

Dr. F. Haslam

JAL/YP/46B-10

1st November 1974.

VISIT TO NORDSON (U.K.) LTD., THAME

Tuesday, 29th October 1974

Present: Mr. A. Withers - Managing Director } Nordson
Mr. A. Handforth - Sales Manager } (U.K.) Ltd.

Mr. P. Marks }
Mr. A.R. Ing } Swift Chemical Co.
Mr. K. Booth }

Mr. H.G. Horsewell }
Mr. J.A. Luke } B-A.T., G.R. & D.C.

Mr. Ing of Swift Chemical Co. arranged with Nordson (U.K.) Ltd., a demonstration of hot melt spraying equipment as used in the packaging industry, and which was considered suitable for spraying the hot melt grade being considered for the F.P.P. filter project. Swift supplied material for the demonstration.

Mr. Withers described the operation of the system. It consisted of a thermostatically controlled melt chamber incorporating a pump, a connecting heated flexible hose and a hot melt gun to which the spraying head can be attached. Depending on the operation to be performed a great number of reservoir/pump and gun specifications are available. Catalogues were presented.

The system is of the airless type. The atomised spray is produced by forcing the molten stream from the delivery pipe through a 'T-plate' via two accurately sized and positioned orifices into an expansion chamber, in which pre-atomisation is produced. This chamber also produces a controlled amount of turbulence, by means of an accurately positioned slot set between the orifices. This arrangement serves to mix the pre-atomising jets and even out irregularities in flow caused initially by the differential flow in the hose. The pre-atomised spray is then ejected through a carbide nozzle, the dimensions of which sets the flow rate and the pattern of the atomised spray and particle size.

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The melt chamber, hose and gun were heated independently. In the demonstration the respective temperatures were 127°C, 143°C and 149°C.

The equipment is usually set for a fixed rate of application but variable systems are available.

The conditions required in the F.P.P. process would require a 20 cm wide spray to be laid down at a base speed of between 100-400 metres/minute with an application rate between 50-200 gms/minute.

The cost of equipment to meet this demand would be £1,600 per set, with extra guns each £140 and a metre of hose each £200. Up to four guns can be used from one melt chamber/pump assembly and controlled individually. Because of excessive hose lengths needed for the F.P.P. application and subsequent heat loss it is recommended to use 2 nozzles only (sic filter machines) per set, thus giving a cost of approximately £1,200 per filter machine, depending on chamber siting.

Nordson say they can better 12 weeks delivery. Occasionally they can deliver from stock and could see no reason why an early request for purchase of a unit by B-A.T. could not be met from present stocks.

In order that G.R. & D.C. can evaluate the equipment, Mr. Withers has agreed to the loan of suitable equipment for periods up to 1 week at a time before decisions on purchase are reached. He has also offered technical assistance during these trials, especially in the area of nozzle selection.

Swift have offered to supply suitable grades of material for these trials.

It is intended to proceed immediately with these trials.

J.A. Luke

J.A. Luke

Distribution

Dr. S.J. Green
✓ Dr. F. Haslam

Mr. N.E. Willis
Mr. H.G. Horsecwell

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sales/servicing office centres

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Belgium	New Zealand
Canada	(Norway)
Denmark	South Africa
Finland	(Spain)
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Holland	U.K.
(Israel)	U.S.A.
(Italy)	

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