

ALLOY FOR SOFT MAGNETIC FILM LAYERS, WHICH HAS LOW
SATURATION MAGNETIC FLUX DENSITY AND IS TO BE USED IN
MAGNETIC RECORDING MEDIUM, AND SPUTTERING TARGET
MATERIAL

ABSTRACT

There is provided an alloy for a soft magnetic film layer used in
a magnetic recording medium and having a low saturation
5 magnetic flux density, and a sputtering target material. The
alloy comprises one or more selected from the group consisting
of Y, Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Ni, Cu, Al, B, C, Si, P,
Zn, Ga, Ge, and Sn, and the balance Co and Fe; and

in at%, the following formulae (1) to (3):

10 (1) $0.50 \leq \text{Fe}\% / (\text{Fe}\% + \text{Co}\%) \leq 0.90$;

(2) $5 \leq \text{TAM} \leq 25$; and

(3) $15 \leq \text{TAM} + \text{TNM} \leq 25$

are satisfied,

with the proviso that TAM and TNM are:

15 $\text{TAM} = \text{Y}\% + \text{Ti}\% + \text{Zr}\% + \text{Hf}\% + \text{V}\% + \text{Nb}\% + \text{Ta}\% + \text{B}\% / 2$; and

$\text{TNM} = \text{Cr}\% + \text{Mo}\% + \text{W}\% + \text{Mn}\% + \text{Ni}\% / 3 + \text{Cu}\% / 3 + \text{Al}\% + \text{C}\% +$
 $\text{Si}\% + \text{P}\% + \text{Zn}\% + \text{Ga}\% + \text{Ge}\% + \text{Sn}\%$,
respectively.

FIG.1