Air Products’ patent pending* burner technology minimizes melt losses and flux usage while achieving improved productivity, reduced process costs and emissions. The Air Products High-Yield Oxy-fuel Burner was designed specifically to increase yield for secondary aluminum melters. Our combustion researchers used state-of-the-art computer modeling – with extensive operational data from melting operations – to develop a new generation burner.

**Key features and benefits**

While oxy-fuel technology has a proven track record in the metals industry, this development adds yield improvement and flux reduction to the long list of benefits. Compared to air-fuel systems, our High-Yield Oxy-fuel Burner can provide the same benefits of conventional oxy-fuel technology, including fuel savings, increased production and reduced baghouse temperatures and loadings. This new generation technology can also provide yield savings compared to existing air-fuel systems through reduced melt times, reduced excess air, protective furnace flow patterns and more consistent operation.

Our High-Yield Oxy-fuel Burner technology can improve your operations through one or more of the following aspects:
- Increased metal yield
- Reduced usage of flux or salt in the process
- Enhanced operational consistency and process efficiency
- Increased production rates, fuel savings and lower emissions vs. air-fuel systems
- Decrease in noise levels

The technology can be easily retrofitted to existing furnaces with minimal interruption to your production schedules. Our industry specialists can provide operational support and consulting on an ongoing basis to help you experience a smooth transition and consistent results.

* US2011 0154950 A1

**Comparison testing**

Comparison tests have shown the Air Products High-Yield Oxy-fuel Burner can achieve the following results over conventional oxy-fuel burners.
- Reduced flux by 10%-15%
- Increased yield by 1%-2%

“We have worked with Air Products for many years and through this relationship, we’ve improved our melting process on rotary and reverb furnaces using different types of technologies. Having used the Air Products High-Yield Oxy-fuel Burner technology for over two years, we’ve seen an improvement in yield and with the combination of further melting control optimization such as the Advanced Low Emissions Melting System, we’ve achieved great results on production increase, yield and lower maintenance on ducting and backhouse system.”

Ludek Septun,
Production Manager,
Remet
“Our extensive experience in the industry along with our Centre of Excellence capabilities has given us a strong platform for continuous improvement in combustion technologies. The High-Yield Oxy-fuel Burner is one example of how our expertise has helped customers such as Remet.”

Petr Tlamicha, Industry Manager for Primary Metals, Minerals & Energy