

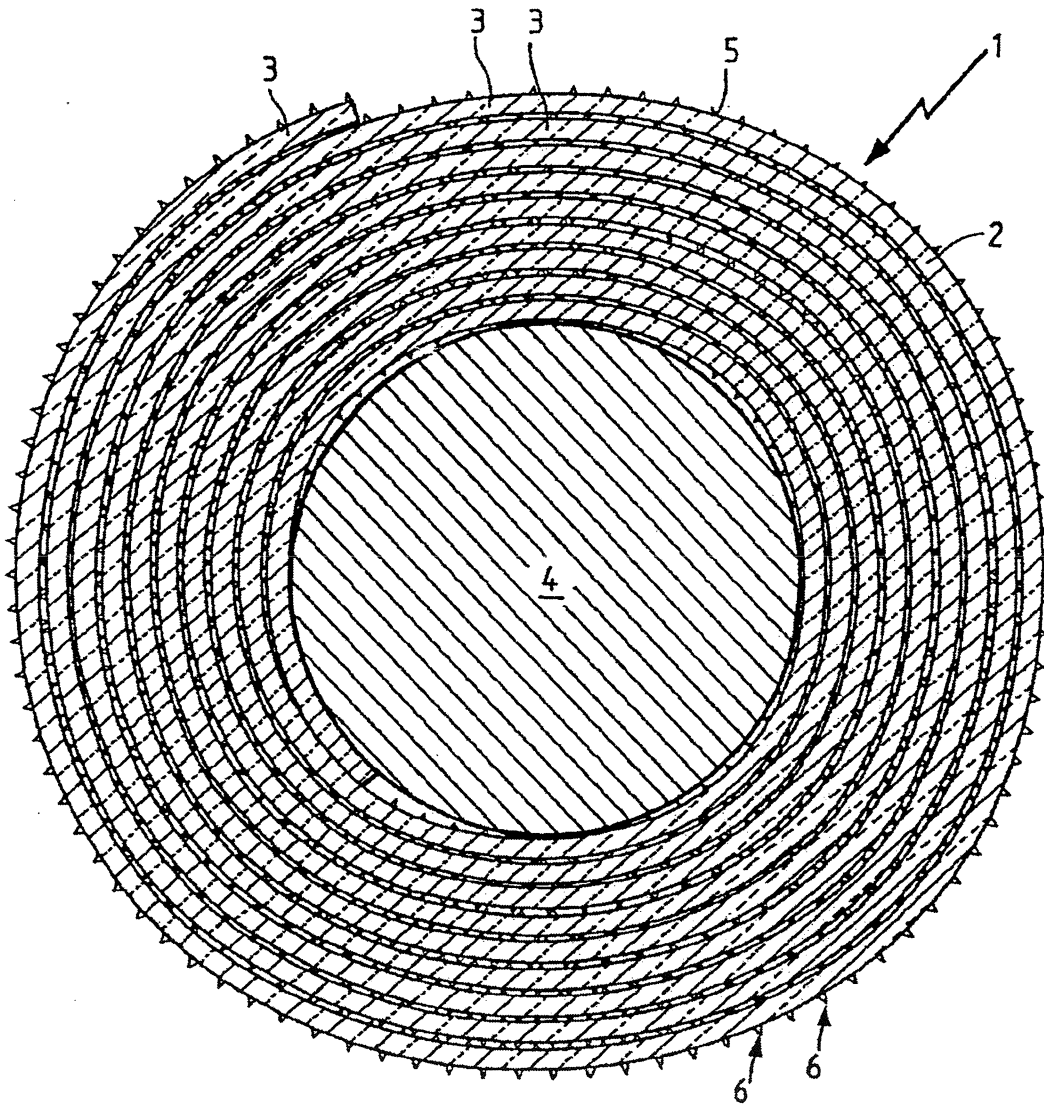


Fig.1

2/4

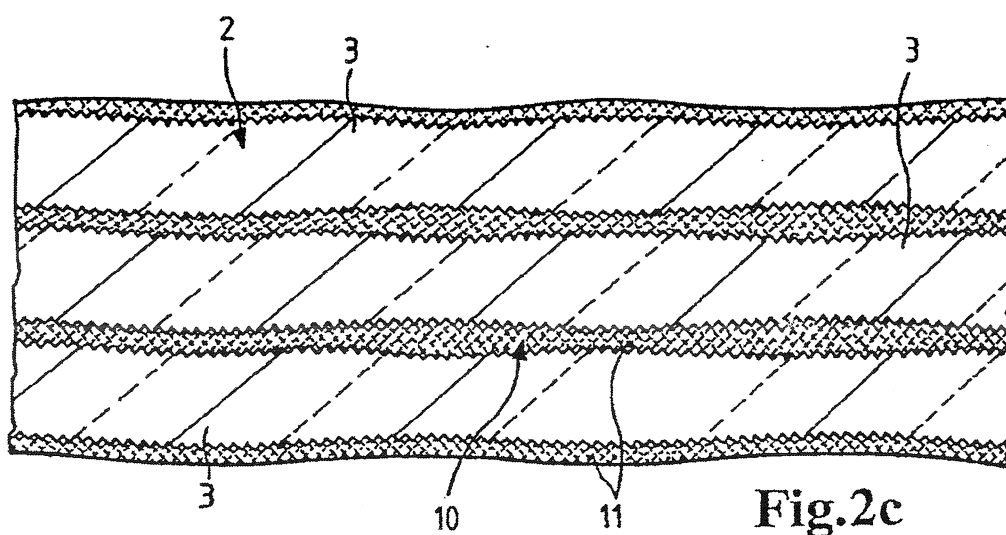
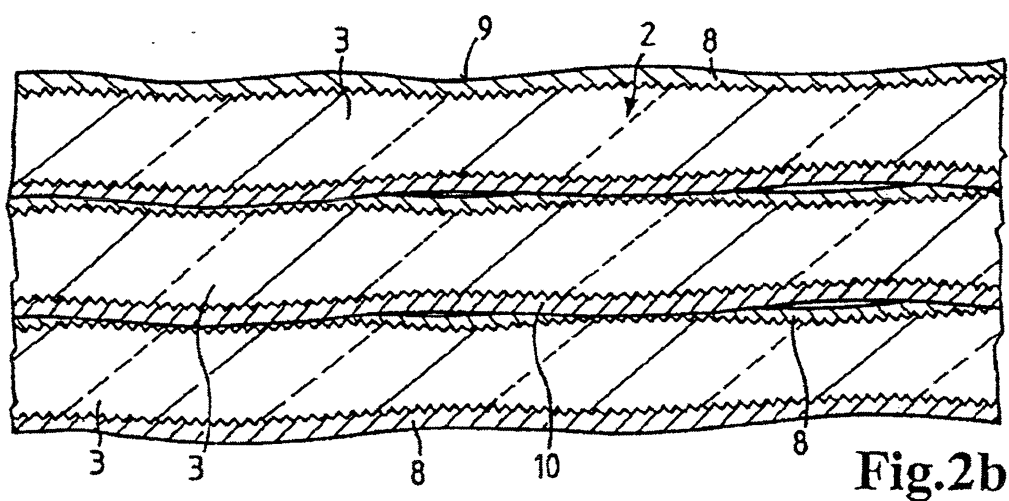
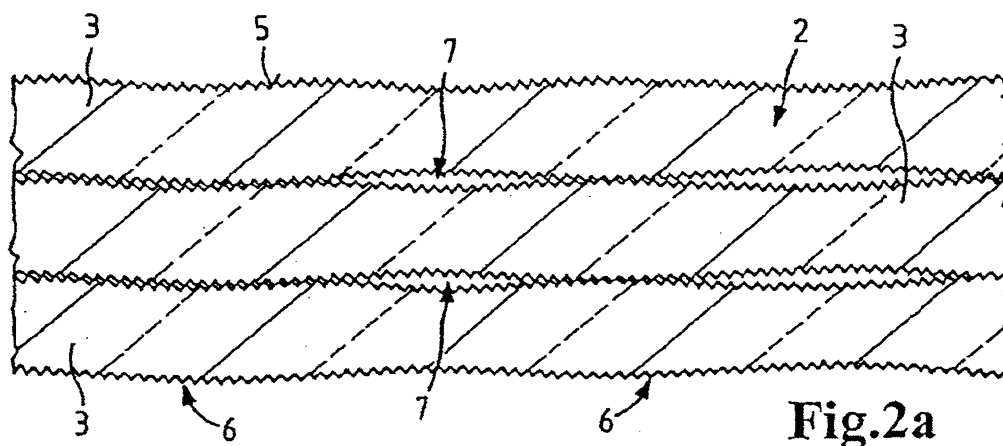


Fig. 3

Coating	Concentration	Characteristic	Carrier medium	Fill factor	Strip thickness/ surface roughness	Heat treatment	λ_s [ppm]	$\langle\mu_r\rangle$ {50 Hz}	Range
Alloy: Fe_{est}Cu_{0.99}Nb_{3.01}Si_{15.73}B_{6.92}									
SiO ₂ nano-dispersed (suspension)	1.5%	particle size 20 nm	Isopropanol dipping process	84.2%	18.2 μ m /2.1%	558°C	0.07	727,506	16%
Mg methoxide (solution)	5.0%	weakly distorted layer	Methanol dipping process	84.2%	18.2 μ m /2.1%	558°C	0.07	580,178	30%
Uncoated reference (prior art)				84.2%	18.2 μ m /2.1%	558°C	0.07	629,540	23%
Alloy: Fe_{est}Cu_{0.79}Nb_{2.72}Si_{13.90}B_{7.62}									
Zirconium propylate (solution)	4.0%	passive layer	Methoxypropanol dipping process	77.0%	17.9 μ m /3.2%	520°C	4.6	421,337	34%
Alloy: Fe_{est}Cu_{0.79}Nb_{2.72}Si_{13.90}B_{7.63}									
Aluminium buthylate (solution)	4.0%	passive layer	Methoxypropanol dipping process	79.7%	18.8 μ m /4.1%	560°C	4.1	420,574	34%
Alloy: Fe_{est}Cu_{0.79}Nb_{2.72}Si_{13.90}B_{7.65}									
SiO ₂ nano-dispersed (suspension)	1.5%	particle size 20 nm	Isopropanol dipping process	68.7%	16.3 μ m /8.9%	540°C	4.2	597,484	16%
Alloy: Fe_{est}Cu_{0.79}Nb_{2.72}Si_{13.90}B_{7.61}									
SiO ₂ nano-dispersed (suspension)	4.8%	particle size 20 nm	Isopropanol dipping process	74.2%	18.1 μ m /6.2%	550°C	4.15	772,560	27%
SiO ₂ nano-dispersed (suspension)	1.8%	particle size 20 nm	Isopropanol dipping process	74.2%	18.1 μ m /6.2%	550°C	4.15	622,463	31%

SiO ₂ nano-dispersed (suspension)	8.2%	particle size 20 nm	Isopropanol dipping process	74.2%	18.1 μm /6.2%	550°C	4.15	555,336	36%
SiO ₂ nano-dispersed (suspension)	4.0%	particle size 60 nm	Isopropanol dipping process	73.8%	17.8 μm /4.2%	520°C	4.6	567,354	34%
SiO ₂ nano-dispersed (suspension in solution)	4.0%	particle size 20 nm	Mg methylate Mg-M/SiO ₂ 0.1% dipping process	68.0%	16.7 μm /8.6%	525°C	4.53	685,250	36%
SiO ₂ nano-dispersed (suspension in solution)	4.0%	particle size 20 nm	Mg methylate Mg-M/SiO ₂ 0.5% dipping process	68.0%	16.7 μm /8.6%	525°C	4.53	642,318	29%
SiO ₂ nano-dispersed (suspension in solution)	4.0%	particle size 20 nm	Mg methylate Mg-M/SiO ₂ 5% dipping process	68.0%	16.7 μm /8.6%	525°C	4.53	612,220	24%
SiO ₂ nano-dispersed (suspension in solution)	4.0%	particle size 20 nm	Mg methylate Mg-M/SiO ₂ 21% dipping process	68.0%	16.7 μm /8.6%	525°C	4.53	451,645	31%
Uncoated reference (prior art)				69.5%	15.9 μm /8.3%	550°C	4.15	382,354	102%
Uncoated reference (prior art)				87.2%	19.0 μm /1.6%	550°C	4.15	691,837	31%
Carbon nanotubes (suspension)	4.5%	particle size 10 x 100 nm	ethanol continuous process	71.2%	17.2 μm /2.6%	530°C	4.48	555,672	29%
Fullerene C ₆₀ (solution)	5.0%	fullerite solution	toluol continuous process	71.2%	17.8 μm /2.4%	530°C	4.48	457,570	24%
Pigment rust (suspension)	2.5%	particle size 35 nm	Methoxypro- panol dipping process	82.0%	18.1 μm /2.8%	530°C	4.48	422,000	34%