

Flow Europe – Innovative Waterjet Cutting Technology Supports Overall Productivity

Since the first presentation of „Dynamic Waterjet[®]“ FLOW was able to further strengthen its leadership in the market of waterjet cutting worldwide. Since 1980 when FLOW invented and patented the abrasivejet cutting technology this cutting technology has been improved and developed further. Tremendous cost advantages are not the only reason for the successful business development. High flexibility of the systems as well as easy handling add to the reasons why customers decide in favour of FLOW.

Bretten, October 2004 - As a pioneer in waterjet cutting technology FLOW first applied this process for industrial fleece and paper production in 1979. Today well-known companies of the aerospace, automotive, paper, plastics, food, metal, stone and glass industries belong to their customers. In the beginning of 1970s FLOW started in Kent, USA as a high-pressure pump manufacturer. Already in 1980 the European Headquarters - Flow Europe GmbH, based in Bretten - was founded. Besides own subsidiaries in Italy, Great Britain, France and Spain Flow Europe operates a European wide distribution network. The local customer support has been further strengthened through strategic investments in the field of research & development, service and personnel. Today the international FLOW Group is the leading system supplier worldwide for waterjet and abrasivejet cutting technology as well as high-pressure systems for cutting, cleaning and food processing.

No taper with “Dynamic Waterjet” by FLOW

At high cutting speeds conventional waterjet systems create angular errors at the edge of the cut also known as taper. This undesirable side effect occurs due to reduced stream intensity during the cutting process.

Leading scientists of the FLOW Group therefore developed a sophisticated technology to increase the accuracy - the system “Dynamic Waterjet”. Equipped with Active Tolerance Control this system moves the cutting head three dimensionally. The intelligent software FlowMaster[®] knows the correct tilt, the optimum cutting speed and the necessary rotary movement for every position along the cutting path. As FlowMaster software is an open system CAD files can be imported or drawings can be created directly within the software.

Manufacturing costs can be reduced by up to 50 percent

Dynamic Waterjet follows the contour smoothly and without a transition while the tilting angle is constantly being corrected according to the necessities. The result

convinces in every respect. Due to the tilt of the cutting head the cutting speed can be increased. Part tolerances of +/- 0.04 mm even at thick materials can be achieved under optimal conditions.

In direct comparison with wire EDM the FLOW technology convinces - depending on part geometry and material - by achieving reduced manufacturing costs of up to 50 percent. The cutting speed of Dynamic Waterjet can be eight to ten percent higher.

The cutting edge is not affected by heat; because the cold cutting process does not create heat-affected zones and thereby the mechanical properties of the material remain unchanged. As radiuses and contours can be cut very easily and flexible with waterjet the faster system Dynamic Waterjet also offers specific advantages to milling.

Dynamic Waterjet – faster and better

Compared to conventional waterjet cutting systems Dynamic Waterjet achieves better part quality and higher cutting speeds. For the customer this means not only high cost saving but also a much better part quality.

In combination with the WMC2, a modular and flexible machining centre, the customer gets all the advantages for mass production, for high-speed cutting jobs as well as for single and small parts production - quality on a high level included.

At their booth of EuroBLECH 2004 Flow Europe GmbH demonstrated how easily FLOW systems are to operate and how many advantages waterjet cutting offers.

Flow Europe GmbH is a division of Flow International Corporation, USA and the European Headquarters for all products relating to ultra-high pressure waterjet cutting technology. FLOW is a world leader in the development, design and sales of complete water- and abrasive-jet cutting machines for processing a wide variety of raw materials.

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