

AUTOMATED WET MASKING FOR DIFFUSION COATINGS

ABSTRACT

A wet masking system (60) for applying a maskant to a portion (16) of a workpiece (10) includes one or more pressurized mixing vessels (62, 64) with agitators (66) for continuously blending the ingredients of the maskant, a dispensing system (88) connected to the vessels (62, 64) for supplying metered volumes of maskant to injection valves (94, 96). An electronic controller (20) operable for controlling the system (60) to coat the portion. A fixture (30) for holding the workpiece (10) with just the portion (16) inside a cavity (31) of the fixture (30) includes one or more inlet ports (44, 46) alignable with injection ports (104, 106) of the injection valves (94, 96) injecting the maskant into the cavity (31). Heaters (110, 112) are positioned for drying or flash drying the maskant on the portion of the workpiece. Recirculation lines (114, 116) from the injection valves (94, 96) to at least one of the mixing vessels (62, 64) operated by the controller (20) to flow the maskant through the recirculation lines (114, 116) after a period of time when no maskant is flowing through masking system (60).

Figure 1