

# **ABSTRACT**

A Co-based alloy heat exchanger comprises: in mass %, 0.08-0.25% C; 0.1% or less B; 10-30% Cr; 5% or less Fe and 30% or less Ni, the total amount of Fe and Ni being 30% or less; W and/or Mo, the total amount of W and Mo being 5-12%; Ti, Zr, Nb and Ta, the total amount of Ti, Zr, Nb and Ta being 0.5-2%; 0.5% or less Si; 0.5% or less Mn; 0.003-0.04% N; and the balance being Co and impurities. The impurities include 0.5% or less Al, and 0.04% or less O. The heat exchanger is a polycrystalline body of matrix crystal grains with an average size of 5-100  $\mu\text{m}$ . In the matrix crystal grains, segregation cells with an average size of 0.13-2  $\mu\text{m}$  are formed, wherein components constituting an MC type carbide comprising Ti, Zr, Nb and/or Ta are segregated in boundary regions of the segregation cells.

(FIG. 3)