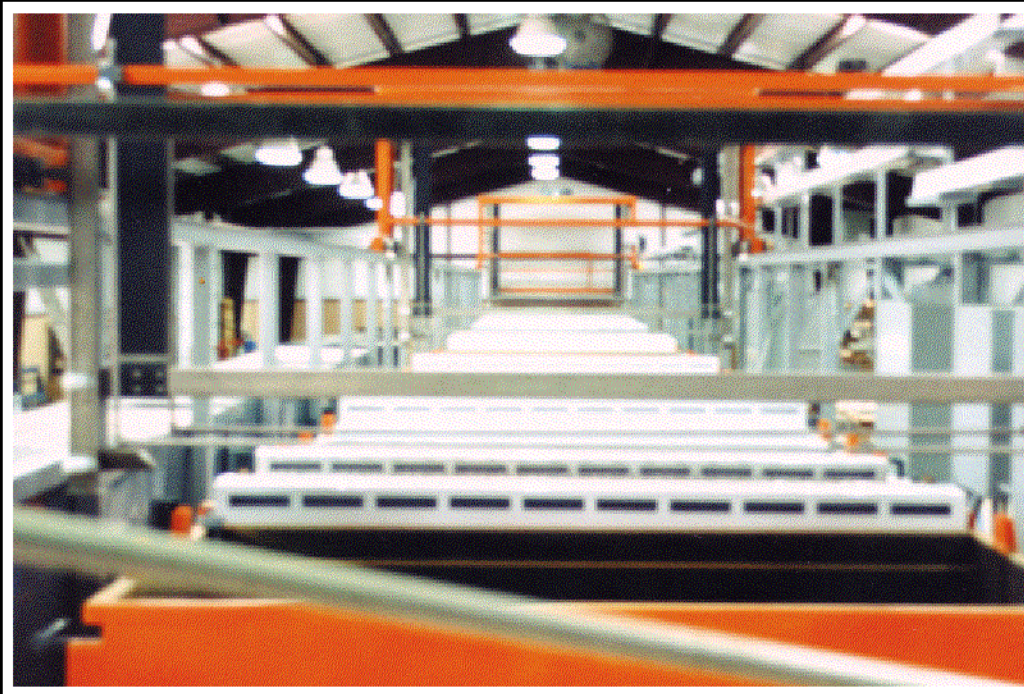




Auto Plating Lines



Two models to suit every application



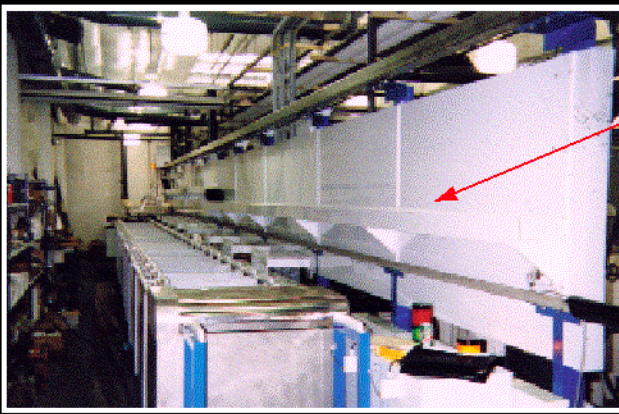
***Rail
Runner***

Side Arm

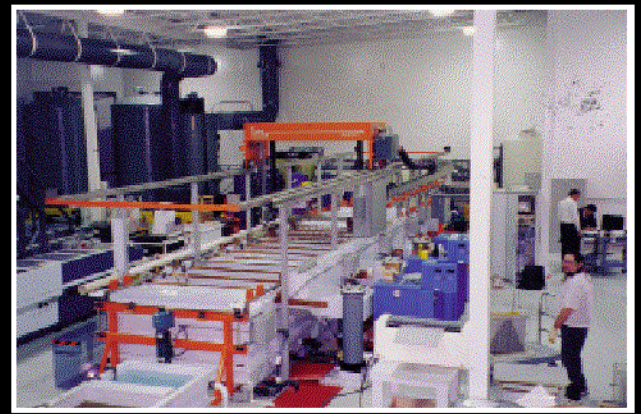


Integrated Process Systems, Inc.

1635 North Bulldog Road, Cedar City, Utah 84720 Phone: (435) 586-1188 Fax: (435) 867-0815
E-mail: mbrask@inxsn.net World Wide Web: <http://www.inxsnet.com/ips>



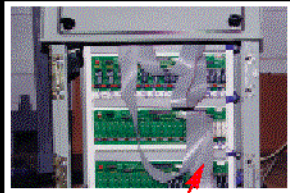
Rear Ventilation Wall



**IPS Side-Arm System
with heated inline dryer**

**Typical Copper/SnPb
IPS Rail Runner**

Electrical Features



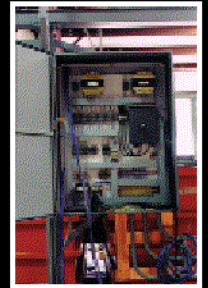
Relay boards interface between the PC and the device to be controlled. Modules required for data logging would be plugged into these cards.



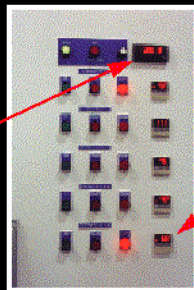
Load center for pump/heater control



Hoffman NEMA 4 computer enclosure houses an industrial-grade rack-mount PC



Multi-hoist systems are equipped with a power distribution panel. All panels are fed from this source

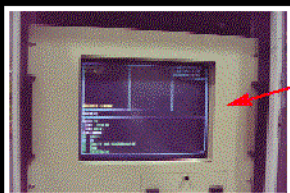


Rate meter provided for oscillation speed

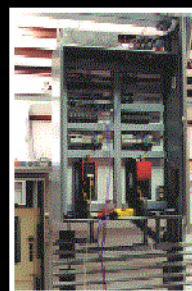
Each tank is provided with PID temperature control, low level/overtemp indication and a start/stop station for pump control



Interconnecting terminal strips



Computer menus status the operator with critical cycle parameters. Menus can be customized for each application and critical data displayed. Network compatible. All systems are completely PC controlled. Software maintenance, service, upgrades and modifications can be performed remotely via modem.



Each hoist is controlled through a subpanel which houses the servo drives for the horizontal and vertical motions. The servo drives are serialized back to the computer with an RS-485 cable. All PC interfacing is bussed on the RS-485 cable. The servo drives are completely programmable, allowing the user complete control over the motion profiles, allowing for soft starts and stops and, therefore, gentle handling of the product.

Mechanical Features



Hoists are fabricated from steel and powder-coated safety orange

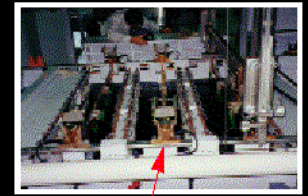
All bearings and components are USA-made, and can be cross-referenced to a Browning or Grainger number



4-point pickup horns are used to stabilize flight bars during transport.



Vertical lifts are belt-driven using gravity in the down direction.



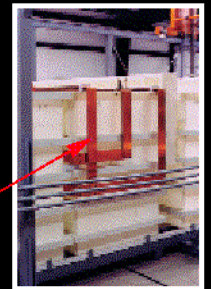
Full-length agitation systems are tied into the vertical movement of the hoist, pausing momentarily to center the pick-up arm for the hoist. Horizontal and vertical oscillation are available.



Horizontal E-stop bumpers ensure that power is cut to the servo drives before the hoist can crash.



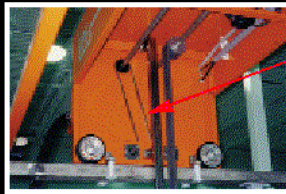
Transport cage is provided to service anodes.



Copper bussing is bent and formed for each tank

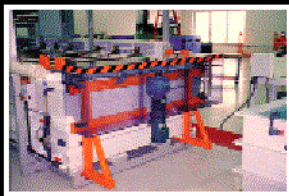


Anode baskets are constructed from materials that are compatible with each plating process

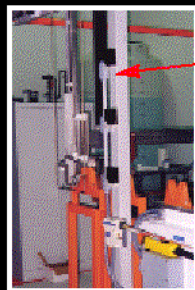


Stainless steel chain is stretched on each rail, providing positive traction for the hoist. The chain drive is stationary, with movement achieved through the rotation of the servo drive.

Carts feed the load/unload queue, keeping operators from working near a moving hoist. Red/green beacons signal the operator to exchange the carts.

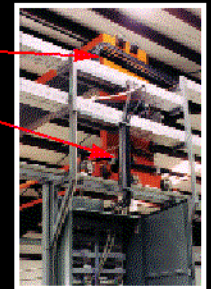


Variable speed oscillation system with safety barrier



Light barriers insure operators cannot penetrate the work envelope without interrupting the movement of the hoist

Power track and robotic cable feed utilities to the hoists.



Plating baths are equipped with canister filtration and computer controlled rectifiers.



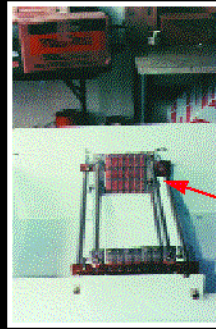
Material handling carts are designed to feed a load/unload queue for processing. Operators are not required to lift or handle the flight bars.

Wheels are CNC milled and fitted with wheel bearings, seals and zerk fittings for lubrication. Rubber is vulcanized onto the outside diameter of the wheel and center ground to final diameter.

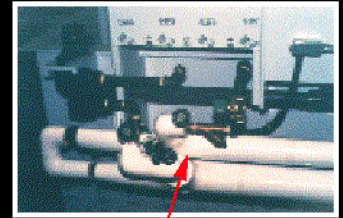
Manual Plating Lines



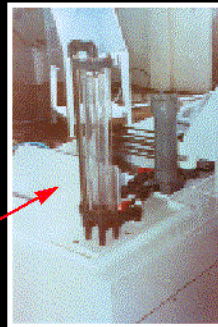
Individual tank construction



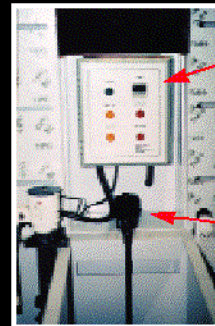
Gold finger racks



Heating loops for steam and hot water



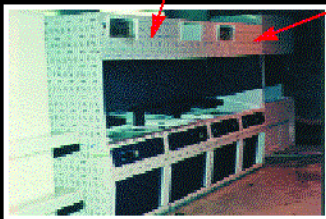
Precious metal recovery



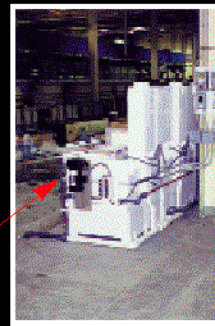
Independent heater control boxes

Air diaphragm valves for air spargers

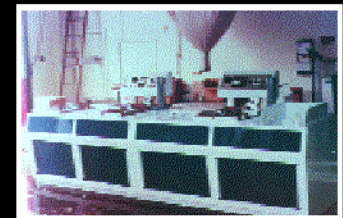
Canopy enclosures



Ultrasonics and megasonics for hole cleaning

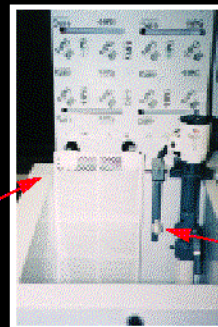


Full-length vertical and horizontal agitation



Nickel/gold lines for deep gold and tab plating

Heat exchangers



Level controls and thermocouples



Processes include all electroless and electrolytic



Integrated Process Systems, Inc.

1635 North Bulldog Road, Cedar City, Utah 84720 Phone: (435) 586-1188 Fax: (435) 867-0815
E-mail: mbrask@inxsn.net World Wide Web: <http://www.inxsnet.com/ips>

