



# JUPITER-ENCON ALLIANCE



Decrease energy consumption, reduce your carbon footprint **and increase production!**

OUR TECHNOLOGY REDEFINES **PROCESS HEATING, ENERGY EFFICIENCY** AND **LOW MAINTENANCE** IN THE ALUMINIUM AND STEEL INDUSTRY.



SWITCH TO THE **AWARD WINNING OXY-FUEL PROCESS** FROM THE JUPITER-ENCON ALLIANCE FOR:

- 1** SIGNIFICANT FUEL SAVINGS & ENERGY CONSERVATION  
Fuel savings up to 30% in the steel industry; up to 70% in the aluminium industry
- 2** GREENHOUSE GAS EMISSION REDUCTION  
Equivalent reduction in CO<sub>2</sub> output relative to fuel savings
- 3** ENVIRONMENTAL & HEALTH BENEFITS  
Virtual elimination of NO<sub>x</sub> production with natural gas & oxy-fuel combustion
- 4** LOW COST PRODUCTION  
Related to the relatively low energy input and maximized heat transfer
- 5** LOW MAINTENANCE  
Longer furnace refractory life and temperature uniformity due to flame placement

## CONTACT

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# FACTS AND MISCONCEPTIONS

Regarding Use Of The **Jupiter Oxygen Corporation (JOC) Oxy-Fuel System**

## MISCONCEPTION

## FACT

- |   |  |   |  |
|---|--|---|--|
| A | Oxy-fuel will cause a furnace meltdown.                                      | > | The Jupiter process has not caused a furnace meltdown or harmed a furnace in any manner.   |
| B | Oxy-fuel systems are expensive.  | > | A JOC oxy-fuel combustion system is comparable in cost to a regenerative system and in most cases may be cheaper   |
| C | Oxy-fuel generates more dross.   | > | Oxy-fuel generates less dross since one of the requirements is strict control of oxygen volume and placement not found in air fired furnaces.  |
| D | Refractory life is shorter using oxy-fuel                                    | > | Oxy-fuel refractory life is longer due to the exceptional uniformity of temperature and proper flame placement.  |
| E | Oxy-fuel creates higher CO <sub>2</sub> concentrations                       | > | Oxy-fuel creates higher furnace CO <sub>2</sub> concentrations but reduces overall CO <sub>2</sub> output since the flue gas is retained in the furnace longer enabling greater efficiency and a lower total volume of CO <sub>2</sub> . |
| F | Oxy-fuel requires sophisticated specialized equipment                        | > | The Jupiter oxy-fuel system utilizes off the shelf hardware and controls available worldwide.  |
| G | Oxy-fuel flames will cause localized overheating of the furnace and product. | > | Not in the proprietary Jupiter process which is why the system is patented and available only from Jupiter or Encon.   |
| H | Installation requires significant downtime to install.                       | > | The only downtime required is to install the burners in the walls and is usually less than one week.   |
| I | Oxy-fuel is unproven.  | > | The Jupiter process has been in continuous usage at JOC's aluminium mill licensee for over ten years and is a proven process requiring minimal effort to maintain and operate.   |
| J | Installing a Jupiter oxy-fuel system has a high risk.                        | > | Jupiter and Encon have quoted numerous systems and have the expertise to provide the end user with a proper turnkey system if desired.   |
| K | Oxy-fuel is only good for remelting aluminium                                | > | The Jupiter process can be implemented in countless applications like metals process reheating such as slab and billet reheating for the steel industry.   |