



17 January 2007

Robotic waterjet surface cleaning system

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KMT Cutting Systems has launched a new robotic system for three-dimensional waterjet cleaning and surface treatment. Based on the company's Cutting Box systems for waterjet cutting and routing, the new Cutting Box Blaster is designed to offer efficient, fast and accurate removal of coatings, grease and other substances from metal surfaces.

The new system has many applications, from removing paint on fixtures used in curing ovens for automotive bodies and removing excess polyurethane and other plastics from injection mouldings to cleaning blades in refurbishment work on diesel turbines and aircraft jet engines. The system also offers the option of abrasive blasting using a mixture of water and sand within the same cell.

The Cutting Box Blaster can be equipped with one or two inverted robots, mounted in fixed positions or able to move on tracks attached to the ceiling of the cell. The cleaning jet in the system is produced by forcing a fine jet of water at very high pressure through a multiple set of nozzles in a unit called a rotojet, mounted on the robot arm in the same way as a waterjet cutting head or routing head in other KMT Cutting Box designs.

Developed by KMT Waterjet Systems, the rotojet nozzles are mounted within a body that is rotated independently by a pneumatically driven motor. This produces a cone-shaped cleaning jet that, combined with the movement of the robot or the worktable, provides optimum coverage for cleaning a surface.