TPS™ FABRICATES RA 353 MA® Alloy CALCINER

A kiln shell of 3/4” (19mm) cast 35Ni 25Cr 15Co 5W began pitting in hours, after the first run. Temperature 2192°F (1200°C), calcining metal oxides. After evaluating exposed coupons of RA 353 MA, 602CA, RA333® and the cast NiCrCoW alloy, RA 353 MA was chosen. Thermal Processing Solutions, Inc., Bartlett, Illinois designed and fabricated a new shell of 3/8” (9.5mm) RA 353 MA plate. This calciner shell went into trial service September 1998 and is currently in continuous production mode. The shell is 18” dia by 15’ furnace length (457mm dia by 3560mm long). Outside of the furnace heated zone, the ends are fabricated of RA310. All welding was done using RA 353 MA GMAW wire. A second kiln is now being fabricated, 24” dia by 15’ furnace length (610mm by 4570mm long), with ends fabricated of RA310.

Thermal Processing Solutions designs and builds rotary calciners, kilns, dryers and coolers, and offers pilot testing services to assist in product development. Rolled Alloys materials used by TPS™ include RA 353 MA, RA 253 MA®, RA85H®, RA330® and RA310.

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