

FIG.1

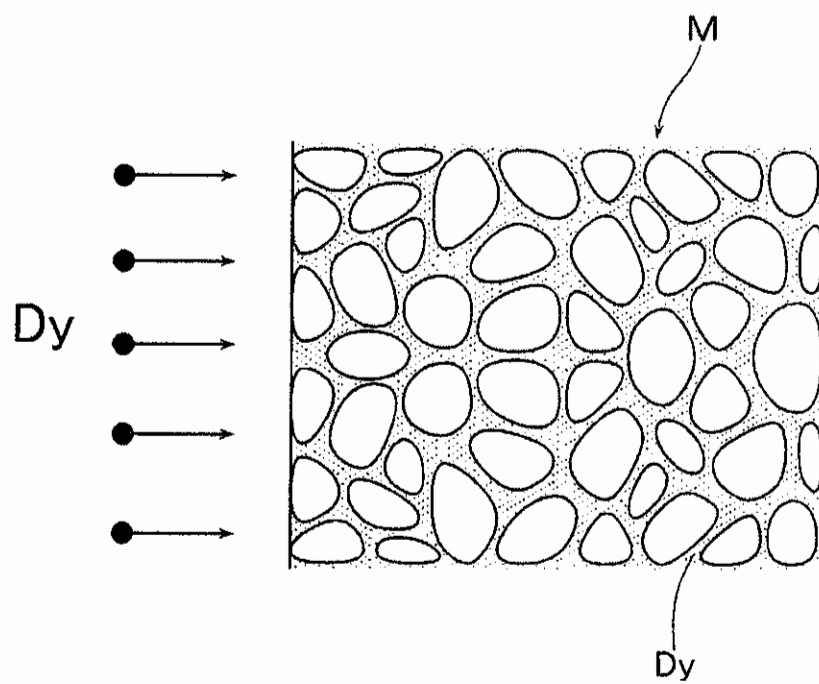


FIG.2

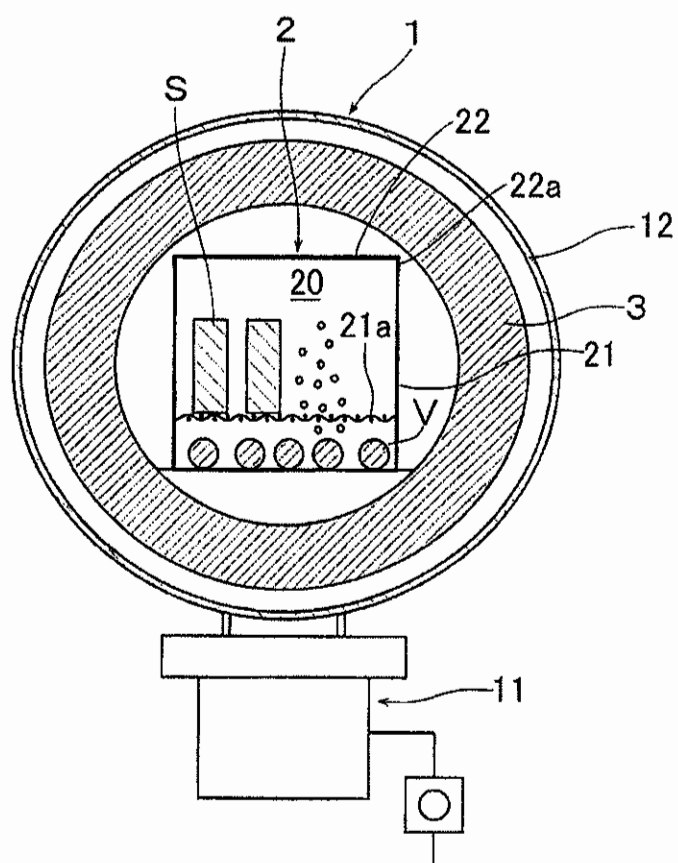


FIG.3

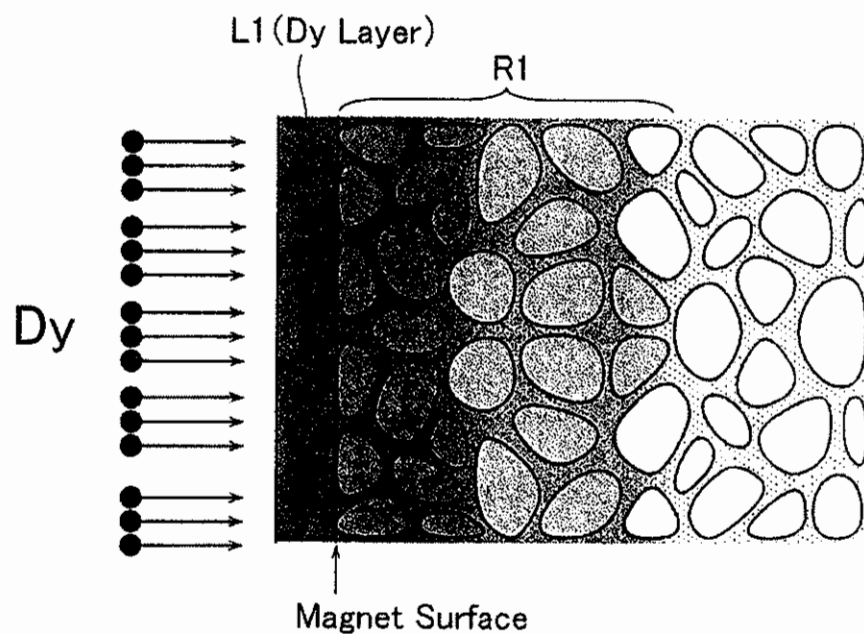


FIG.4A

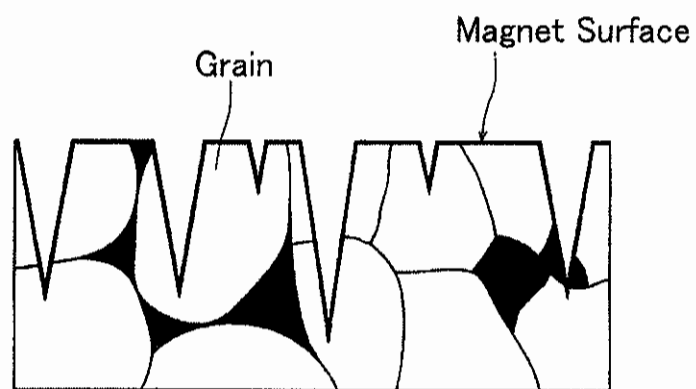


FIG.4B

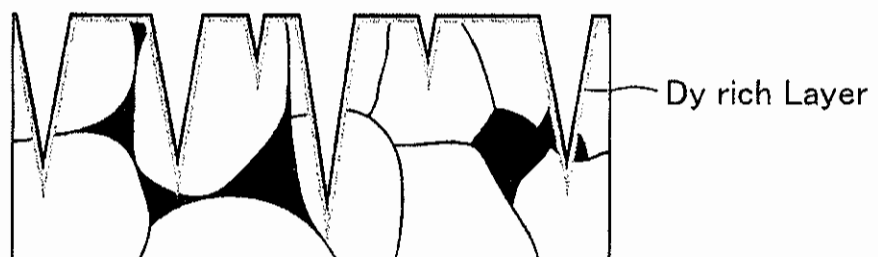


FIG.5

	Evaporating source	Vapor Processing Time(h)	Br(kG)	iHc(k0e)	(BH)max(MG0e)	(BH)max+iHc
Comparative Example 1a	No	0	13.6	15.8	44.7	60.5
	Dy	1	13.6	18.9	45.1	64.0
	Dy	10	13.6	21.5	45.0	66.5
	Dy	18	13.6	24.3	44.7	69.0
Example 1a	DyF ₃	1	13.6	20.9	45.0	65.9
	DyF ₃	10	13.6	24.2	45.1	69.3
	DyF ₃	18	13.6	24.1	45.0	69.1

FIG.6

	Evaporating source	Vapor Processing Time(h)	Br(kG)	iHc(k0e)	(BH)max(MG0e)	(BH)max+iHc
Comparative Example 1b	No	0	13.6	15.8	44.7	60.5
	Tb	1	13.6	20.9	45.2	66.1
	Tb	10	13.7	25.1	45.0	70.1
	Tb	18	13.7	28.3	45.1	73.4
Example 1b	TbF ₃	1	13.6	25.3	45.1	70.4
	TbF ₃	10	13.6	28.2	45.0	73.2
	TbF ₃	18	13.7	28.3	45.1	73.4

FIG.7

	Evaporating source		Br(kG)	iHc(kOe)	(BH) _{max} (MG0e)	(BH) _{max} +iHc
Comparative Example 2b	DyF ₃		13.6	24.2	45.1	69.3
Comparative Example 2a	DyF ₃		13.6	21.6	45.1	66.7
Example 2a	90 DyF ₃	10 NdF ₃	13.6	26.1	45.2	71.3
	80 DyF ₃	20 NdF ₃	13.7	26.5	45.2	71.7
	70 DyF ₃	30 NdF ₃	13.7	26.7	45.3	72.0
	60 DyF ₃	40 NdF ₃	13.8	26.8	46.0	72.8
	50 DyF ₃	50 NdF ₃	13.8	26.8	46.2	73.0
	40 DyF ₃	60 NdF ₃	13.8	26.9	46.3	73.2
	30 DyF ₃	70 NdF ₃	13.8	26.9	46.3	73.2
	20 DyF ₃	80 NdF ₃	13.9	27.2	46.5	73.7
	10 DyF ₃	90 NdF ₃	14.0	27.8	47.3	75.1
	1 DyF ₃	99 NdF ₃	13.9	26.8	46.7	73.5
	50 DyF ₃	50 PrF ₃	13.8	27.5	46.7	74.2

FIG.8

	Evaporating source		Br(kG)	iHc(kOe)	(BH) _{max} (MG0e)	(BH) _{max} +iHc
Comparative Example 2d	TbF ₃		13.6	28.2	45.0	73.2
Comparative Example 2c	TbF ₃		13.6	28.2	45.0	73.2
Example 2b	90 TbF ₃	10 NdF ₃	13.6	32.1	45.1	77.2
	80 TbF ₃	20 NdF ₃	13.7	32.5	45.1	77.6
	70 TbF ₃	30 NdF ₃	13.7	32.6	45.2	77.8
	60 TbF ₃	40 NdF ₃	13.7	32.8	45.9	78.7
	50 TbF ₃	50 NdF ₃	13.8	33.9	46.1	80.0
	40 TbF ₃	60 NdF ₃	13.8	34.2	46.2	80.4
	30 TbF ₃	70 NdF ₃	13.9	34.7	46.2	80.9
	20 TbF ₃	80 NdF ₃	13.9	35.6	46.4	82.0
	10 TbF ₃	90 NdF ₃	14.0	36.3	47.2	83.5
	1 TbF ₃	99 NdF ₃	13.9	34.3	46.6	80.9
	50 TbF ₃	50 PrF ₃	13.8	35.7	46.6	82.3

FIG.9

Evaporating source 90DyF310A

	Element A	Mixing Ratio(wt%)	Br(kG)	iHc(kOe)	(BH) _{max} (MG0e)	(BH) _{max} +iHc
Comparative Example 2d	No	No	13.6	24.2	45.1	69.3
Example 3a	Al	50	13.7	29.2	45.7	74.9
	Ag	50	13.7	27.3	45.3	72.6
	B	50	13.8	26.8	45.1	71.9
	Ba	50	13.8	26.7	45.5	72.2
	Be	50	13.7	27.2	45.1	72.3
	C	50	13.8	26.8	46.0	72.8
	Cu	50	13.7	29.3	45.6	74.9
	Ca	50	13.7	26.9	45.1	71.9
	Ce	50	13.7	27.3	45.1	72.4
	Co	50	13.7	26.9	45.2	72.1
	Cr	50	13.8	26.6	45.7	72.2
	Cs	50	13.8	26.8	45.8	72.5
	Dy	50	13.8	26.5	46.0	72.4
	Er	50	13.8	26.4	45.4	71.8
	Eu	50	13.8	26.7	45.6	72.3
	Fe	50	13.7	26.8	45.4	72.3
	Ga	1	13.7	29.0	45.5	74.5
	Gd	50	13.8	26.8	45.1	71.9
	Ge	50	13.8	26.6	45.7	72.3
	Hf	50	13.8	26.8	45.6	72.4
	Ho	50	13.8	26.7	45.9	72.6
	In	50	13.8	26.5	45.5	71.9
	K	50	13.7	27.3	45.9	73.2
	La	50	13.7	27.1	45.2	72.4
	Li	50	13.8	26.7	45.7	72.5
	Lu	50	13.7	26.9	45.1	72.0
	Mg	50	13.7	26.9	45.6	72.5
	Mn	50	13.7	27.1	45.5	72.6
	Mo	50	13.7	26.8	45.4	72.2
	Na	50	13.7	26.9	45.2	72.2
	Nb	50	13.7	27.1	45.3	72.4
	Nd	50	13.8	28.1	46.0	74.1
	Ni	50	13.7	26.9	45.2	72.0
	P	50	13.8	26.7	45.5	72.2
	Pd	50	13.7	26.8	45.2	72.0
	Pr	50	13.7	28.9	45.4	74.3
	Ru	50	13.7	27.3	45.2	72.4
	S	50	13.8	26.4	45.7	72.0
	Sb	50	13.7	27.0	45.0	72.1
	Si	50	13.7	26.9	45.3	72.2
	Sm	50	13.8	26.4	45.5	72.0
	Sn	50	13.7	26.8	46.0	72.8
	Sr	50	13.8	26.4	45.4	71.8
	Ta	50	13.8	26.4	45.2	71.6
	Tb	50	13.8	28.6	45.7	74.4
	Ti	50	13.7	26.8	45.7	72.5
	Tm	50	13.7	26.5	45.1	71.6
	V	50	13.7	26.9	45.1	72.0
	W	50	13.8	26.6	45.4	72.0
	Y	50	13.7	27.2	45.6	72.8
	Yb	50	13.8	26.5	45.6	72.1
	Zn	50	13.7	27.2	45.7	72.9
	Zr	50	13.7	27.1	45.1	72.2

FIG.10

Evaporating source90TbF₃10A

	Element A	Mixing Ratio(wt%)	Br(kG)	iHc(k0e)	(BH) _{max} (MG0e)	(BH) _{max} +iHc
Comparative Example 2d	No	No	13.6	28.2	45.0	73.2
Example 3a	Al	50	13.8	31.4	45.0	76.5
	Ag	50	13.8	29.8	45.5	75.3
	B	50	13.7	30.0	46.0	76.0
	Ba	50	13.8	29.6	45.3	74.9
	Be	50	13.8	29.4	45.5	74.9
	C	50	13.8	29.6	45.3	74.9
	Cu	50	13.7	31.6	45.4	77.0
	Ca	50	13.7	30.3	45.2	75.4
	Ce	50	13.8	29.5	45.6	75.1
	Co	50	13.7	30.0	45.4	75.4
	Cr	50	13.7	30.3	45.2	75.5
	Cs	50	13.7	30.1	46.0	76.0
	Dy	50	13.7	32.0	45.8	77.8
	Er	50	13.7	30.3	45.2	75.6
	Eu	50	13.7	30.3	45.5	75.8
	Fe	50	13.7	30.1	45.7	75.8
	Ga	1	13.8	31.2	45.5	76.8
	Gd	50	13.8	29.7	45.3	75.0
	Ge	50	13.7	30.0	45.0	75.0
	Hf	50	13.8	29.6	45.8	75.4
	Ho	50	13.8	29.6	45.8	75.4
	In	50	13.8	29.4	45.1	74.5
	K	50	13.8	29.7	46.0	75.7
	La	50	13.7	30.2	45.9	76.1
	Li	50	13.8	29.5	45.8	75.4
	Lu	50	13.7	30.1	45.2	75.3
	Mg	50	13.7	30.3	45.2	75.4
	Mn	50	13.7	30.1	45.6	75.7
	Mo	50	13.8	29.6	45.7	75.2
	Na	50	13.7	30.2	45.1	75.3
	Nb	50	13.8	29.6	45.8	75.4
	Nd	50	13.7	32.1	45.6	77.7
	Ni	50	13.7	30.1	45.3	75.3
	P	50	13.7	30.2	45.4	75.6
	Pd	50	13.8	29.9	46.0	75.9
	Pr	50	13.7	32.1	46.0	78.1
	Ru	50	13.7	30.1	45.6	75.7
	S	50	13.7	30.0	45.5	75.6
	Sb	50	13.8	29.7	45.9	75.7
	Si	50	13.8	29.6	45.1	74.7
	Sm	50	13.8	29.8	45.9	75.7
	Sn	50	13.8	29.7	45.6	75.2
	Sr	50	13.7	30.2	45.8	76.0
	Ta	50	13.7	30.4	45.1	75.5
	Tb	50	13.7	33.0	45.3	78.3
	Ti	50	13.7	29.9	45.4	75.3
	Tm	50	13.8	29.8	45.8	75.6
	V	50	13.7	30.2	45.8	76.0
	W	50	13.7	30.3	45.9	76.2
	Y	50	13.8	29.8	45.9	75.6
	Yb	50	13.8	29.7	45.9	75.6
	Zn	50	13.7	30.0	45.7	75.6
	Zr	50	13.8	29.8	45.4	75.2

FIG.11

	Br(kG)	iHc(k0e)	(BH) max(MG0e)	(BH) max+iHc
Blook	14.4	10.5	51.4	61.9
Cutting Without Vapor Processing	14.4	9.3	43.3	52.6
Block After Vapor Processing	14.4	18.3	51.2	69.5
Cutting After Vapor Processing	14.4	18.2	48.8	67.0