

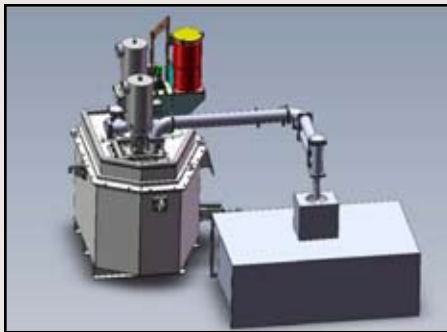
## PYROTEK TAIWAN SUPPORTS NATIONAL PROCESS RESEARCH ON METAL MATRIX COMPOSITES

A recent contract from a leading national research institute in Taiwan awarded to Pyrotek's Taiwan facility centred on the processing of metal matrix composites. The particular requirement for these special materials was to preheat, submerge and mix silicon carbide powder into molten 6016 aluminium alloy and transfer it to a Wagstaff DC caster.

The customer's specific objective for Pyrotek was to deliver 3.4 litres/min to the casting tundish while keeping the velocity above 10 fps. The solution devised was to use the Metallurgics T-18T, T-15 LOTUSS™ pumping and metal circulation system with a horizontal Tunetsu immersion heater furnace. The furnace equipment was engineered and developed for this particular project application by Pyrotek's Canastota plant in New York. The T-18T incorporated conventional transfer piping, which delivered metal at 400 litre/min to and from the caster. At the caster, the piping incorporated a large high velocity hydrodynamic valve that would provide 3.4 litre/min to the casting tundish.

Pyrotek completed the turnkey installation in December last year and subsequently ran several trials with the customer. Initial micrographs of the resultant cast MMCs were very favorable and met with the client's process and product requirements. The project was also an excellent opportunity for Pyrotek Taiwan to further develop the market in the region. The next IMS System is scheduled to start-up in spring 2009 at Formosa Alloys.

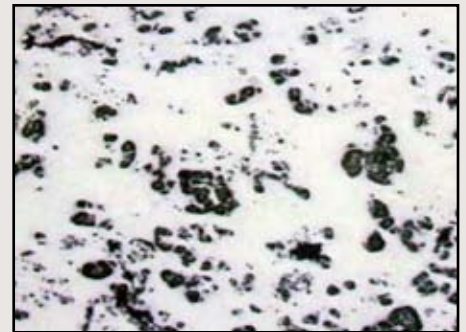
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System design view



Casting with the T-18T



Electronmicrograph of cast billet