

Title (en)  
Heat-generative electric wire.

Title (de)  
Wärme erzeugender elektrischer Draht.

Title (fr)  
Fil électrique pour la production de chaleur.

Publication  
**EP 0391719 A1 19901010 (EN)**

Application  
**EP 90303675 A 19900405**

Priority  
JP 8658789 A 19890405

Abstract (en)  
A heat-generative electric wire (1) comprising a Ni-Fe alloy wire member (3) which contains 45 to 80% by weight of Ni with the remaining portion being substantially Fe and which is wound on or stranded with the outermost layer of an overhead electric wire (2) exhibits adequate heat generation at low power transmission to melt adhered snow or ice and permits high power transmission without excessive heat generation.

IPC 1-7  
**H02G 7/16; H05B 1/00**

IPC 8 full level  
**H05B 3/12** (2006.01); **H05B 3/56** (2006.01)

CPC (source: EP KR)  
**H01B 7/28** (2013.01 - KR); **H05B 3/12** (2013.01 - EP); **H05B 3/56** (2013.01 - EP)

Citation (search report)  
• [A] US 4100673 A 19780718 - LEAVINES JOSEPH E  
• [A] US 4605819 A 19860812 - WARBURTON FRANK W [US]  
• [A] FR 2332674 A1 19770617 - ACIM JOUANIN [FR]  
• [A] DE 2206138 B2 19771208

Cited by  
CN108702814A; US6420683B1; EP2712265A4; EP2034089A3; WO2017100851A1; US9628854B2; US9917341B2; US9954287B2; US10139820B2; US10679767B2; US10916969B2; US9722318B2; US10090606B2; US10326689B2; US10341142B2; US10340600B2; US10389029B2; US10777873B2; US9627768B2; US9742462B2; US9831912B2; US9954286B2; US9997819B2; US10135145B2; US10168695B2; US10359749B2; US10411356B2; US9860075B1; US9948355B2; US10069535B2; US10148016B2; US10755542B2; US9608740B2; US9699785B2; US9788326B2; US9836957B2; US9906269B2; US10063280B2; US10194437B2; US10291311B2; US9893795B1; US9912027B2; US9948354B2; US10199705B2; US10374316B2; US10530505B2; US10665942B2; US10819035B2; US9301342B2; US9755697B2; US9768833B2; US9794003B2; US9871282B2; US9876584B2; US9999038B2; US10009065B2; US10020587B2; US10291334B2; US9680670B2; US9712350B2; US9847566B2; US9866276B2; US9876605B1; US10136434B2; US10243784B2; US10312567B2; US10498044B2; US11032819B2; US9705610B2; US9820146B2; US9853342B2; US9876587B2; US9913139B2; US9947982B2; US10051629B2; US10225025B2; US10355367B2; US9640850B2; US9653770B2; US9661505B2; US9674711B2; US9912033B2; US10009067B2; US10033107B2; US10069185B2; US10142086B2; US10320586B2; US10361489B2; US10784670B2; US9628116B2; US9762289B2; US9929755B2; US9930668B2; US10051483B2; US10051630B2; US10091787B2; US10224634B2; US10340601B2; US10340603B2; US10547348B2; US10601494B2; US9615269B2; US9866309B2; US9887447B2; US9935703B2; US9973416B2; US9973940B1; US9998932B2; US10050697B2; US10264586B2; US10326494B2; US10446936B2; US9729197B2; US9769020B2; US9793951B2; US9806818B2; US9871558B2; US9927517B1; US9948333B2; US9960808B2; US10033108B2; US10243270B2; US10637149B2; US10694379B2; US10811767B2; US9685992B2; US9742521B2; US9749083B2; US9871283B2; US9882277B2; US9912419B1; US9967173B2; US10074886B2; US10079661B2; US10135147B2; US10144036B2; US10535928B2; US10727599B2; US10938108B2; US9667317B2; US9705571B2; US9735833B2; US9769128B2; US9780834B2; US9793955B2; US9800327B2; US9838078B2; US9911020B1; US10090594B2; US10103422B2; US10205655B2; US10224981B2; US10298293B2; US10340573B2; US10340983B2; US10382976B2; US10396887B2; US10439675B2; US10797781B2; US10812174B2; US9654173B2; US9692101B2; US9876570B2; US9876264B2; US9876571B2; US9882257B2; US9912381B2; US9912382B2; US9967002B2; US10020844B2; US10074890B2; US10096881B2; US10135146B2; US10154493B2; US10178445B2; US10650940B2; US11018488B2; US9608692B2; US9787412B2; US9838896B1; US9847850B2; US9865911B2; US9882657B2; US9904535B2; US9973299B2; US9991580B2; US9998870B1; US10009063B2; US10009901B2; US10027398B2; US10027397B2; US10044409B2; US10090601B2; US10103801B2; US10142010B2; US10225842B2; US10305190B2; US10348391B2; US10349418B2; US10389037B2

Designated contracting state (EPC)  
DE ES FR GB SE

DOCDB simple family (publication)  
**EP 0391719 A1 19901010**; CA 2013792 A1 19901005; KR 900017050 A 19901115; NZ 233190 A 19920129

DOCDB simple family (application)  
**EP 90303675 A 19900405**; CA 2013792 A 19900404; KR 900004559 A 19900403; NZ 23319090 A 19900403