

RECIRCULATION SYSTEM AND METHOD FOR AUTOMATED DOSING APPARATUS

ABSTRACT:

A recirculation system associated with an automated dosing apparatus (10) employs pressurized supply canisters (22A, 22B) for flowable materials to be dosed and a recirculation loop which permits the flowable materials to be recirculated through the dosing head (12) and returned to the pressurized supply canisters (22A, 22B). The recirculation system includes a buffer reservoir (60A, 60B) which is fluid-connected to both the dosing head (12) and the pressurized supply canister (22A, 22B). During a recirculation mode, the flowable material supplied to the dosing head (12) will be caused to recirculate through channels defined in the dosing head (12) and thereafter be directed to the buffer reservoir (60A, 60B). The recirculated paint will accumulate in the buffer reservoir (60A, 60B) until the recirculation mode has been completed. At that time, a transfer mode will be initiated so as to cause the buffer reservoir (60A, 60B) to be pressurized greater than the pressure existing in the stock canister (22A, 22B). This greater pressure within the buffer reservoir (60A, 60B) will thereby serve to forcibly transfer the accumulated recirculated paint therein to the supply canister (22A, 22B).

Fig.: 1