

Rectangular impeder clusters for large tube & pipe mills.

Conventional impeder design for large tube & pipe mills (250mm-10 inch & larger) is to use large numbers of round impeders in a "Gatling Gun" configuration. These are highly susceptible to damage, and are expensive to maintain.

A cluster of eight rectangular impeders in a return flow configuration is used for welding 12.75 inch O.D. steel tubing.

Impeders are 2" x 1" x 41" long, and contain a total of 80 lbs of ferrite.

The assembly is supported on a 2" diameter coaxial tube.



Cluster Design

EHE's rectangular impeders place more than twice the ferrite mass in the critical area close to the open "vee" of the tube, resulting in higher welding speeds & reduced power requirements.

Unlike conventional clusters, the impeders are supported at both ends by aluminium or stainless steel manifolds. This not only results in a more rigid structure, but also protects the manifolds from damage due to weld spatter & mechanical wear.

The dual manifold design enables the impeders to be used in either through flow or return configurations. Many newer cold saw or milling type cutoffs required the elimination of excess coolant from the inside of the tube. EHE's rectangular clusters are also compatible with most types of internal scarfing equipment.

Most clusters use six impeders. In some cases, an additional pair of impeders may be added for a small increase in welding efficiency.

Cost Comparison

Rectangular impeder clusters generally cost less than conventional clusters of similar size, but contain twice the amount of ferrite. This ferrite is concentrated in the area below the open vee of the tube, where it has the greatest effect on welding efficiency.



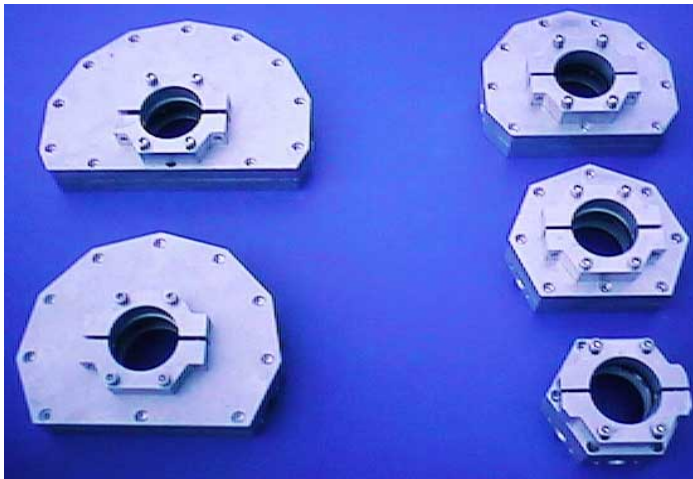
The rectangular impeders used in these clusters can be repaired easily on site, using inexpensive replacement parts available from stock.

The massive blocks of ferrite are fluted for additional cooling & are extremely resistant to damage. The outer casing of these impeders uses a high temperature epoxy/glass composite material with a wall thickness more than twice that of a conventional impeder.



41" long cluster of eight impeders for welding 12-3/4" x 5/8" wall steel tubing. A return flow configuration is used to eliminate excess coolant in the finished product.

Manifold & support tube for a six impeder cluster used to weld 7-1/2" O.D. steel tubing. Impeders mount on outside faces of manifold by means of two cap screws at each end. Coolant enters & leaves impeders via ports in manifold, with o-ring seals. Split clamp is used to attach manifolds to support tube or I.D. scarfing tow rod.



A selection of manifolds for 7-1/2" O.D. though 14" O.D. tubing.

All impeders are identical & can be switched between manifolds of different sizes to minimize cost.

Manifolds are available for tube & pipe up to 24 inches in diameter.

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