallizers Are Known For Its Supreme Quality And High Durability. We Manufactured This Water Cooled Crystallizers By Using Good Quality Material. Water Cooled Crystallizers Are Extensively Used In Beet And Cane Sugar Factories. Our Products Are Easy To Use In Suitable Applications.

#### **Vacuum Seed Crystallizer**

We Are The Prominent Manufacturer And Supplier Of A Wide Range Of Vacuum Crystallizers. Offered Vacuum Crystallizer Is Manufactured In Strict Compliance With Set Standards Using Top Quality Material & Latest Techniques In Compliance With The Norms Of Industry. This Vacuum Crystallizer Is Used For Different Product At Different Operating Conditions. Our Provided Vacuum Crystallizer Is Extensively Demanded In Pharmaceutical And Cosmetic And Food Industries.



Air Cooled Crystallizer



Water Cool Crystallizers



Vacuum Seed Crystallizer



#### **Pug Mills**

With The Help Of Our Skilled Professionals, We Are Involved In Manufacturing And Supplying A Comprehensive Range Of Pug Mill. The Offered Products Are Fabricated Using The Best Grade Raw Material And Sophisticated Technology. These Are Stringently Tested On Various Parameters In Order To Deliver Flawless Range At The Clients' End. Furthermore, Clients Can Avail The Offered Products From Us At The Most Affordable Price Range.



**Pug Mills** 

#### **Magma Mixers**

With The Help Of Our Experts, We Are Highly Engaged In Offering An Excellent Range Of Magma Mixer. This Offered Mixer Is Designed And Manufactured By Our Adroit Professionals In Tune With Industry Quality Standards. Our Offered Mixer Is Manufactured Using The Advanced Technology, Latest Machines And The Finest Components. Moreover, Offered Mixer Is Tested On Different Strict Parameters To Make Sure Its Durability And Quality.



Magma Mixers

#### **Molasses Conditioners**

Vee Key Industries Manufacture The Molasses Conditioners Working Effectively To Heat The Molasses To The Required Level, By Utilizing Non Condensable Gasses/ Vapours From The Calandria Of Last Body Of The Evaporators Under Vacuum.

#### **Sugar Melters**

By Utilizing Skills Of Our Ingenious Professionals, Vee Key Industries Offering A Quality Assured Assortment Of Sugar Melters Which Is Used To Reprocess Sugar To New Sugar. These Sugar Melters Is Designed Using Supreme Quality Components Under The Direction Of Experts And Latest Technology. The Offered Sugar Melters Can Be Availed In Numerous Specifications As Per The Application Requirements Of The Customers. Sugar Melters.



Molasses Conditioners Sugar Melters



### Sugar House Equipment

#### **Sugar Elevators**

Vee Key Industries Are One Of The Renowned Manufacturers, Offering A Wide Range Of Sugar Elevators To The Esteemed Clients. These Are Highly Appreciated And Demanded In Sugar Mills. Further, These Elevators Are Used For Carrying Sugar From The Bottom To The Top Direction. Their Swift Performance And Durability Have Made These Popular Among The Clients.



Sugar Elevators

#### **Sugar Hopper**

Vee Key Industries Manufacture The Equipment Under Rigid Supervision Of Our Skilled Professionals, We Are Manufacturing And Supplying A Wide Range Of Complete SUGAR HOPPER. The Offered Tray Is Developed Using High Grade Components, In Compliance With International Standards Under The Supervision Of Skilled Professionals. We Manufacture Various Types Of Sugar Hopper.



Sugar Hopper

#### **Sugar Conveyor**

Vee Key Industries Are An Industry Leader In The Manufacturing And Supply Of Conveyor For Sugar /Cement / Fertilizer Industry. The Offered Pneumatic Conveyor Is Commonly Used For The Loose Sugar Processing In Sugar Plants. Our Offered Conveyor Is Able To Move The Bulk Sugar Processing Intermediates, Which Are Air Stream Suspended At Intake Points. The Offered Conveyor Is Able To Efficiently Separate The Qualified And Unqualified Sugar Materials, For Discharging At The Exit Gates.



Sugar Conveyor



### Sugar House Equipment

#### **Sugar Silo System With Auto Weighing And Conveying System**

Vee Key Industries Manufacture Sugar Silo Systems With Welded Or Bolted On To The Supporting Structure Of The Silo. These Are Cost Effective Systems For Providing 1 % To 3% Of Mass Accuracy. Our Designed Equipment Gives Years of Maintenance-Free Service Once it's Installed And Calibrated. It Provides An Ideal Solution For Non-Intrusive Level Measurements For Materials That Are Subject To Uneven Buildup, Bridging, Or Sidewall Collection. Also, Liquids Or Wetted Materials That Are Not Suited For Direct Contact Level Measurement Are An Ideal Application For These Weighing Systems. The Unique Design Makes It An Excellent Solution For Retrofitting Existing Structures Without Compromise Of The Integrity Of The Vessel Or Structure.



Vee Key Industries Have Reputed & Most Trusted Name In This Business, Involved In Offering Supersite Quality Range Of Sugar Bagging System. Our Product Is Extensively Used In Different Industries For Bagging Equipment And Customized Packaging. To Attain The Maximum Satisfaction Of Our Clients, We Are Offering This Product In Different Range And At Pocket Friendly Price.



Sugar Silo System With Auto Weighing And Conveying System



Sugar Bag System From Sugar House To Godown



## Milling House

#### **Bagasse Elevators**

Vee Key Industries Are Leading Manufacturer And Supplier Of High Quality Bagasse Elevator To Our Reliable Customers. These Products Are Manufactured From Finest Quality Raw Material And Used In Sugar Industries For Carrying Bulk Stuff. These Elevators Are Available In Various Standards Sizes That Best Suits The Needs Of Our Customer. These Products Can Also Be Customized According To The Needs Of Our Customers. These Products Are Available At Very Affordable Market Price To Our Customer Without Compromising On Our Quality.



Bagasse Elevators

#### **Bagasse Carriers**

Vee Key Industries Believe In Establishing And Maintaining A Long Lasting Association With Some Of Our Valuable Clients By Providing Them With Best In Class Bagasse Carriers. Manufactured As Per The Industry Laid Norms, These Carriers Are Used For Conveying Different Products From One Place To Another. Rendered By Us At Industry Leading Prices, These Carriers Are Highly Appreciated. This Carrier will be High Load Bearing Capacity, Resistance against Corrosion



Bagasse Carriers

#### **Return Bagasse Carriers**

For The Diverse Requirements Of Our Clients We Are Involved In Offering A Wide Range Of Return Bagasse Carrier. Offered Bagasse Carrier Are Highly Durable In Nature. Our Products Are Manufactured Using Best Quality Material In Adherence To The International Quality Standards. In Addition To This, We Offer Our Products At Feasible Rates.



Return Bagasse Carriers



# Milling House

#### **Rake Elevator**

Vee Key Industries Is The Leading Manufacturer Of Rake Elevator With Short Space And Designed To Transfer The Crushed Cane From 1st Mill To Last Mill Which Will Help To Instantaneous Feeding At The Mills.



Rake Elevator

#### **Cane Carriers**

Vee Key Industries Is The Leading Manufacturer And Supplier Of Premium Quality Assortment Of Cane Carrier. These Are Manufactured In Our Production Unit By Using Superior Quality Raw Material And Latest Technology, Which Is Well-Equipped With Advanced Machines. These Products Are Quality Tested On Various Parameters To Ensure Flawlessness And Defect Free Range. Clients Can Avail The Offered Gamut In Customized Options At Market Leading Prices.



**Cane Carriers** 



### **Co Generation**

#### **Bagasse Handling System**

Vee Key Industries Is Reputed Organization For The Design, Manufacturing, and Supplies & Exporter Fine Quality of Bagasse Handling System. We Offered Wide Range; We Make Sure That Excellent Quality Material Is Used. The Material Used In The Manufacturing Process Is Sourced From Most Trusted And Reliable Vendors Of The Market. Further, These Systems Are Manufactured Using The Latest Technology, Which Assists Us In Delivering An Effective Range To The Clients. These Are Extensively Used Sugar Plants. In Addition To This, These Are Used For Transferring The Bagasse From Main Bagasse Carrier To Stock Yard.



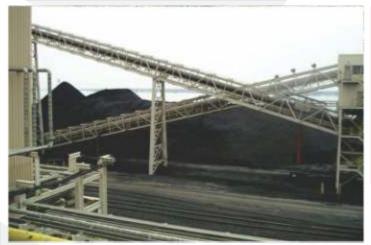
Ours Is An Illustrious Organization That Manufactures Supplies, Trades And Exports Finest Quality Coal Handling System. To Manufacture The Offered Range, We Make Sure That Excellent Quality Material Is Used. The Material Used In The Manufacturing Process Is Sourced From Most Trusted And Reliable Vendors Of The Market. Further, These Systems Are Manufactured Using The Latest Technology, Which Assists Us In Delivering An Effective Range To The Clients. These Are Extensively Used In Thermal Power Plants And Coal Handling Plants. In Addition To This, These Are Used For Transferring The Coal From Trucks And Wagon Tippler Hopper With The Help Of Belt Conveyors To Boiler Bunkers.

#### **Ash Handling System**

Vee Key Industries Are Indulged In Manufacturing And Supplying A Wide Range Of Ash Handling System. These Are Easy To Maintain & Operate And Offer High Performance. Moreover, These Are Fabricated In Accordance With The Predefined Industrial Norms & Regulations. These Provide Plurality Of Hoppers That Is Disposed Under A Solid Fuel-Fired Steam Boiler. The Hoppers Have Angled Walls Along With The Rectangular Opening Regulated By A Grate Door. The Air Inlets Are Provided At Intersections Between Adjacent Angled Walls So That The Flow Of Ash Can Be Facilitated Along With The Combustion Of The Unburned Fuel. In Addition, The Hopper Enters The Crusher And Is Conveyed Through The Vacuum Line To The Disposal Point. Moreover, The Heavier Ash Particles Are Carried And The Lighter Particles Are Bypassed Through The Mobile Tank Truck. We Offered Centrifugal Dust Particle Separation Mechanism.



Bagasse Handling System



Coal Handling
System



Ash Handling System



## Chemical Plant

#### **Leaching Reactor**

Leach Reactor is a high yield processing solution designed to drastically improve mineral recovery from gravity concentrate. Combining long-term production value with low operating costs, the Leach Reactor is installed after concentration in a circuit to maximize gravity treated ore. Extensive test work of the Leach Reactor on site has shown over 99% of the target mineral is recovered through a simple, fully automated process that is easily incorporated into gold and silver recovery operations. Mineral Systems designs and supplies complete, customizable mineral recovery circuits incorporating leaching, gravity concentration, agglomeration, and electro winning based on mining project requirements.

#### **Pressure Vessel / Column**

Avail From Us Quality Assured Pressure Vessels / Column, Which Is Used For The Purpose Of Holding Liquid Or Gases At A Specific Pressure. To Ensure That Offered Pressure Vessels Are Able To Stand Tall On The Expectations Of Patrons, We Manufacture This Using Best Grade Stainless Steel, Sourced From Certified Vendors. Along With This, We Keep In Mind The Globally Laid Quality Standards While Manufacturing These Pressure Vessels. Our Company Offer High Quality Of Pressure Vessels / Column. They Are Also Available In Various Shapes And Sizes. As It Is Designed To Contain A Liquid, Gas Or Vapor At Different Temperatures, As They Are Heat Resistant. When Compared To The Atmospheric Pressure And Without Change In The Volume, Our Pressure Vessels Can Be Categorized As Thinned Wall Pressure Vessels, Thick Walled Pressure Vessels, Transportable Containers, And Gas Cylinders. Pressure Vessels Are Highly Applicable In Petroleum Refining, Petrochemical Industries, Water Treatment Systems Of Boilers & Steam Generation Equipment.

#### **Batch Reactor**

Batch Reactors Are Perhaps The Simplest Reactors Used In Chemical Processes. The Batch Reactor Having A Stirrer On The Top And Its Operated By Planetary Drive. When Using Batch Reactors, Reactants Are First Placed Inside The Reactor And Then Allowed To React Over Time. Batch Reactors Are Close System That Operate Under Unsteady State Conditions. The Reactors Shown Below Are Used In The Dairy Industry.



Leaching Reactor



Pressure Vessel / Column



Batch Reactor





## Chemical Plant

#### **Storage Tanks**

Storage Tanks Are Containers That Hold Liquids, Compressed Gases (Gas Tank) Or Mediums Used For The Short- Or Long-Term storage Of Heat Or Cold. The Term Can Be Used For Reservoirs (Artificial Lakes And Ponds), And For Manufactured Containers. We Specialize In Design, Engineering, Manufacture And Supply Of All Kinds Of Storage Tanks Such As Large Diameter Modular Tanks, Trailer Mounted Tanks For Shale Gas Exploration Projects. We Have Qualified Welders And An In-House Quality Control Department. We Have Fabricated Carbon Steel, Low Alloy Steel, Stainless Steel Equipments.



Storage Tanks

#### **Rotary Drum Dryer**

The Rotary Drum Dryer Is Widely Used For Drying The Chalk Slags, Coal Powder, Slags, Clay And Other Materials In The Building Materials, Metallurgy, Chemical Industry, and Cement Industry. The Rotary Dryer Has A Better Adaptability And Can Dry Various Materials With A Simple And Reliable Operation. The Rotary Drum Dryer Is Mainly Composed By The Revolving Body, Lifting Plate, Driving Device, Supporting Device, Sealing Ring And Other Components. So It Has The Advantages Of Reasonable Structure, Perfect In Workmanship, High Yield, Low Energy Consumption, Convenient To Operate. We Design High Mechanization, Strong Production Capability And Continuous Operation. Our Design Includes Excellent And Simple Structure, Steady Operating Process Under Resistance Of The Drum, Easy Operation



Rotary Drum Dryer

### AUTOCLAVED AERATED CONCRETE PLANT [AAC]

#### **AUTOCLAVED AERATED CONCRETE PLANT [AAC]**

Vee Key Industries Is Leading Manufacturer Of AAC Plant. AAC Is Non-Combustible. So In The Case Of Fire, No Toxic Gases Or Vapors Are Emitted. Solid AAC Construction Without Any Additional Finishing Materials Provides A Fire Rating Of 4 Hours For A 6 Inch Minimum Wall. This Exceptional Rating Meets Even The Most Stringent Requirements Of The Standard Building Code. It Has Been Refined In To A Highly Thermally Insulating Concrete Based Material Used For Internal & External Construction. One Of Its Advantages In Construction Is Its Quick And Easy Installation.

- Highest Fire Rating In The Industry
- Ideal For Fire And Shaft Walls
- Non-Combustible
- No Toxic Gases Or Vapors Emitted
- Is Non-Combustible
- Prevents Spread Of Fire
- Will Never Emit Toxic Gases
- · Additional Coating Not Required
- Install Before Building Dried-In
- Fewer Inspections Required
- Up To 6 Hour Fire Rating



AUTOCLAVED AERATED CONCRETE PLANT [AAC]







## **General Heavy Fabrication**

#### **General Heavy Fabrication**

General Heavy Fabrication Is A Type Of Manufacturing That Includes A Combination Of Processes To Make Components Of Thick Plate.

Fabrication Is Usually Considered Heavy Fabrication When The Plate's Thickness from 10 mm to 50 mm. The Thick Plate Requires Heavy Machinery; For Example, Instead Of Using Laser Cutting, Gas Or Plasma Cutting Might Be More Efficient. Also, Presses Need To Be Much More Powerful To Bend Pieces Of Material. Naturally, This Means That There Are Special Workshops That Have Equipment And Machinery To Take Care Of The Heavy Fabrication.

The Heavy Fabrication Manufacturers Make Components That Often Go Into Industries That Make Products Which Needs To Withstand Great Forces Such As The Heavy Vehicle Or Construction Industry. It Can Be Small Components Or Large Beams Used In Constructing Buildings.

Our Mild Steel and Stainless Welding Is Applied To:-

- Architectural Steelwork (Wrought Iron)
- Platforms
- Fire Escapes
- Tanks
- Machine Guards
- Security Doors And Windows



General Heavy Fabrication







# GRIT BLASTING, PAINTING & METALAIZING

#### **GRIT BLASTING, PAINTING & METALAIZING**

Big Enough To Accommodate Any Size. Flexible Enough To Apply Any Coating. Our State Of The Art Abrasive Blasting And Paint Facility Can Accommodate Any Size Of Product, From A Few Centimeters In Width To The Size A 40 Foot Shipping Container. Using A Variety Of Blast Media, Including Steel Grit And Garnet, We Can Grit Blast Substrate Surfaces To Class 3 And Apply A Comprehensive Range Of Industrial Coatings. With Separate Blast and Paint Booths, GME Offer Impressive Flexibility. We Can Cater For Oversize Structures Such As Containers And Their Structures, Large Metal Components And Trailers. The Grit Blasting And Painting Facility Has The Capacity To Grit Blast Substrate Surfaces To Class 3 Using A Variety Of Blast Media, Including Steel Grit And Garnet. The Separate Blast And Paint Booths Are Able To Handle Units Of More Than 15 Meters Long, Including Containers And Container Structures, Larger Metal Components And Structures, And Trailers. The Painting Facility Has The Capacity To Apply Most Industrial Coatings. Features

Large Capacity Spray • Airless Gun Spray • Grit Booths • Class 3 Surface
 Capability • Comprehensive Range Of Industrial Coatings

Metalizing Is A Substitute For Painting Structural Steel For Decades Longer Than Paint Alone. This Is A Proven Process, Which Has Been Used Around The World For 90 Years. One Single Metalized Coating Protects Steel For 30 To 50 Years Depending Upon The Application Coating Thickness And Sealing. Normal Paint System Last For 10 To 15 Years.

Metalizing Is Considered A Cold Process In That The Aluminum Or Zinc Is Deposited Onto Steel By Spraying, Rather Than By Dipping The Steel Into A Bath Of Molten Zinc As With Galvanizing. The Metalizing Process Always Begins With Proper's Surface Preparation Sa 2,5. Next Aluminum And Zink Or Zink Wire Is Melted In An Electric Arc Spray Or Gas Fl Ame Spray Gun. Clean Compressed Airstrips Droplets Of Molten Metal From The Wire Depositing These Particles Onto The Steel Forming The Protective Coating. This Sprayed Metal Coating Is Both A Barrier Coating And Galvanic Coating In One. THE COATING THAT SAVES YOU MONEY AND TIME The Cost For Metalizing Varies With The Project. In General An Owner Can Expect To Pay About 30 To 40 Percent More For A Metalized Coating Than For Painting, But The Maintenance On Board During The Next Decades Will Decrease Considerably.

Any Steel Structure That Can Be Blast Cleaned We Can Metalize. Applications Include 4 Ships And Vessels, Bridges, Piers And Shore Facilities, Lock And Dam Gates, Pipelines, Off Shore Oil Platforms, Communication Or Power Transmission Poles & Power Project / Nuclear Plants



GRIT BLASTING, PAINTING & METALAIZING





# BUFFING /PICKLING & PASSIVATION/ ELECTRO POLSHING

#### **PICKLING & PASSIVATION:**

A clean and passive surface finish is crucial to corrosion resistance. Stainless steel is protected from corrosion by its passive layer - a thin, impervious, invisible, surface layer that is primarily chromium oxide. The oxygen content of the atmosphere or of aerated aqueous solutions is normally sufficient to create and maintain ("self-heal") this passive layer. Unfortunately, surface defects and imperfections introduced during manufacturing may drastically disturb this "self-healing" process and reduce resistance to several types of local corrosion. Thus, as regards hygiene and corrosion, a final cleaning process is required to restore an acceptable surface quality.



The Removal Of Oxidization (Tarnish) From Metal Objects Is Accomplished Using A Metal Polish Or Tarnish Remover; This Is Also Called Polishing. To Prevent Further Unwanted Oxidization, Polished Metal Surfaces May Be Coated With Wax, Oil, Or Lacquer. This Is Of Particular Concern For Copper Alloy Products Such As Brass And Bronze.

The Term Chem-Mechanical Was Coined To Describe Action Of Corrosive Slurry On Silicon In A Polishing Process. Multiple Rotating Heads, Each Studded With Silicon Wafers, Get Forced Against A Large Rotating Buffing Pad, Which Is Bathed In Corrosive Slurry. Material Removal At Elevated Temperature Progresses First Through Oxidation, Then Through Oxide Removal By Abrasion. This Cycle Repeats With Each Rotation Of A Head. Potassium Hydroxide And Silox (White Paint-Base) Can Be Combined With Deionized Water To Form Such Slurry.



PICKLING & PASSIVATION



**BUFFING** 



# BUFFING /ELECTRO POLISHING AND PIKLING

#### **ELECTRO AND POLISHING**

This Research Presents A New Application Of Electro Polishing Using A Low-Cost Disc-Form Electrode Offering Fast Improvement Of The Surface Roughness Of Skd61. It Requires No Expensive Special-Purpose Equipment Or Heavy Material Removal As Conventional Electrochemical Machining Does, And It Also Avoids The Complex Pre-Polishing Of The Work Piece Before The Electro Polishing.

Round Bars Or Round Tubes Produced By Traditional Turning,
Drawing, Form Rolling, Or Extrusion, Can Be Successively Electro
Polished Using The Designed Disc-Form Electrodes. Five Electrode
Designs Are Discussed. The Experimental Parameters Include
Rotational Speed Of Work Piece, Electrical Current Rating And Pulse
Period, Electrode Geometry, And Electrode Feed Rate. Thinner Disc
And Larger Disc Taper Angle Are Associated With Larger Discharge
Space For The Electrode, Thus The Polishing Is More Effective.

A Smaller End Radius Of The Disc Electrode Produces Higher Current Density And Provides Faster Feed Rate And A Better Polishing Effect. A Disc With Discharge Flute Performs Better, And Larger Flute Back Rake Angle, Side Rake Angle, Wider Flute, And Deeper Flute Depth Are Also Advantageous. Although The Use Of Pulsed Current Slightly Outperforms The Fluted Electrode Using Continuous Current, It Sacrifices Both Machining Time And Cost.

An Ideal Electro Polishing Process Is Characterized By A Plateau Of The Current Density-Potential Curve Corresponding To The Maximum Diffusion Rate Of An Acceptor For Metal Ions Toward The Anode. Such A Process Is Amenable To A Quantitative Theoretical Analysis. Formulas Are Derived For Decrease Of Surface Roughness As A Function Of The Recess Of The Average Surface, Amount Of Metal Dissolved Per Unit Surface Area, And Product Of Current Density And Time.



ELECTRO POLISHING

