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Financially speaking, one of the most valuable things you can do to analyze your extrusion process is to evaluate the energy balance. A certain amount of polymer is being extruded and it has a certain melt temperature. By multiplying the output by the average specific heat and then by the temperature rise of the polymer through the extruder you have the energy going into the polymer. By measuring the power draw of the extruder at the distribution point you have the total power used. Comparing them tells you the efficiency of the extrusion operation. Since power is one of the major costs of plastics processing it is important to optimize the power efficiency. It is surprising to many processors to find their process is less than 50% power efficient. This is due to a variety of issues such as over cooling the barrel and feed throat, poorly set up drives, bad screw designs, poor heater contact and running in an inefficient portion of the speed range to name a few. To be successful in today's competitive climate this is an area that cannot be ignored.

– Jim Frankland Milacron

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