



STALWART
INTERNATIONAL





reimagining a legacy

- Since : 1979 • 5000+ Installations • Turnkey projects
- Specialist in manufacturing process equipment



about stalwart

Stalwart has been swiftly emerging in the SME sector of India's rapidly-modernising engineering industry.

It has a long and rich legacy – being under the experienced leadership of Mr. Kishor Ganatra, who founded and steered Shree Krishna Fabricators Pvt. Ltd. (SK-fab)

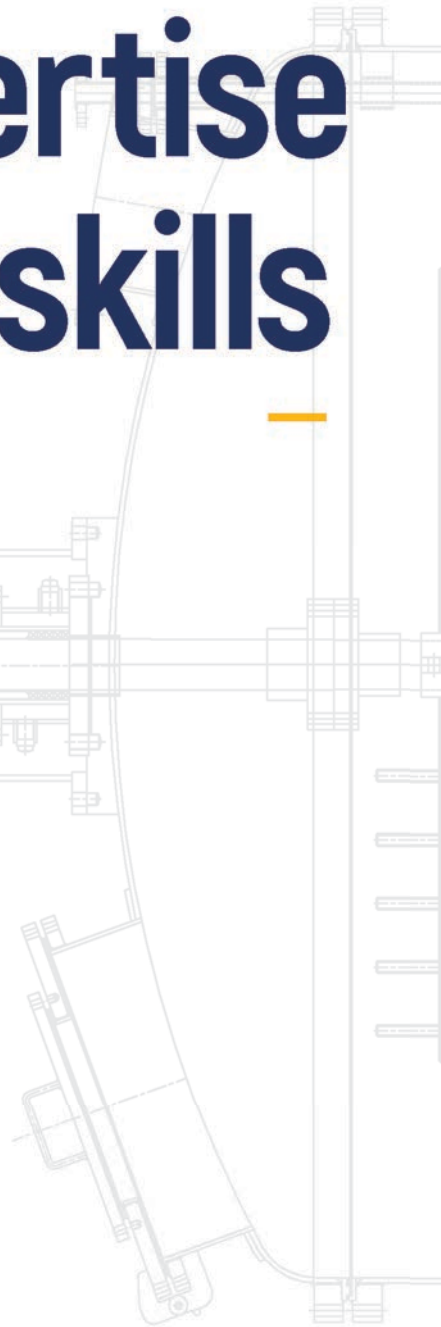
SK-fab, as it is better known, is one of the leading companies manufacturing a range of plant and equipment for chemical and pharmaceutical industries, For more than four decades. it has successfully delivered high performing engineered equipment and services to clients across Indian and overseas locations.

Stalwart International (India) Pvt. Ltd. has focused on keeping manufacturing facilities in-house, to have better control over the quality of process equipment, on-time delivery of equipment and handing over the plant.





high level technical expertise and skills



our journey



infrastructure

Factory

Fabrication area - 52,540 sq. ft.

Single equipment tonnage handled - 60 tonnes

Inventory

Stainless Steel Plates, Round Bars and Tubes are readily available in stock, ensuring quick commencement of operations.

Forming

Joint free limpet (half pipe) coil forming, full pipe coil forming, dished end and cone forming by pressing and spinning process, Shell plate pre-punching and rolling, 'U' tube bending and tube corrugation.

Machining

Well Equipped machine shop consisting of various:

- Lathe
- HMT Radial Drilling machines
- Milling machines
- Shaping machines
- Slotting machines
- Dynamic balancing for High RPM Agitator and Centrifuge Baskets.

Testing Facilities

- Liquid Penetrant Test
- Calibrated Gauges & Measuring Instruments
- Hydro pressure testing pressure pump
- Compressor and Vacuum Pump for Pneumatic and Vacuum Test
- Digital thickness gauge for measuring thickness after formation of dish and other components
- Infrared Temperature Sensing Gun
- Tachometer – measuring the rotation of Agitator and Centrifuge Basket
- Dark room for X-Ray film check
- PMI: For verifying the chemical composition of metals and alloys

Team Strength

We have expanded from 12 independent fabrication teams to a workforce of 250 production workers.





our mission

To keep rising as a force to be reckoned with, for its exceptional services and outperforming equipment that facilitate our clients to maximize results with ease and swiftness, propel them towards accelerated growth, so that they become success stories in their respective industries.

our vision

To transcend from being a reliable equipment manufacturer to an acclaimed turnkey solution provider, worldwide.

certification



Integrated Management System

Stalwart International's achievement of the Integrated Management System (IMS) certification (ISO 9001, 14001, and 45001) underscores its unwavering commitment to quality, environmental stewardship and workplace safety. This accomplishment solidifies its position as an industry leader.

ASME U Stamp

The ASME U Stamp is an indication of quality for pressure vessels. It ensures that the design, fabrication, inspection, and testing of pressure vessels conform to ASME's guidelines. ASME U stamp is provided on the body or the nameplates of the pressure vessels as a certification to meet ASME requirements. Globally, more than 100 countries use the ASME BPVC code for the pressure vessel design and U stamped vessels follow the requirements of ASME Sec VIII Div 1. For the maximum protection of life and property, ASME provides rigorous rules for pressure vessels. In many countries, the government authority made it mandatory to purchase ASME U stamped vessels.

R Stamp

The National Board offers the Certificate of Authorization and R symbol stamp for the repair and/or alteration of boilers, pressure vessels, and other pressure-retaining items. Repair or alteration of pressure-containing parts of a container must be performed in compliance with the applicable provisions of the current edition of the National Board Inspection Code (NBIC). Where specific procedures are not given, it is intended that subject to acceptance of the inspector, all repairs or alterations must conform as much as possible to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (BPVC) section and edition to which the container was constructed.

CE Certificate

The CE mark is required for all new products which are subject to one or more of the European product safety directives. It is a visible sign that the manufacturer of the product is declaring conformity with all the directives relating to that product. Stalwart is CE certified.



our advantage

- 43 Years of journey towards expertise
- 250+ Satisfied customers across India and overseas
- Customers base across 5 continents
- Equipped with cutting edge technology & advanced manufacturing set-up
- Meticulous quality control from design-procurement to delivery
- Equipment manufactured as per ASME, TEMA, API, DIN
- IS standards and cGMP equipment in compliance with USFDA, UKMCA and TGA
- Seasoned team, stalwarts in their domain knowledge
- 24/7 after sales support
- A brand name synonymous with reliability

our values

To ensure eternal client success

- For us, success means the success of our clients, and the fact that majority of our clients are continually expanding, is a hallmark of the same.

To build and maintain relationships

- We are on the absolute top of preferred vendors list of our customers, for the faith they have on performance of our equipment, timelines and reliability.

To be forerunners in innovation

- At Stalwart, we keep inventing and reinventing designs and manufacturing practices. Having adopted Kaizen, we constantly push ourselves to challenge the status-quo.

To be a great place to work

- Our work culture makes the place exuberant and this heightens the quality and speed of responsiveness and interactions.

To remain an ethically strong organization

- We are committed to upholding and enhancing integrity, transparency, social responsibility, and global consideration. We believe that our high-performance equipment, on-time delivery, and services not only reinforce our clients' commitment to the brand but also inspire confidence in our values and principles.

products

DISTILLATION COLUMN



REACTOR



OCTAGONAL BLENDER



AUTOCLAVE



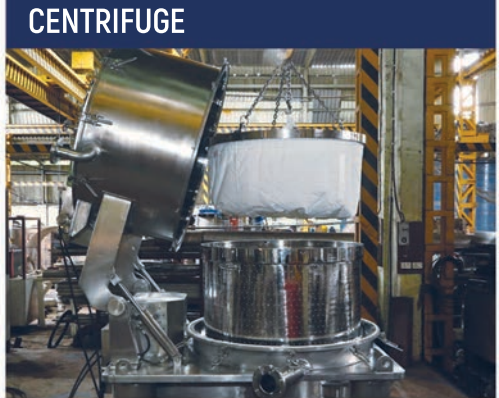
4 decades of
equipment
manufacturing



TWIN-SHAFT DISPERSER



RIBBON BLENDER



CENTRIFUGE



FINNED TUBE HEAT EXCHANGER



PILOT PLANT



FLAKER



DRYER (VTD)



Stalwart offers an entire spectrum of high-performance and cost-effective equipment for process plants with a range of capabilities & capacities, made mainly from Stainless Steel and Exotic metals.

We are a trusted destination for an entire range of coded and cGMP Pressure Vessels (Static and Agitated), Reactors, Hydrogenator, Cooling Vessels, Distillation Columns, Heat Exchangers, Blenders, Mixers, Centrifuges, Storage Tanks and Special Purpose Machines such as Dispersers, Pug mills, Ribbon Blenders, Pebble Mills, High Speed Dispersers, Flakers and many more.



reactors

Reactors (Vessels with Agitator) are used practically for the manufacturing of Homo polymers, Copolymers, Binders, Paint resins, Saturated and unsaturated resins, Fermentation chemicals, Bulk drugs and Drugs intermediates.

Reactor applications - Polymers, Paint & Binders, pure & styrene acrylics, SBR, NBR, saturated & unsaturated polyester, alkyd, polyurethane, epoxy resins, construction and textile chemicals, Dye & dye Intermediates, Food Colours, Fertilizer & Pesticides, Organic and Inorganic Salts, Speciality & Aromatic Chemicals & Essential Oils and Shellac, Bulk Drug & Pharmaceutical Products.

We can deliver reactors in compliance with the cGMP regulations.

A wide range of chemical processes can be done within working pressure ranging from vacuum up to 25 bar and working temperatures upto 350°C. Some examples are extraction, distillation, evaporation, crystallization, mixing, fermentation, ethoxylation, polymerization, esterification, chlorination, nitration, hydrogenation.

We deliver reactors with and without agitators, jacketed, limpet coiled, internal heating and cooling coil. The Reactors can be hot & cold (LRB & Puff / PIR) insulated with permanent SS guard to comply with cGMP standards.

Different type of Agitators:

- Anchor, Gate Anchor, Boxed Anchor
- Pitched Blade Turbine, Disc Turbine, Ruston Turbine, Smith Turbine
- Pitched Blade Paddle, Propeller, Hydrofoil, Mig
- High-Shear Cowl, Stator – Rotor Impeller, Screw type, Co-axial Impellers
- Visco-prop, Para-visc type and customised impeller
- Dual Agitator, Triple Agitator & Co-axial Agitator

We do design and manufacturing of the agitator in house for high performing results, studying detailed process design and mechanical strength. We do manufacture complete agitation solutions comprising the agitator, lantern supports with bearing housing, Single or Double Mechanical Seal and selection of Gearboxes and energy required for the Electric Motor. Of course the Motor can be ATEX, Flameproof, Standard Non Flameproof as the case may be. Wherever the operating pressure is atmospheric, even PTFE Gland packing / Self Lubricating Cart Seal is used depending upon the temperature under operation.

We have designed, manufactured, supplied, installed and commissioned various Reactors from 100 Litres to a 65 KL capacity in Stainless Steel MOC of different grades – SA 240 GR 316 to Exotic metals like Hastelloy C 276, Hastelloy C 22, Incoloy 825, Alloy 20, SS 904L, Duplex 2205, Super Duplex 2750 as complying with the process requirement.

Dimple Jacketed Reactor



25 KL SS 904 L Reactor with
Limpet & Double Internal Coil



Reactor for Pharmaceutical Plants



Reactor for Polymer Plants

shell & tube heat exchanger



Heat Exchangers are mainly used for Reflux Condensation and Distillation and Extraction of required distillates, heating, cooling, re-boiling & chilling the mass.

HEs are used in industries that manufacture chemicals & Pharmaceutical products, Speciality and Petrochemical Industries and all other industries wherever process demands such equipment.

Type of Heat Exchangers:

- Shell & tube type (Plain & Corrugated tube type)
- Double pipe (pipe in pipe),
- 'U'- Tube,
- Finned Tube – Longitudinal & Helical
- Floating head bundle,
- Hair pin type
- WFI

The heat exchangers are single pass, multi pass and they are mounted in horizontal, vertical and inclined positions as per the process requirement.

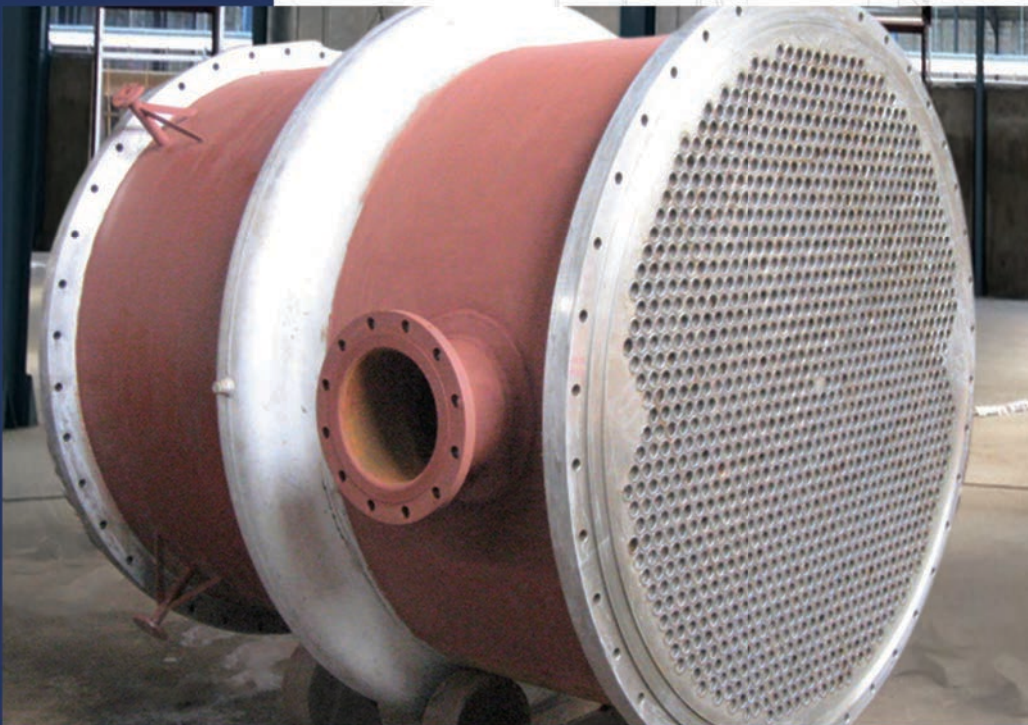
The heat exchangers are used for processing various products and accordingly they are known for Condensers, Coolers/Chillers, Re-boilers, Preheaters, Evaporators (thin Film and falling film evaporators).

We manufacture heat exchangers in stainless steel SS 316/L, SS 304/L, 321/H, SS 904/L, alloy steel, copper finned tubes, Hastelloy, duplex, titanium and other exotic metal.

Stalwart's experienced team of engineers provide selection of heat exchangers which are used in various process conditions with an optimized thermal design, to ensure near to zero pressure drop and required heat transfer coefficient.



Column Mounted Condensers with Vents



High Pressure Heat Exchanger

- Capacity: Upto 1000m² HTA • Diameter : 2 m • Length : 12 m
- Material handled : SS 304, SS 316, SS 321H, SS 904L, Hastelloy C276, Titanium and other high-nickel alloys

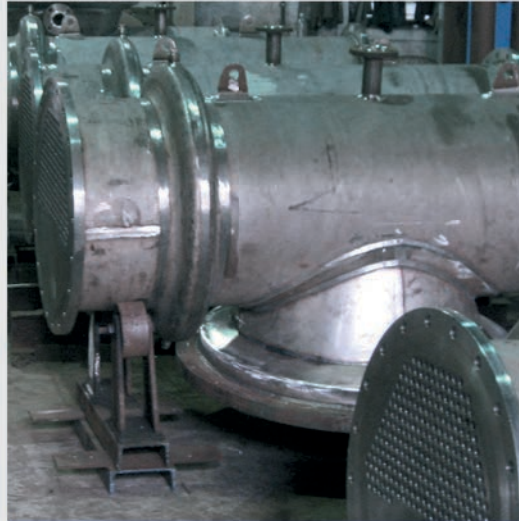




corrugated tube heat exchangers

Corrugated Tubes are made by indenting a helical pattern along the length of the tube. CTHes basically increase the turbulence along the periphery of the tube surface thus reducing the boundary layer. Reduction in the boundary layer reduces the wall resistance and thus gives a higher heat transfer coefficient. CTHes operate at the same Reynolds number but at a higher Nusselt number due to the increase in side coefficient.

High Pressure Heat Exchanger



Condensers for Aromatic Chemicals



Customised Square Heat Exchanger



dispersers

Dispersers are used for mixing of high viscous products, specially used for manufacturing textile chemicals, water proofing chemicals, adhesive, ink and paint.

Dispersers are used to homogenise/disperse/dissolve powder into liquid/solvent and produce paste/mixture/emulsion through high speed agitator/saw toothed cowl/high shear blades.



High Speed Dispenser



Twin Shaft Dispenser



blenders

Blenders are used to blend a wide range of substances used in industries such as chemical, food, pharmaceutical, plastic, mineral and other such industries. Stalwart's range of industrial blenders includes Ribbon Blenders, Double Cone Blenders and Octagonal Blenders. These are mainly used to blend various materials using different types of blades to make an excellent quality homogeneous mixture.



12 KL Ribbon Blender



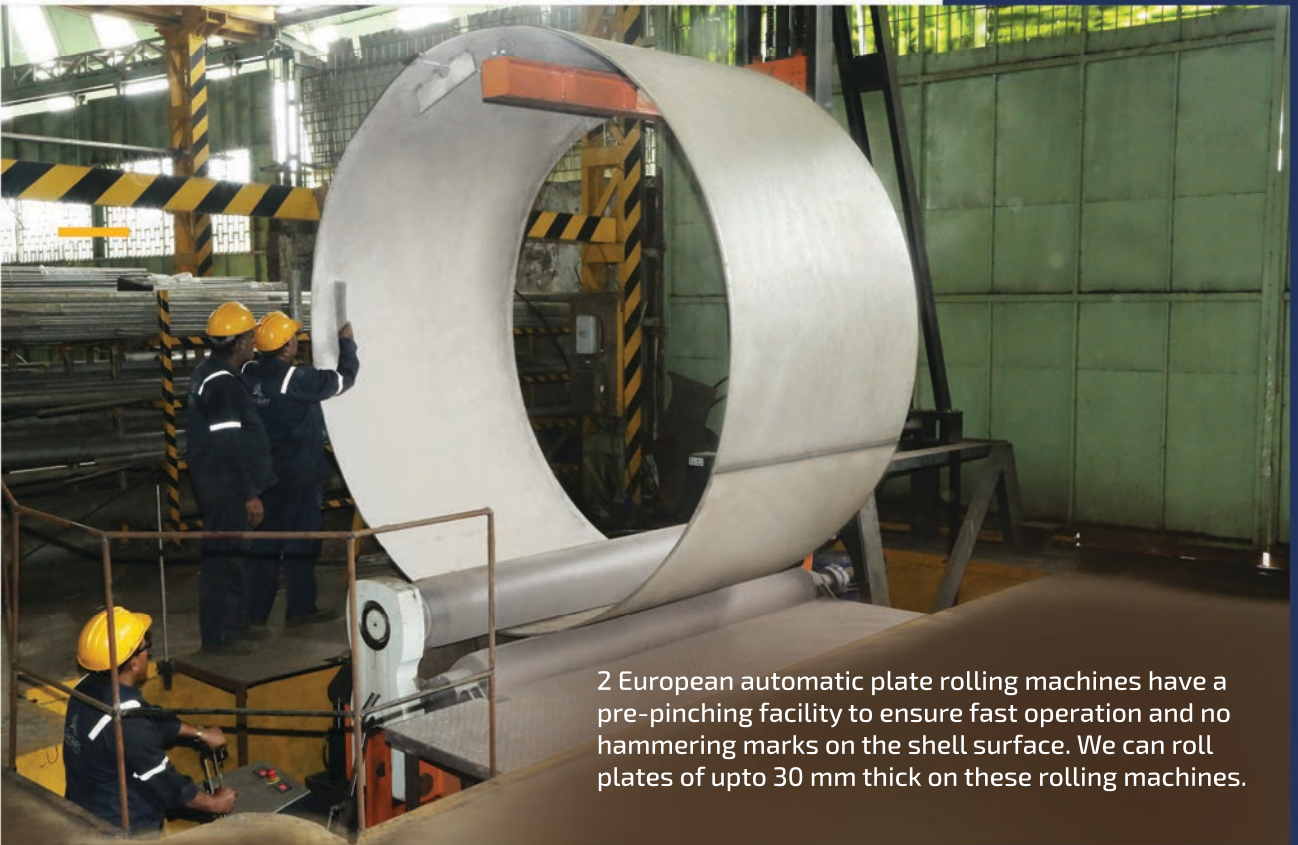
120 KL Blender with agitator

- Material of Construction: SS304, SS 316

in-house facilities

The dished-end spinning machine ensures precise knuckle forming of dished-ends of upto 5000 diameter with near to zero ovality, thus enabling a better shell to dished end set-up.

250 ton and 500 ton capacity hydraulic pressing machines for dished end forming upto 40 mm thick x 4200 mm diameter dish ends & cones.



2 European automatic plate rolling machines have a pre-pinching facility to ensure fast operation and no hammering marks on the shell surface. We can roll plates of upto 30 mm thick on these rolling machines.



A European limpet coil forming machine for making JOINT FREE LIMPET COILS of maximum length , manageable for handling & fitting them on vessel. No Butt weld joints. Resulting safest and leakproof, even in case of double limpet coils, used for heating and cooling / chilling separately.

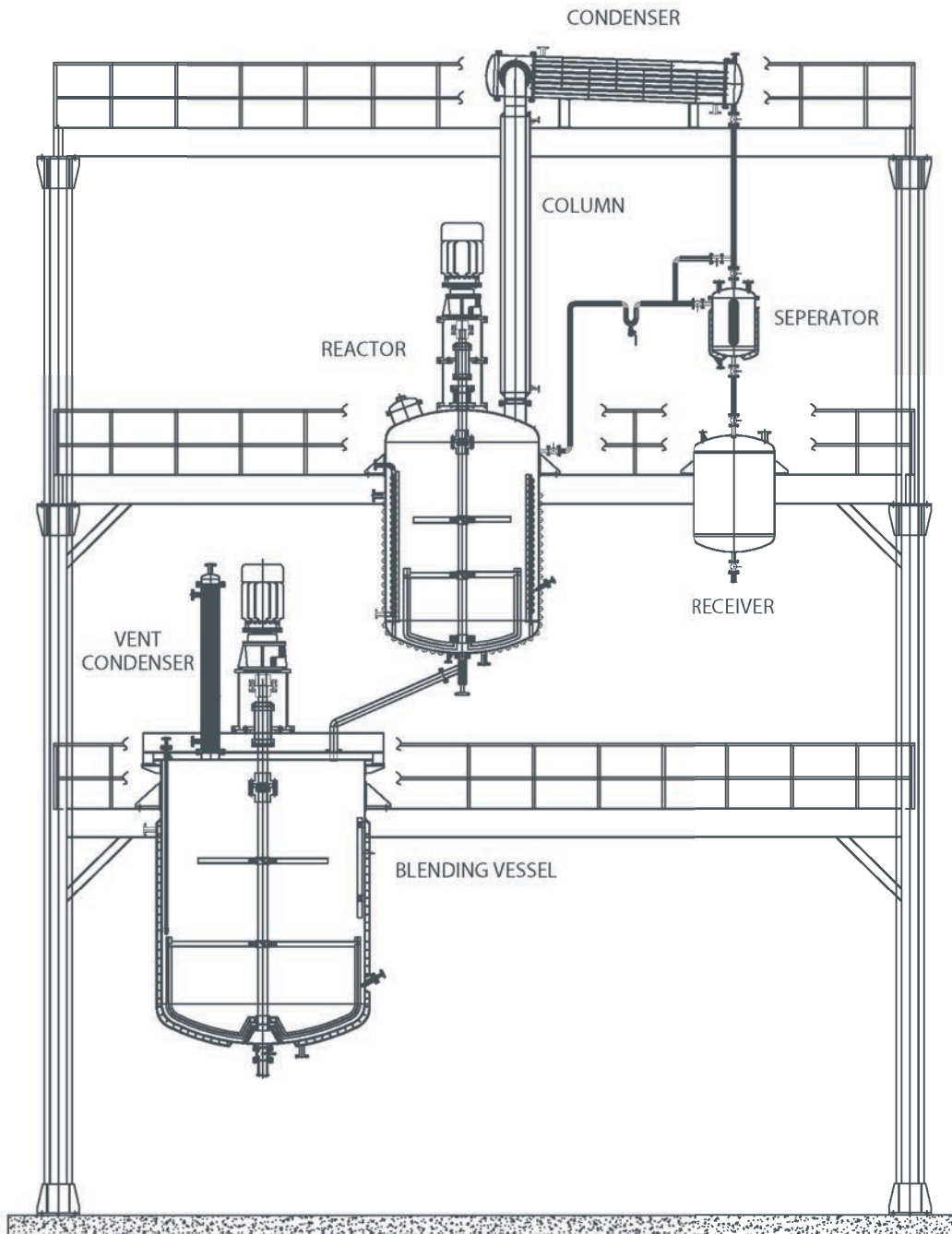
Well Equipped machine shop having...

- Long bed precision lathes 6000 mm & 4500 mm for agitator shaft
- High-centre lathes having machining upto 1200 mm dia HE tube-sheets, flanges, fabricated lanterns, centrifuge baskets and various components and further IN GAP 2000 mm for machining tube-sheets & main body flanges etc.
- Medium sized various precision Lathe for all drive unit components and other equipment components.
- HMT Radial Drill - Heavy duty
- Milling & Shaping machines
- Balancing Machine - 3 Ton Capacity for balancing of High & Low RPM Agitator upto 6000 mm Long having agitator sweep diameter upto 2200 mm and centrifuge baskets upto 1800 mm diameter. The complete machine shop is under EOT crane having long and cross travel for safe handling of "to be machined and machined parts of the Equipment."



A German section bending machine that provides flexibility in forming the spiral (jalebi) limpet for fitting on bottom dish. This machine forms all sections - flats, bars, angles, channels, beams, square and rectangular pipes too.





MULTIPURPOSE PLANT SETUP FOR POLYESTER, ALKYD-RESIN & SOLUTION ACRYLIC POLYMER: 1 Ton - 30 Ton Batch Capacity

Process Equipment

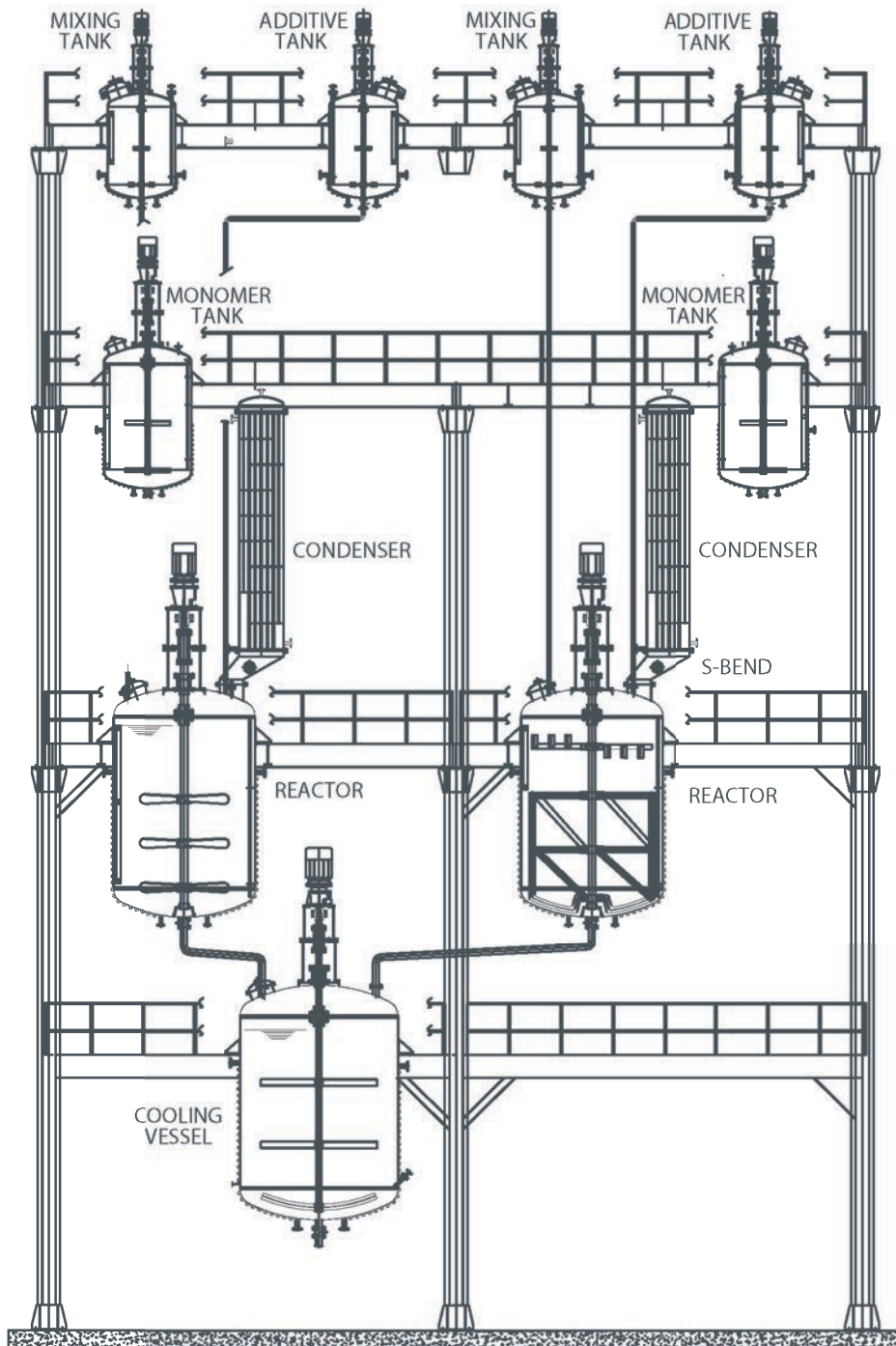
- Reactor
- Vapor Column & Bend
- Horizontal Condenser
- Separator
- Receiver
- Blending (Thinning Down) Vessel
- Storage Tanks
- Vent Condenser

Utility Equipment

- Thermic Fluid Heater
- Cooling Tower

Ancillary Equipment

- Vacuum Pump
- Raw Material Transfer Pump
- Resin Transfer Pump
- Flow Meter
- Digital Temperature Indicators
- VFD & Valves



**POLYMER EMULSION PLANT : 1 Ton -30 Ton Batch Capacity
(Co-Polymer & Homo Polymer)**

Process Equipment

- Reactor
- S Bend/Oblique Cone
- Vertical Condensor
- Cooling Vessels
- Storage Tanks
- Monomer Tanks
- Mixing and Additive Tanks

Utility Equipment

- Steam Boiler
- Cooling Tower

Ancillary Equipment

- Raw Material Transfer Pump
- Resin Transfer Pump
- Flow Meter
- Digital Temperature Indicators
- VFD & Valves

clients

Our client base is spread worldwide with successful plant installations in USA, Germany, Egypt, Turkey, Ethiopia, Saudi Arabia, Iran, UAE, India, Bangladesh, Indonesia and Thailand.



Catered Industries



TEXTILE
CHEMICAL



POLYMER



PHARMACEUTICAL



FOOD COLOR



SPECIALITY
CHEMICAL



RUBBER ADHESIVE
& BINDER



WINERY & DAIRY



CONSTRUCTION
CHEMICAL



DYE & PIGMENT



AROMATIC
CHEMICAL



OIL &
PETROCHEMICAL



RESIN
& PAINT



we promise to care

STALWART INTERNATIONAL BELIEVES SAFETY FIRST.

STALWART CARES FOR TEAM MEMBERS, WORKMANSHIP, COMMITMENT, VENDORS / BUSINESS PARTNERS, ENVIRONMENT, REPUTATION, NATIONAL SPIRIT AND AT THE HELM - OUR ESTEEMED CLIENTS, THE MOST.

We maintain quality assurance programs and comprehensive systems which assures full traceability of all components through all the stages of design, procurement, fabrication, machining, assembling, finishing, logistics, installation and final commissioning.

STALWART INTERNATIONAL is committed to provide quality finished equipment, that empowers our clients with the confidence to always work with us and further enabling them to serve their clients much better.

We function with a holistic approach and understand that we are an integral part of a vast ecosystem.

○ STALWART INTERNATIONAL (INDIA) PRIVATE LIMITED

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