

ABSTRACT

EFFERVESCENT NOZZLE FOR CATALYST INJECTION

A nozzle for catalyst injection for olefin polymerization is provided. In one or more embodiments the nozzle includes a first conduit including a body, a tapered section, and an injection tip. The nozzle also includes a second conduit having an inner surface and an outer surface. The first conduit is disposed about the second conduit defining a first annulus therebetween. The nozzle further includes a support member at least partially disposed about the outer surface of the first conduit defining a second annulus therebetween. The support member has a converging outer surface at a first end thereof.

Fig. 1 & 1A