SRS for h_g and h_c

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1 Table of Units

Throughout this document SI (Système International d'Unités) is employed as the unit system. In addition to the basic units, several derived units are employed as described below. For each unit, the symbol is given followed by a description of the unit with the SI name in parentheses.

Symbol	Description
m	length (metre)
kg	mass (kilogram)
s	time (second)
K	temperature (kelvin)
mol	amount of substance (mole)
A	electric current (ampere)
cd	luminous intensity (candela)
°C	temperature (centigrade)
J	energy (joule)
W	power (watt)
cal	energy (calorie)
kW	power (kilowatt)

2 Table of Symbols

The table that follows summarizes the symbols used in this document along with their units. The choice of symbols was made with the goal of being consistent with the nuclear physics literature and that used in the FP manual. The SI units are listed in brackets following the definition of the symbol.

Symbol	Description	Units
h_g	effective heat transfer coefficient between clad and fuel surface	$\mathrm{kgs}^{-3\circ}\mathrm{C}^{-1}$
h_c	convective heat transfer coefficient between clad and coolant	$\mathrm{kgs}^{-3\circ}\mathrm{C}^{-1}$

3 Data Definitions

Refname	DD:h.g
Label	h_g
Units	$\text{kgs}^{-3\circ}\text{C}^{-1}$
Equation	$h_g = \frac{2k_c h_p}{2k_c + \tau_c h_p}$
Description	h_g is the effective heat transfer coefficient between clad and fuel surface k_c is the clad conductivity h_p is the initial gap film conductance τ_c is the clad thickness

Refname	DD:h.c
Label	h_c
Units	$\text{kgs}^{-3\circ}\text{C}^{-1}$
Equation	$h_c = \frac{2k_c h_b}{2k_c + \tau_c h_b}$
Description	h_c is the convective heat transfer coefficient between clad and coolant k_c is the clad conductivity h_b is the initial coolant film conductance τ_c is the clad thickness