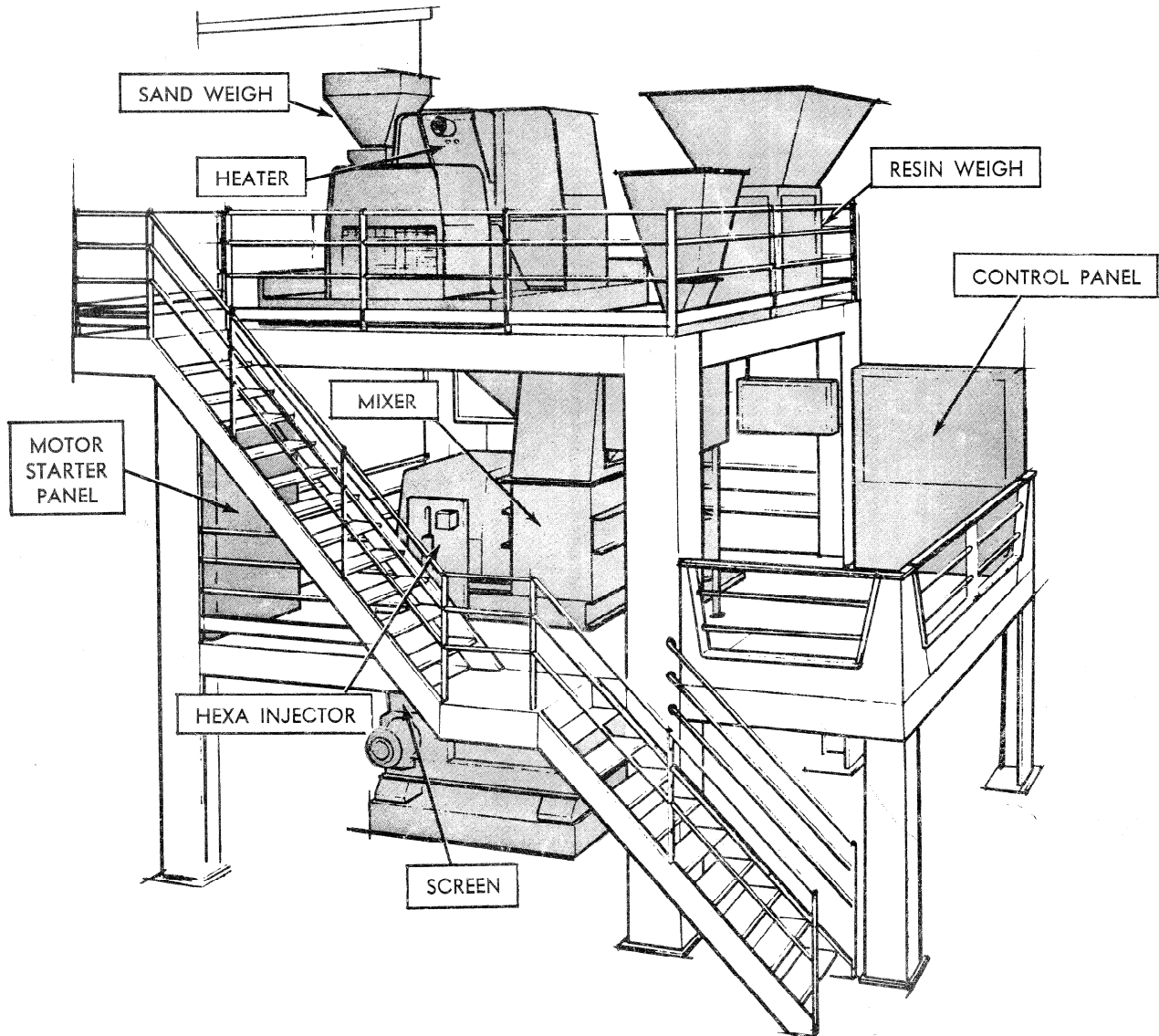




HOT COATING SHELL SAND SYSTEM



Our company produces shell sand coating systems as well as core and mould machines.

Short description of the work and scheme of the shell sand coating system you can find in enclosed. Same device can prepare sand with liquid and dry resin. Only resin measuring device is different and can be also found in description.

Our experience over years, especially in the high temperature fields, has shown that the procedure with dry resin is better. Quality of the sand is higher, storing of resin, transport and safety of the work is more simple and better with price of the sand being the same.

Device for sand preparation is completely automatic. Solid, constructed from the components of world-famous suppliers, with metal construction and with silos for raw and coated sand, capacities of 10 and 20 tons.

Core and mould machines are equipped with PLC system. Control of the work is secure and easy to monitor.

Production capacity rate: 2-3 TPH, 3-4 TPH and 5-6 TPH.

DRY RESIN WEIGH AND UNITS

To consist of flanged bin adaptor, electric vibrating feeder, lever system and beam scale, weigh hopper with air cylinder operated gate, limit switch to register gate closed, chute from weigh hopper to mixer and air cylinder operated gate mounted on the mixer hood.

LIQUID RESIN INJECTOR

This unit will automatically measure, by volume, and feed liquid resin into the sand mix at the proper time during the cycle. Volume is adjustable from zero to maximum capacity by a threaded stroke adjustment rod. Equipment will consist of an air measuring cylinder, air operated liquid control valves, solenoid control valve, speed control valves, solvent tank for flushing back side of measuring cylinder after each cycle and a liquid level indicator on the solvent tank for visual check of cylinder action.

SEQUENCE of OPERATION	POWER CONTROL	AUTOMATIC CYCLE	AUTOMATIC WITH WEIGH and FEED EQUIP.
1. Weigh sand for feed to heater.	Equipment to perform this operation varies widely depending on building configuration existing facilities, etc. Automatic equipment is recommended for batches over 200#.		Sand source is cut-off at pre-set weight automatically, and batch held awaiting signal.
2. Dump sand into heater. 2a. Repeat Operation #1	Operator turns air valve to open heater gate and charges sand. Closes gate & repeats #1.	Automatic cycling panel controls air ram solenoid for heater to accept sand charge. Step #1 is repeated.	Cycle panel air ram operation and Step #1 repeats automatically.
	Sand is heated on "high-fire" until pre-set temperature is reached. Burner automatically goes on "low" or "off" until sand is discharged, and remains on "low" or "off" until heater is recharged.		
3. Discharge sand from heater to pugmill.	Operator watches temp. indicator & actuates valve when sand is up to temp.	Automatic discharge once pre-set temperature is reached and operation #8 of previous batch is complete.	
4. Add resin to pugmill. 4a. Repeat Operation #2. (Additives such as iron oxide, calcium carbonate, silica flour, limestone, etc. If used, are normally added manually ahead of the resin.)	Operator adds proper amount of resin to batch; then repeats Operation #2.	On 200# & 400# plants, air ram automatically discharges resin from hopper into pugmill upon signal from timer. Next sand batch is automatically dumped into heater.	Solid resin handled as is sand (see Op.#1). (Liquid resin automatic measure & feed equipment is optional).
5. Add Quench Water*	Operator adds proper amount of water to batch.	Adjustable timer on panel actuates water valve & pre-selected amount of water is metered in. *Hexa in solution of quench water can be metered in automatically as a slurry.	
6. Add Hexa* & introduce cooling air	Operator adds hexa after quench & starts cooling air.	Dry hexa handled same as resin (See Op.#4).	Dry hexa handled as is sand (See Op.#1).
		Cooling air is on during #5 and off during hexa addition, then back on, all automatically by control panel.	
7. Add calcium stearate (Part of the stearate can be added shortly after addition of resin).	Operator adds proper amount of stearate (usually 2-4 ounces per 100# of sand) a short time prior to mix discharge. Other additives (See #4 above) if in small quantities, are also added at this time.		
8. Discharge mix to screen 8a. Repeat operation #3 etc.	Operator actuates valve to open & close pugmill gate. He then repeats Operation #3.	Coated sand is discharged to screen automatically upon signal from timer. Operation #3 is repeated automatically.	