

e-mail: liliana.pop@staff.utcluj.ro

www.utcluj.ro





Title

PULBERI COMPOZITE COMPLEXE PE BAZĂ DE FE ȘI ALIAJ CU BAZA FE, COMPACTE SINTERIZATE COMPOZITE MAGNETIC MOI CU MATRICE OXIDICĂ PE BAZA ACESTORA ȘI PROCEDEU DE OBȚINERE

COMPLEX COMPOSITE POWDER COMPRISES IRON COATED WITH LAYER OF IRON OXIDE AND THEN COATED WITH FINE PARTICLES OF IRON-SILICON-ALUMINUM OR IRON-ALUMINUM OR IRON-SILICON ALLOY

#### Inventor/s - Contact

MARINCA TRAIAN - traian.marinca@stm.utcluj.ro, NEAMŢU BOGDAN VIOREL, POPA FLORIN, CHICINAŞ IONEL

## Patent/ Application number

Patent application OSIM no.: A/00413/14.07.2022

# Short presentation

A complex composite powder comprises iron with particle size of  $10-200 \mu$  m, coated with a layer of iron oxide, and then coated with composite layer (L2) of fine particles of iron-silicon-aluminum or iron-silicon alloy. The ratio of iron and iron-silicon-aluminum alloy is 0.1-99.9%, and the amount of silicon and aluminum in the alloy is  $0.1-30 \mu$  wt.% and large areas of iron being embedded in a complex matrix based on aluminum oxide and silicon oxide which has areas/particles of iron-silicon-aluminum dispersed.

## Applicability

Magnetic cores, magnetic inductors, transformers, etc.

# Images







