



PREVENTING PLATING REJECTS STARTS WITH YOUR CLEANING TANK AND DOESN'T STOP UNTIL THE FINAL RINSE

WATER

WATER must be pure if you want to avoid unnecessary problems with your chemicals and final rinsing. Filtration is a first step which might be followed by softening with ion exchange, carbon or reverse osmosis and final trap filtration.

CLEANERS (Acid and Alkaline Solutions)

SKIMMERS remove surface oils, greases and dirt. Pumps then transfer the liquid to a filter purification chamber, coalescer or still tank for their separation and removal. This prevents parts being plated from carrying contaminants from tank to tank, thereby reducing the amount of solids and organics getting to the plating tank (and ultimately reducing the need for plating tank carbon treatment).

FILTERS are often overlooked on these tanks, but extended life and less dumping of the cleaners justifies at least coarse particulate removal which will attract most of the oils also.

CARBON following filtration for adsorption of oily substances.

COALESCERS separate oil from water with presoaked elements which agglomerate the oil droplets and float them to the surface for easy venting for removal. This is especially helpful on parts where fabrication has left difficult to remove drawing compound, cutting oil, etc.

STILL TANK provides dormant area to overflow to rest. This is easily accomplished by creating a weir (or using a bulkhead fitting) at the solution level and pumping at a slow rate from the auxiliary tank to the main tank so that the excess will float the oil away from the parts just being plated.

PLATING SOLUTIONS

FILTRATION FOR CLARIFICATION - Although drag-in of particulate matter may be minimized, the plated surface reflects the actual condition of the bath. High turnover rates through the filter are required for total solids removal before roughness can occur. Various filter media should be considered according to the requirements of the application.

FILTER MEDIA - Depth type and pleated cartridges, sleeves, bags and roll media can be used.

PURIFICATION MEDIA - Carbon for adsorption of organic impurities is used on many plating solutions. It is available in cartridge, powdered or granular form. The latter form is offered in refillable canisters.

ABSOLUTE MEDIA - Use pleated membrane cartridges, nominal and absolute sub-micron, in series with other types of filter media for the purpose of achieving a higher degree of clarity when required for specific types of electronic applications.

CARBON CHAMBERS FOR PURIFICATION - Adsorption of undesirable organics can be achieved continuously by directing a small portion of the filtered liquid through a granular bed. Emergency purification can be achieved with a surface pre-coated with a powdered grade of carbon.

CONTROLLERS FOR CHEMICAL ADDITION Use acid adjustment for pH balance and a brightener feeder to control additions via a shunt from the rectifier. This assures optimum chemical usage without waste or unnecessary drag-out to waste treatment. The feeder energizes a metering pump in direct reaction to amps used. Totalizes amperage to evaluate metal consumption.

PUMP FOR CLEANER AGITATION - In-tank or out-of-tank pumps for agitation in place of air. It is the cleanest way to move solution to achieve better throwing power into recesses and accomplish plating at a faster rate.

RINSE TANKS

CONDUCTIVITY INSTRUMENTS - To control the amount of water necessary to maintain a maximum level of concentration of dissolved metals in plating rinse water.

FILTERS, CARBON PURIFICATION AND ION EXCHANGE - for metal recovery or spotless drying.

PRECIOUS METAL RECOVERY SYSTEMS - Ion exchange columns and electrolytic cells for silver and gold are available for recovering precious metals from rinse tanks and spent solutions.

WASTE TREATMENT

PUMP STATIONS - Single and duplex units for tanks and sumps accommodate a variety of chemical handling, transferring and waste treat applications.

pH MONITOR - CONTROLLER - RECORDER
These units are used to identify the level of pH in waste streams and record it for purposes of meeting federal or local requirements. Controllers activate chemical metering pumps to maintain pH limits for plating solution or waste treat.

FILTER PRESS - For liquid/solid separation at 40-60% solids concentration. Manual and automatic units designed for metal hydroxide waste treat systems.

AUXILIARY EQUIPMENT

HEATERS AND HEAT EXCHANGERS - To elevate and maintain solution temperatures. Heaters are quartz, steel or stainless steel. Heat exchangers are TFE.

PIPE TO HOSE ADAPTERS - Injection molded CPVC and PVDF available as straight or elbow in 1/2", 3/4", and 1" sizes with 'O' ring seal to assure leak-free operation.

STAINLESS STEEL SPRING CLAMPS - Useful, especially in chrome plating to hold the rack to the bus bar to make certain that constant contact is made at all times. Also for holding PC boards to racks. Spring clamps with an attached hose clamp for securing hoses to the tank are also available.

POLYPROPYLENE BALLS - These items reduce heat loss and fuel costs for heated tanks or reduce fume emissions. Three sizes—1", 1 1/2" and 1 3/4"—for use in plating tanks, hot cleaners, hot rinses, anodizing steel, etc.

VERTICAL PUMPS - FOR DRUMS, CARBOYS AND BARRELS - Manual siphon; hand lever, double acting piston or rotary gear; and centrifugal pumps with electric or air driven motors.

METERING PUMPS - For chemical addition to cleaners, plating solutions, waste treatment. Pumps can operate on a continuous injection basis or in response to an external signal from an ampere time or pH controller.

CLAMPS OF SOLID 316 STAINLESS STEEL - To securely fasten plating rack to bus bar to assure good electrical contact.



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