Analysis of thermal processes in furnaces for CMA firing

APPENDICES
APPENDIX I- STRUCTURE OF STACK PUT IN FURNACE

Flatfiring (360 productplates)

Weight

Productplate

Alumina support

Silicon carbide plate
A survey of the thermal processes during firing of CMA products

APPENDIX II- DIFFERENT GEOMETRIES AND TEMPERATURE CURVES

Figure II-1  Geometry 1; stack in 60 litre furnace

Figure II-2  Temperature profile geometry 1
A survey of the thermal processes during firing of CMA products

Figure II-3  Geometry 2; stack in a 60 litre furnace

Figure II-4  Temperature profile geometry 2
A survey of the thermal processes during firing of CMA products

Figure II-5  Temperature profile geometry 2
A survey of the thermal processes during firing of CMA products

Figure II-6  Geometry 3; stack in a 60 litre furnace

Figure II-7  Temperature profile geometry 3
A survey of the thermal processes during firing of CMA products

Figure II-8  Geometry 4; stack in a 300 litre furnace

Figure II-9  Temperature profile geometry 4
A survey of the thermal processes during firing of CMA products

Figure II-10  Temperature profile geometry 4
A survey of the thermal processes during firing of CMA products

Figure II-10  Geometry 5; stack in a 300 litre furnace

Figure II-11  Temperature profile geometry 5
A survey of the thermal processes during firing of CMA products

Figure II-12 Geometry 6; stack in a 300 litre furnace

Figure II-13 Temperature profile geometry 6
APPENDIX III- DIFFERENT FIGURES FROM ANSYS

Figure III-1: Element distribution 60 litre furnace
Figure III-2: Element distribution stack in furnace
Figure III-3: Element distribution stack in furnace
Figure III-4: Element distribution 300 litre furnace
Figure III-5: Temperature distribution during heating up in stack
Figure III-6: Temperature distribution during heating up in stack
Figure III-7: Element distribution 1/4 60 litre furnace for CFD
Figure III-8: Element distribution 1/4 60 litre furnace for CFD
Figure III-9: Velocity field in furnace during forced cooling by CFD
Figure III-10: Temperature distribution during forced cooling by CFD
Figure III-11: Velocity field in furnace during forced cooling by CFD
Figure III-12: Temperature distribution during forced cooling by CFD
PLOT NO. 1
ELEMENTS
TYPE NUM

XV = 0.3881
YV = -0.8495
ZV = 0.3573
*DIST = 305.6
ZF = 200
A-ZS = -52.81
CENTROID HIDDEN

Figure III-1
Figure III-3
TIME = 10800

TEMP
SMN = 538.277
SMX = 597.783

538.277
544.889
551.5
558.112
564.724
571.336
577.947
584.559
591.171
597.783

Figure III-6
Figure III-7
Figure III-9
Figure III-10