

## Oil-Free Air for Agitation

*"Blowers should be used to provide clean air that won't contaminate plating solutions..."*

Air agitation is highly recommended for many different plating processes. It sweeps the anodes and cathodes with fresh solution, decreasing polarization and enabling the use of higher current densities.

The air is usually forced into the solution through perforated pipes lying near the bottoms of the plating tanks.

In rinsing after plating, the same kind of air agitation installation improves removal of dragged-out plating solutions from the surfaces of parts and utilizes rinse water more effectively. Sometimes rinse volumes can be decreased if effective air agitation is used, making pollution control easier and less costly.

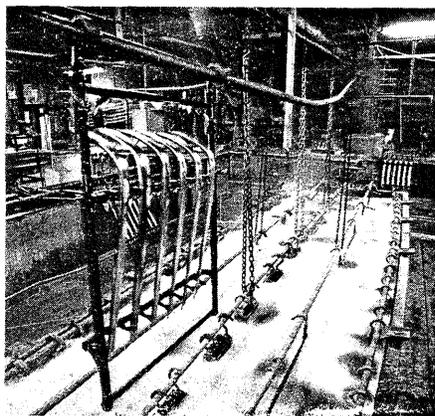
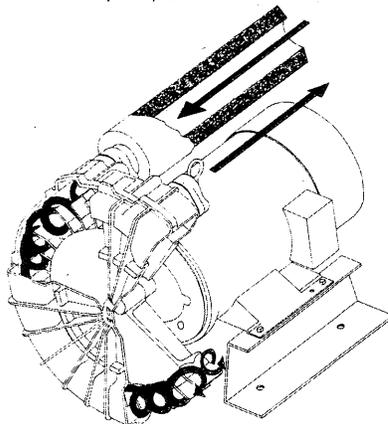
While it's a temptation to use plant compressed air to provide air agitation, compressed air usually contains a fine mist of oil. This oil interferes with plating baths and may reduce adhesion of electroplates by coating part surfaces with an oil film.

Better practice is to use low-pressure air from a separate blower. Blowers can supply oil-free air. So critical is the need for clean air, however, that even when blowers are used, many platers install an air filter on the inlet pipes, to be sure no dirt is admitted.

### CLEAN, LOW PRESSURE AIR

Oxy Metal Industries Corp., (OMI), Warren, MI, a leading manufacturer of plating machinery, uses Rotron regenerative blowers in their plating systems. Rotron regenerative blowers, they have found, have many advantages in supplying air for agitation of plating solutions. First, no lubrication is required, making possible oil-free air, with little maintenance. Plating shops often are cramped and Rotron's regenerative blowers are small in relation to the amount of air produced. Buildup is equal to that obtained from larger multi-stage blowers and positive-displacement pumps. In addition, since the pumps

**DRAWING SHOWS** how Rotron's regenerative blowers operate in providing air for agitation of plating bath: air is hurled outward against the curved housing, where it is reflected back, along the sides of the housing, to the vane root, and out again from the blade root toward the housing; here, it is again reflected back along the sides of the housing to the vane root. Each time the process repeats itself, pressure is regenerated to the point where it equals that of larger multi-stage blowers and positive-displacement pumps.



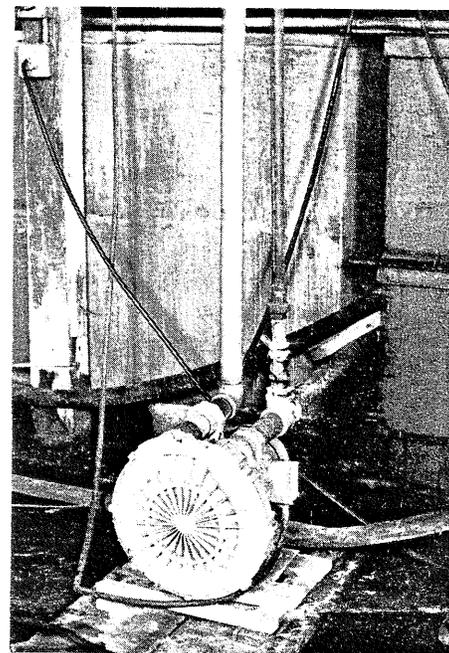
**AIR AGITATION** is standard good practice in today's nickel plating, as exemplified by these air agitated nickel tanks for plating automotive parts.

are close to personnel in a plating shop, limiting noise is important. All of Rotron's regenerative blowers produce less than proposed OSHA standards (85dBA).

### BETTER PLATING

According to engineers of Oxy Metal Industries, blowers are generally installed next to the tank being agitated when making a new installation, although other locations are feasible if the need arises.

Air agitation is widely recognized as an excellent way to speed plating while improving deposit properties. Rotron regenerative blowers provide clean air with a broad range of relatively quiet, low-maintenance equipment that fits in small areas in plating shops.



**"REMOTE" AIR SOURCE** is also practical. To agitate the electrolyte for its customer, Marysville Plating, Marysville, Mich., OMI installed this Rotron DR6 regenerative blower about 15 feet away from the actual plating tank.



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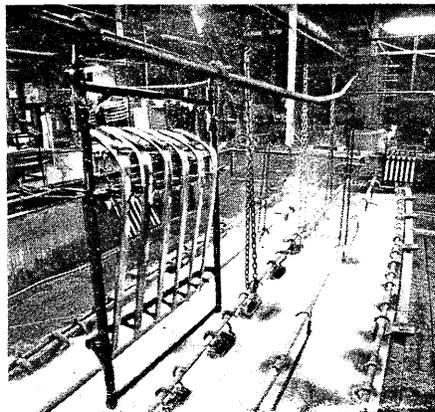
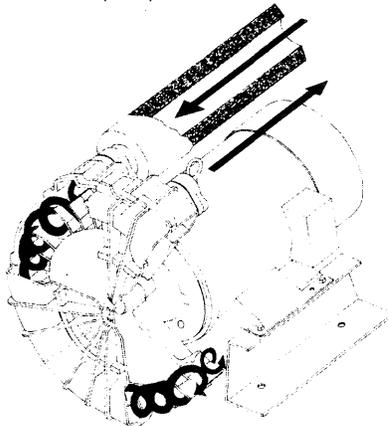
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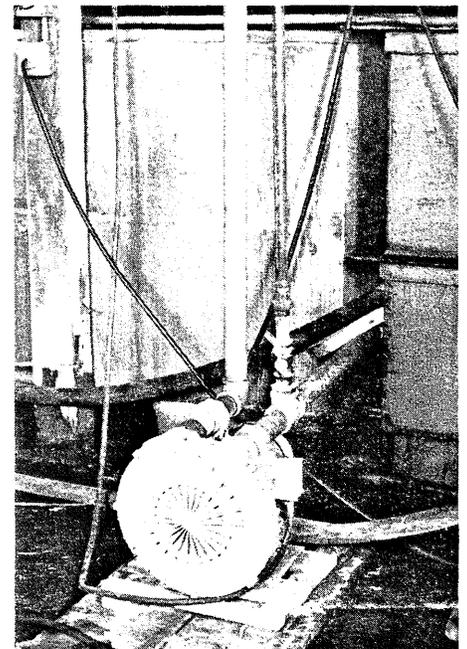
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