

Title (en)
FRICTION ELEMENT IN COMPOSITE CARBON/CARBON-SILICON CARBIDE MATERIAL AND METHOD FOR MANUFACTURING SAME

Title (de)
REIBELEMENT AUS KOHLENSTOFF / KOHLENSTOFF-SILICIUMCARBID VERBUNDWERUSTOFF UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)
ELEMENT DE FRICTION EN MATERIAU COMPOSITE CARBONE/CARBONE-CARBURE DE SILICIUM ET PROCEDE POUR SA FABRICATION

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Application
EP 97909404 A 19971014

Priority

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- EP 96402184 A 19961014
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Abstract (en)
[origin: EP0835853A1] The invention concerns a friction element produced in a composite material comprising a carbon fiber reinforcement and a matrix which, at least in the proximity of each or the friction surface, comprises: a first phase containing pyrocarbon obtained by chemical infiltration in vapour phase, in the proximity of the reinforcing fibers, a second carbon or ceramic refractory phase obtained at least partly by pyrolysis from a liquid precursor, and a silicon carbide phase obtained for example by siliconizing. Preferably, at least in the proximity of each or the friction surface, the composite material is constituted, in volume, of at least: 15 % to 35 % of carbon fibers, 10 % to 55 % of the first matrix phase containing pyrocarbon, 2 % to 30 % of the second matrix phase in refractory material, and 10 % to 35 % of silicon carbide. The invention is particularly useful for railway braking and for motor vehicles.

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IPC 8 full level
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C-Set (source: EP US)

EP

1. **C04B 41/52 + C04B 41/4531 + C04B 41/5001**
2. **C04B 41/52 + C04B 41/4535 + C04B 41/4554 + C04B 41/5001**
3. **C04B 41/52 + C04B 41/4535 + C04B 41/4554 + C04B 41/5059 + C04B 41/522**
4. **C04B 41/52 + C04B 41/4523 + C04B 41/4558 + C04B 41/5059**
5. **C04B 41/52 + C04B 41/4531 + C04B 41/5059 + C04B 41/522**
6. **C04B 41/009 + C04B 35/52**
7. **C04B 41/009 + C04B 35/806**

US

1. **C04B 41/52 + C04B 41/4531 + C04B 41/5001**
2. **C04B 41/52 + C04B 41/4535 + C04B 41/4554 + C04B 41/5001**
3. **C04B 41/52 + C04B 41/4535 + C04B 41/4554 + C04B 41/5059 + C04B 41/522**
4. **C04B 41/52 + C04B 41/4523 + C04B 41/4558 + C04B 41/5059**
5. **C04B 41/52 + C04B 41/4531 + C04B 41/5059 + C04B 41/522**
6. **C04B 41/009 + C04B 35/52**

Cited by
CN107935617A; US8142845B2; WO2012016747A1; DE102010038914A1; WO2006004999A1; DE102007044783A1; EP2039666A2; EP1829843A2; US9663406B2

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