



GILLESPIE & POWERS, INC

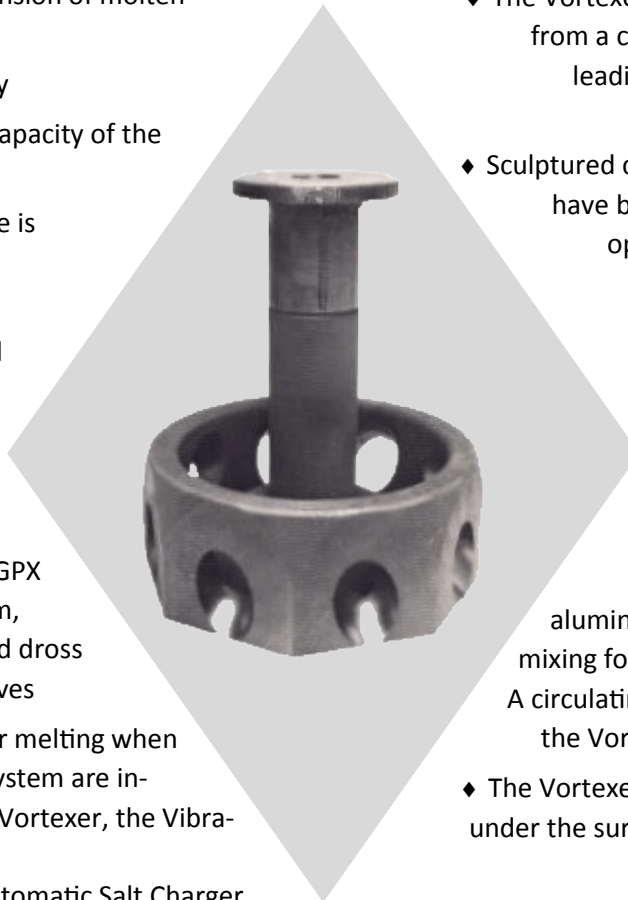
TROLLEY SUPPORTED VORTEXER

RAPID SUBMERGING SYSTEM

INCREASED RECOVERY WITH REDUCED SALT

PERFORMANCE ADVANTAGES

- ◆ Overcomes the high surface tension of molten aluminum
- ◆ Separates dross simultaneously
- ◆ Full utilization of the thermal capacity of the furnace is achieved
- ◆ Melt loss is reduced – Melt rate is increased – Dross separation is improved
- ◆ Drier dross and a separate well make removal easier
- ◆ Continuous charging is possible with no interruption in production
- ◆ Used in combination with the GPX Automatic Salt Charging System, melt loss is reduced further and dross separation substantially improves
- ◆ No manual labor is required for melting when all elements of the total GPX system are installed: The Trolley Supported Vortexer, the Vibratory Conveyor Feed Bin, and the Automatic Salt Charger
- ◆ All equipment has been fully tested and is being used to improve production in custom designed installations around the world
- ◆ Increased control of the entire production process means increased efficiency, increased recovery, reduced costs, and greater productivity



DESIGN ADVANTAGES OF HIGH EFFICIENCY VORTEXER

- ◆ The Vortexer is a graphite wheel that evolves from a circle into an octagonal shape with leading edges that create an unusually powerful low pressure zone
- ◆ Sculptured contours of eight holes and angles have been tested and proven to provide optimum submerging action pulling shredded scrap or cans into the void created by the whirl of the Vortexer
- ◆ The design of the Vortexer not only submerges with its physical mixing, but improves thermal mixing
 - ◆ Both the physical mixing of the aluminum and its alloys and the thermal mixing for heat transfer are homogeneous. A circulating pump brings heated metal into the Vortex chamber below the metal line
- ◆ The Vortexer instantly pulls the solid material under the surface of the bath preventing metal oxidation or loss
- ◆ Self cleaning surfaces of the wheel and shaft prevent dross accumulation and permit continuous charging

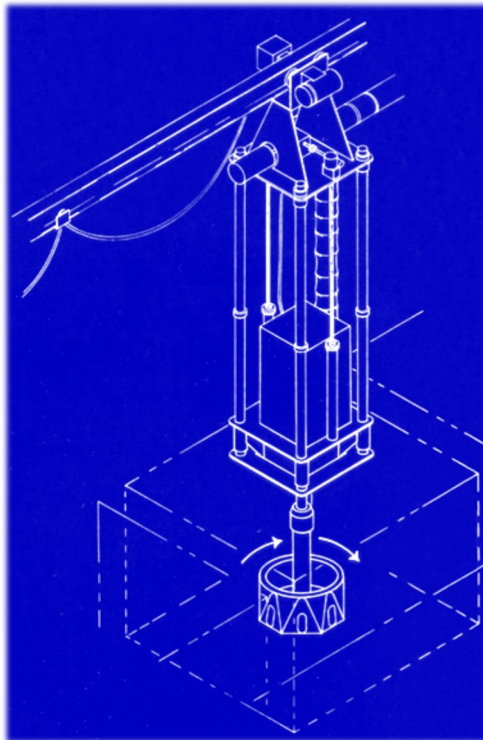
GILLESPIE & POWERS, INC
**TROLLEY SUPPORTED VORTEXER
VIBRATORY CONVEYOR FEED BIN
AUTOMATIC SALT CHARGER**

Advantages of Arrangement of Hardware into a Total Production System

GPX custom designs and engineers exclusive technical advantages into a total production system which includes the Trolley Supported Vortexer and Assembly augmented by the Vibratory Conveyor Feed Bin and the Automatic Salt Charger.

GPX VIBRATORY CONVEYOR FEED BIN

- ◆ Substantial reduction in salt use is possible without the compromise of the finished quality. As much as 50% reduction is possible
- ◆ Salts are added continuously and automatically with the scrap charge
- ◆ Eliminates the manual imprecise method of adding salts
- ◆ Variable speed feeder is used to dial in percentage of salt which varies with the amount of metal
- ◆ Salt is metered proportionally with the charge to provide the exact quantity needed
- ◆ Generation of dross is reduced and waste removal time and costs are reduced
- ◆ Molten metal and salt are swept together into the settling well.
- ◆ Continuous, uninterrupted operation is possible



ADVANTAGES OF THE OVERHEAD DESIGN

- ◆ Complete access to well for cleaning with no obstruction or pedestal
- ◆ Fully adjustable overhead position. All hardware is suspended using a trolley
- ◆ Design permits easy and fast installation and removal
- ◆ Mechanism is raised and lowered by motor with jack screw
- ◆ Four telescoping guide tubes circumscribe the mitered gear box drive
- ◆ Three sets of air cooled, high temperature graphite bearings are connected to output shaft
- ◆ Operated by 10hp variable speed drive motor in air cooled housing
- ◆ Overhead mechanism increases efficiency of entire operation

NEWLY PATENTED, PROVEN, AND IN PRODUCTION Perfected after years of research and development



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