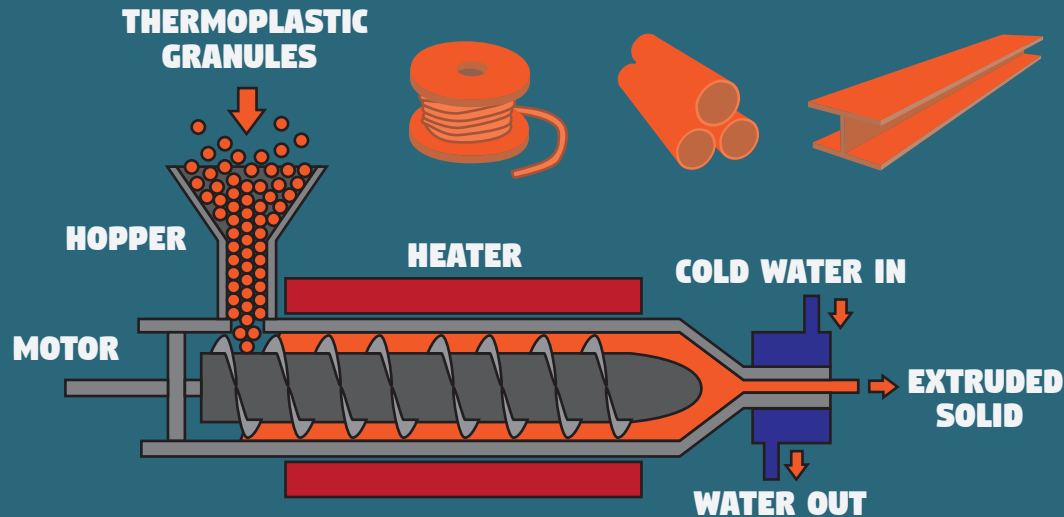


PLASTIC EXTRUSION

MANY PLASTIC MATERIALS SUCH AS PVC, NYLON, POLYTHENE, POLYPROPYLENE AND POLYSTYRENE ARE USED IN A PROCESS CALLED EXTRUSION. THESE MATERIALS ARE ALL TYPES OF THERMOPLASTICS, MEANING THEY CAN BE HEATED INTO A LIQUID THEN MOULDED INTO DIFFERENT SHAPES. THIS PROVIDES US WITH USES SUCH AS WIRING INSULATION, PVC PIPING, PLASTIC SHEETING AND ALSO PROFILE SHAPES.



COSTS

COMPANIES COULD PAY IN EXCESS OF £250,000 FOR A MODERN PLASTIC EXTRUSION MACHINE. DIE COSTS IS DEPENDENT ON THE COMPLEXITY AND MATERIAL BUT AVERAGES AROUND £1000 PER TOOL. MOST MANUFACTURING COMPANIES WILL HAVE A MINIMUM QUANTITY PER RUN, WHICH IS SOMETHING TO CONSIDER WHEN PLANNING COSTS.

TIME

EARLY DAY EXTRUSION MACHINES WOULD EXTRUDE AROUND 2600LB OF PLASTIC PER HOUR. HIGH SPEED MACHINERY ARE BEING PRODUCED THESE DAYS, BEING ABLE TO OUTPUT AROUND 3750LB PER HOUR. THESE PRODUCTION SPEEDS CAN VARY BECAUSE EVERY MATERIAL IS DIFFERENT, AND CAN REQUIRE ALTERNATIVE ROTATIONAL SPEEDS AND TEMPERATURES.

POST PROCESSING

ADDITIONAL OPERATIONS CAN BE APPLIED TO PLASTICS AS THEY ARE BEING OUTPUTTED FROM THE DIE IN THEIR EXTRUDED FORM. THESE PROCESSES INCLUDE PUNCHING, LABELLING, SLITTING, FOLDING, NOTCHING AND CUTTING TO A SPECIFIED LENGTH. SOME OF THESE CAN BE COMPLETED IN-LINE WITH THE EXTRUDER, WHERE OTHERS WILL BE COMPLETED BY HAND.

DESIGN

THERE ARE MANY CONSIDERATIONS TO DESIGNING A PLASTIC EXTRUDED PRODUCT TO ENSURE YOU ACHIEVE THE BEST RESULTS. A WELL DESIGNED EXTRUSION WILL PROVIDE COST-EFFECTIVE TOOLING, PREVENT PRODUCTION ISSUES AND WILL REDUCE THE DELIVERY TIME. YOU SHOULD CONSIDER REGULAR WALL THICKNESS'S, LIMITED DETAILING AND PROVIDE SIZE TOLERANCES.

TYPE OF MATERIALS

UPVC

A RIGID TYPE OF PVC SUITABLE FOR A WIDE RANGE OF INDOOR AND OUTDOOR USES SUCH AS WINDOWS, TRIMS, GLAZING AND PACKAGING.

PVC

A VARIABLE FLEXIBLE MATERIAL USED FOR MANY DIFFERENT APPLICATIONS INCLUDING CURTAIN PELMETS, SLEEVES, TRIMS, HOSE PIPING AND WIRING INSULATION.

ABS

HARD PLASTIC THAT CAN WITHSTAND HIGH TEMPERATURES AND HAS GOOD ADHESIVE PROPERTIES. USED INDOORS FOR PIPING, HOSE PIPING, CONSUMER PRODUCTS AND KITCHEN APPLIANCES.

POLYETHYLENE

CAN BE SUPPLIED IN MULTIPLE DENSITIES DEPENDING ON THE APPLICATION. SUITABLE FOR INDOOR AND OUTDOOR USES AND HAS GOOD RESISTANCE TO CHEMICALS. USED IN GAS/WATER PIPING, PROTECTIVE COVERS, BOTTLES AND OTHER PACKAGING.

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