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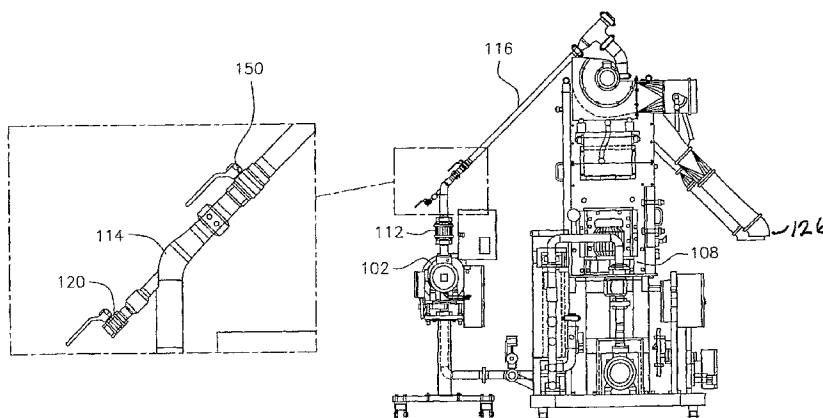
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(54) Title: METHOD AND APPARATUS FOR MAKING CRYSTALLINE POLYMERIC PELLETS AND GRANULES



(57) Abstract: A method and apparatus for underwater pelletizing and subsequent drying of crystallizing polymers to crystallize the polymer pellets without subsequent heating is shown in Figure 5. High velocity air or other inert gas is injected into the water and pellet slurry line (120) toward the dryer near the pelletizer exit (102) at a flow rate of from about 100 to about 175 m³/hour, or more. Such high-speed air movement forms a vapor mist with the water and significantly increases the speed of the pellets into and out of the dryer such that the polymer pellets leave the dryer with sufficient latent heat to cause self-crystallization within the pellets. A valve mechanism in the slurry line (150) after the gas injection further regulates the pellet residence time and a vibrating conveyor after the dryer helps the pellets to achieve the desired level of crystallinity and to avoid agglomeration.