Nomenclature

tm  Melt temperature
tpst  Preheated shell temperature
hp  Pour height
I  % Inclusions
C  % Cold shuts
H  Hardness (BHN)
S  Surface finish (RA)
T  Tensile strength (MPa)
HTC  The overall heat transfer coefficient of between ambience and investment casting shell

\( h_a \)  Function of the convection heat transfer coefficient
\( T_A \)  Ambient temperature
\( N_{ul} \)  Nusselt number
\( R_{al} \)  Rayleigh number
\( g \)  Gravitational acceleration
\( \beta \)  Thermal expansion coefficient
\( v \)  Kinematic viscosity of the fluid
\( L \)  Characteristic length scale
\( \alpha \)  Thermal diffusivity
\( T_s \)  Surface temperature
\( T_\infty \)  Ambient temperature
\( \varepsilon \)  Shell emissivity