

Engineers at their best



SURIA ENGINEERING

Engineers and Turnkey Solution Providers.

Company Profile

SURIA ENGINEERING is a company which enjoys a unique status among other companies in the field of engineering. At one end it is engaged in the manufacturing of wide range of machinery & plants whereas at the other end, it provides services for complete engineering projects.

SURIA ENGINEERING was established in 1995 and since then it has completed a series of projects for renown Petro chemical, Oil & Gas, Chemical, Food, & Pharma Industries of Pakistan.

TEAM EXPERTIES:

SURIA ENGINEERING has the team of experts having vast experience in the field of Engineering with professional training and education domestically & Internationally

SURIA ENGINEERING can also manage Turn key projects on **ENGINEERING, PROCUREMENT AND CONSTRUCTION (EPC)** comprising of Mechanical Electrical and civil works to the customers to have a single point of reference in Planning, Designing, Fabrication, Installation and Commissioning their projects.

SURIA ENGINEERING is an ISO 9001-2015, ISO 14001:2021 and OHSAS 18001:2021 certified company which emphasize on worker's and equipment safety to minimize the accidents.



HEALTH SAFETY

ENVIRONMENTAL POLICY:

Safety first is the basic policy of Suria Engineering and is committed to provide Engineering and Manufacturing Services by meeting all applicable requirements and providing a safe and healthy workplace for employees, contractors and customers.

SURIA ENGINEERING is being operated at two workshop facilities one in S.I.T.E. and other in Port Qasim Authorities, each having about 44000 sq. ft. working area. Each Site is equipped with 30 Tons of Mobile crane and other Fabrication and Machining Facilities.



Business Activities

PRESSURE VESSELS.

HEAT EXCHANGERS.

S.S & MS REACTORS.

OIL STORAGE TANKS

STEEL STRUCTURE WORK.

S.S & MS DISTILLATION COLUMNS & TANKS.

S.S & MS JACKETED & LIMPET COIL TANKS.

UTILITY, PROCESS & CROSS ROADS PIPING WORK.

PIPE RACKS

VAPOUR PHASE DRYING OVENS (AUTOCLAVE).

EVAPORATORS

DRYERS (VACCUM, TRAY,ROTARY).

SPRAY DRYER.

POWER TRANSFORMER TANKS (MVA).

SOLID WASTE INCINERATOR.

BELT, CHAIN & SCREW CONVEYORS.

DOW THERM SYSTEMS (THERMO BOILERS)

**BATTERY PLANT (PASTE MIXER, +VE & -VE
OVENS,PLATE CUTTING M/C etc etc).**

WET SCRUBBERS.

FURNACES.

INSULATION & CLADDING

HARDNER & RESIN PLANT.

FLAKE ICE PLANTS.

ELECTRICAL WORKS



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Few Main Projects Completed

47 TPD GLUCOSE & 44 TPD SORBITOL
PLANT ON TURNKEY BASIS

M/S ACT POLYOLS 2019-20

STRUCTURE WORK APPROX 600 TONS
FOR EXTENSION OF EDC/VCM PLANT

M/S EPCL 2019-20

OXY STRIPPING COLUMN

M/S EPCL 2019-20

HARDNER & RESIN PLANT ON
TURNKEY BASIS

M/S RESSI CHEM 2019-20

SPRAY DRYER 600KG/HR
EVAPORATION RATE

M/S MATCO FOODS LTD 2019-20

COMPLETE PIPING WORK FOR DYES
EXTENSION PLANT (MALU PROJECT)

M/S ARCHROMA PAKISTAN 2018-19

VAPOUR PHASE DRYING OVEN
(AUTOCLAVE)

M/S SIEMENS PAKISTAN 2008-09

SHELL & TUBE TYPE
HEAT EXCHANGER 550 SQM

M/S EPCL 2019-20

DRY MORTAR PLANT

M/S RESSI CHEM 2020-21

COMPLETE PIPING WORK 30 TPD
GLUCOSE PLANT

M/S MATCO FOODS LTD 2017-18

PIPELINE WORK 3.5KM LONG

M/S SSGC LPG 2020-21

ELECTERICAL & MECHANICAL WORK
FOR NISHAT GARMENTS

M/S SYNERGY ENGINEERING 2015-16

SOAP CRUSHER & MIXING PLANT

M/S KOHINOOR CHEMICALS 2019-20

SYRUP PROCESSING PLANT

M/S NAURUS PVT LTD 2016-17

DRYING OVENS WITH THERMOBOILER
COMPLETE ON TURNKEY BASIS

M/S K-ELECTRIC 2014-15

TT-307 HEAT EXCHANGER STRUCTURE
& PIPING WORK ON EPC BASIS

M/S EPCL 2020-21

S.S STORAGE VESSELS

M/S SHAFI GLUCO 2014-15

COAL TRANSFER CONVEYORS
900 FT LONG

M/S UNIVERSAL 2004-05

BATTERY PLANT (FURNACES, PASTE
MIXERS ETC ETC)

M/S RAINBOW HITECH(BRIDGE POWER)

BINDER PLANT ON
TURNKEY BASIS

M/S SHAFI RESO CHEM 2000-01



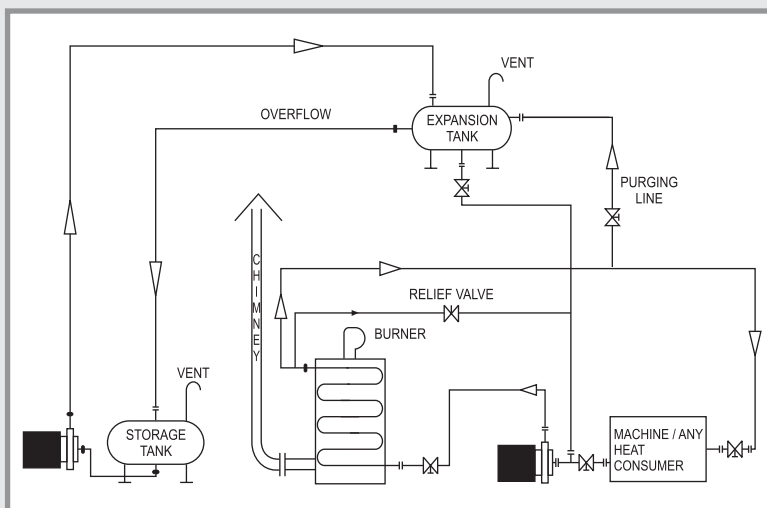
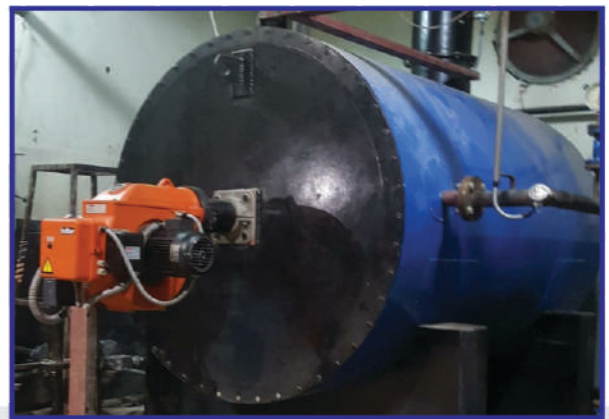


Thermal Fluid System (TFS)



Thermal Fluid System is an efficient mean of supplying indirect heat to one or more processing machines via a high temperature and low pressure arrangement.

Available in different capacities ranging from **100,000 to 5000,000 kcals/hr.** **SURIA THERMO OIL Heater** is a skid mounted maintenance free compact unit. Presently it is in use by many industries throughout the country



It has a three-pass combustion chamber which utilizes maximum heat of the flue gases and hence makes the unit cost-effective.

SURIA THERMO is robust in construction and available in vertical as well as horizontal designs. Special imported high temperature hot oil circulating pumps are used to circulate the oil through heater and heat consumers.

Dual/fuel (Gas / diesel) burner is the main feature of **SURIA THERMO**. In **SURIA THERMO**, control is carried out by a programmer in automatic electric control panel which handles the digital signals. Therefore the system becomes so simple that presence of an operator is required only to turn on the starter key and periodically check the status of the unit in terms of temperature and pressure of the system. Temperature controller and pressure switches make the system auto and safe as well.

Benefits

Thermal Fluid System

Over

Steam System

EFFICIENCY

As it is a closed cycle system, the losses are minimum. The average temperature difference is 50°C i.e. we have to heat the oil by 50°C to achieve its maximum temperature which may be between 200 to 300°C. If maximum temperature is 200°C, then the incoming temperature of the oil to the combustion chamber is minimum 150°C.

It is an open cycle system. The steam after transferring its heat is condensed. The average temperature of condensate which reaches the boiler room and water feed tank is in the range of 60 to 70°C. The temperature of steam at 100 psi is about 165°C. Here the temperature difference is about 105°C i.e. the steam boiler burner has to heat the water and steam by about 105°C and hence more fuel is required.

SAFETY

As it is a low pressure system and vented to atmosphere through expansion tank it is a safe system.

It is a high pressure system and less safer than the Thermal Fluid System (TFS).

LICENSED OPERATOR

All TFS's operate at a very low pressure i.e. between 30 to 50 psi and do not require licensed operators. Hence again it is cost effective as far as operating cost is concerned.

Being a high pressure system the law requires a full-time licensed stationary boiler/engineering operator. This increases the operating cost.

INITIAL INVESTMENT

In Pakistan, initial cost of a TFS is less than a Steam System.

Initial cost is also high as it needs a water softening plant and an economizer as well.

ANNUAL INSPECTION

It does not require any annual inspection from government authorities and hence no production loss throughout the year.

It requires annual inspection and interruptions in the production are obvious.

MAINTENANCE

It requires no traps, condensate return and blow down valves. Therefore the regular maintenance is minimal.

Steam system requires regular maintenance which is focused on steam traps, valves, condensate, return pump and water treatment etc. Also frequent water analysis is required to ensure the water input to boiler.

TEMPERATURE CONTROL

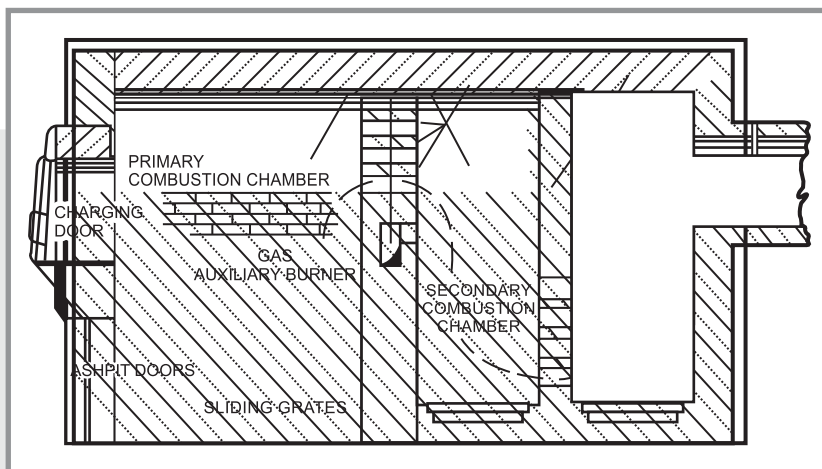
TFS provides efficient and uniform heating because of minimum variation in temperature. This gives us smooth heating. Also it consumes lesser time in heating/drying.

Because of fluctuation in steam pressure, there is a lot of variation in temperature of steam. This gives us uneven heating. Also it consumes more time in heating/drying.



Suria Engineering Manufactures Incinerator of Capacity ranges from 10 to 500 kg / hour Each Incinerator is designed according to specific requirement of user.

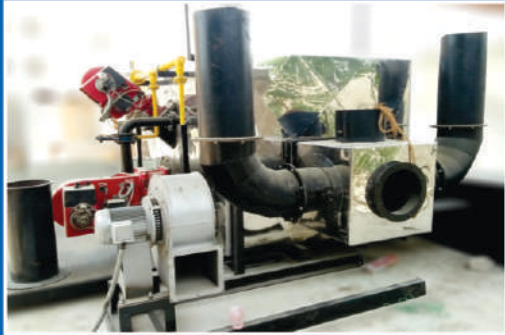
- Meets National Environment Quality Standards (NEQs)
- Complete burning of waste material is ensured by proper air / fuel ratio and sufficient mixing of reactants, adequate residence time, high temperature and low velocities.
- Eliminates dark smoke emission when burning the waste materials.
- Userfriendly: operation is ensured by proper automation.
- Adequate SAFETY FEATURES are incorporated to protect the premises and operators against mishaps and accidents
- Absolute trouble free and maintenance free burner operation.



- **A TYPICAL INCINERATOR**
- consists of three chambers which are interconnected
- The primary chamber is for burning the waste material in a controlled atmosphere. A gas burner is provided to ignite and sustain combustion.

- In the secondary chamber the **POLYNUCLEAR HYDRCARBONS** and **COMBUSTIBLE SOLIDS** carried over from the primary chamber, are incinerated at high temperature. The chamber is designed to extend the residence time of **FUEL GASES**, to ensure thorough combustion. A gas burner is provided to maintain high temperature in this chamber.
- The third chamber is primarily for cooling flue gases and setting **FLY-ASH**.

Suria Medical Incinerator



SI Series Medical Incinerator is a useful type waste disposal equipment Which can be used in every class hospital for incinerating solid flammable waste such as surgical waste and substance with virus etc.

Characteristics:

- **Thorough incineration**

The incinerator owns the effective structure for smoke flow, so the fire flow direction is stable, the burning is powerful and the waste can be incinerated thoroughly, and the volume decreasing ratio is 95%

- **Thorough prevention on social effects of pollution,**

The second time burning is adopted to make sure that the smoke & hazardous gas after the first burning is thoroughly burned and broken in the second burning

- **Automatic Feeding**

Feeding waste Automatically makes Incinerator user friendly

- **Easy operation**

It has auto firing device and photoelectrical inspection, so the special technical training is unnecessary on the operators and the special people for management is also unnecessary part-time is enough.

- **Pollution Control Device**

Scrubber is used as pollution control device is designed to effectively use the energy from the inlet gas stream to Atomize the liquid being used to scrub the gast stream



Main Technical Parameters

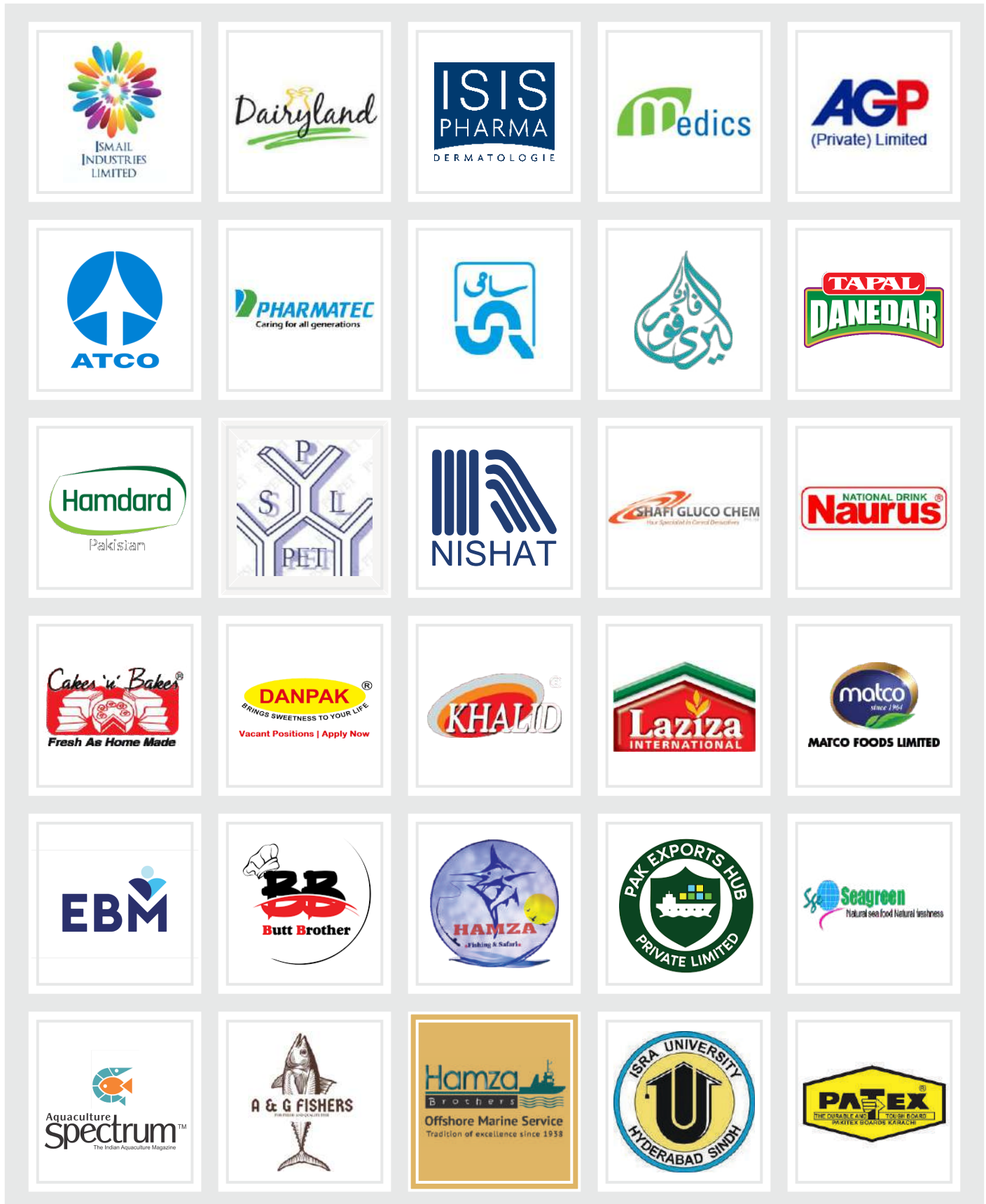
Model	Capacity	Voltage	Power (Kw)	No. of Chambers
SI-25	10 - 30	220 / 380V	1.5	2
SI-50	40 - 60	220 / 380 V	2.5	3
SI-75	60 - 90	220 / 380 V	7	3
SI-100	90 - 110	220 / 380 V	9	3
SI-150	140 - 160	220 / 380 V	15	3
SI-200	190 - 210	220 / 380 V	18	3
SI-300	220 - 320	220 / 380 V	25	3
SI-500	470 - 530	220 / 380 V	25	3







List of Major Clients







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