Vent Stream for O_2 Combustion

Summary:
A method has been developed for oxygen-enhanced combustion that increases productivity and fuel efficiency, while reducing flue gas volume and pollution emissions. The technology takes advantage of the oxygen-rich vent stream from nitrogen generation equipment which may also exist at a factory.

Overview:
Air Products is offering for license a method for oxygen-enhanced combustion using a vent stream of nitrogen generator. In order to improve productivity and thermal efficiency of the heating and melting process, oxygen enhanced combustion is utilized. Oxygen is proven to provide benefits in the combustion process; notably increasing productivity and fuel efficiency, while reducing flue gas volume and pollution. Oxygen has been used in many ways to enhance existing air/fuel fired combustion processes. Although oxy-fuel typically results in the greatest benefit it usually comes with a trade off in cost.

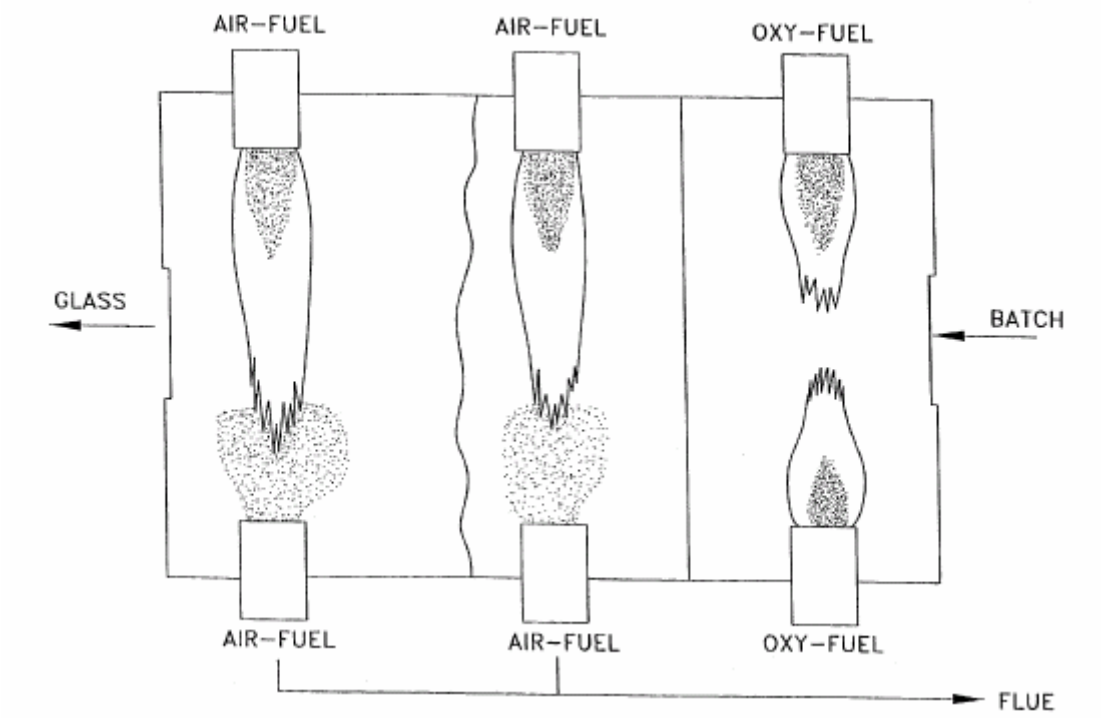
This technology is a supplemental benefit to the production of high purity nitrogen by separation from air in a nitrogen plant. In this invention the nitrogen plant is operated to produce a vent, exhaust or waste stream having by volume 40-90% oxygen balanced nitrogen, atmospheric gases, and impurities such as CO_2 and H_20.

Benefits:

- Increased productivity
- Increased fuel efficiency
- Reduced flue gas volume
- Reduce pollution emissions including NOx

Priority Patent Number	Title	Status	Grant Date
6,217,681	Method for Oxygen-Enhanced Combustion using a Vent Stream	Issued	4/17/2001

Schematic: A representation of an oxy-fuel boosting system



Also Offered:
Technology transfer assistance may be provided with a license.

Availability:
All serious inquiries for license will be considered.

For more information on licensing this technology contact:

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