

Title (en)
LIGHT-WEIGHT SEMI-RIGID COMPOSITE ANTI-BALLISTIC SYSTEMS WITH ENGINEERED COMPLIANCE AND RATE-SENSITIVE IMPACT RESPONSE

Title (de)
LEICHTE HALBSTEIFE ANTIBALLISTISCHES VERBUNDSYSTEME MIT MANIPULIERTER NACHGIEBIGKEIT UND RATENSENSITIVER AUFPRALLREAKTION

Title (fr)
SYSTÈMES ANTIBALLISTIQUES COMPOSITES SEMI-RIGIDES DE POIDS LÉGER AYANT UNE COMPLIANCE MODIFIÉE ET UNE RÉPONSE À L'IMPACT SENSIBLE À LA VITESSE

Publication
EP 2972060 A1 20160120 (EN)

Application
EP 14737349 A 20140313

Priority
• US 201361780803 P 20130313
• US 2014026828 W 20140313

Abstract (en)
[origin: WO2014160492A1] Composite anti-ballistic systems comprising multiple nested sub-laminates are disclosed wherein each sub-laminate comprises sub-layers of unidirectional tapes comprising monofilaments made from engineering fibers having anti-ballistic properties embedded in polymer matrix materials. The sub-laminates are nested with interfacial materials such as stiffening polymers or polymer foam engineered for controlled compliance, deformation, energy release, and rate sensitive behavior. Alternating foam and sub-laminate layers are nested to form antiballistic plates that can be flat and/or curved, and can be used alone or incorporated into antiballistic devices.

IPC 8 full level
F41H 5/04 (2006.01)

CPC (source: EP US)
F41H 1/02 (2013.01 - US); **F41H 5/04** (2013.01 - US); **F41H 5/0485** (2013.01 - EP US); **Y10T 428/24099** (2015.01 - EP US); **Y10T 428/24132** (2015.01 - EP US); **Y10T 428/24975** (2015.01 - EP US); **Y10T 428/249991** (2015.04 - EP US); **Y10T 428/31511** (2015.04 - EP US); **Y10T 428/31551** (2015.04 - EP US); **Y10T 428/31786** (2015.04 - EP US)

Citation (search report)
See references of WO 2014160492A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2014160492 A1 20141002; BR 112015022447 A2 20170718; BR 112015022447 A8 20191126; CA 2906062 A1 20141002; CN 105074378 A 20151118; EP 2972060 A1 20160120; IL 241280 A0 20151130; KR 20150123943 A 20151104; MX 2015012413 A 20160203; US 2015082976 A1 20150326; US 2016033236 A1 20160204

DOCDB simple family (application)
US 2014026828 W 20140313; BR 112015022447 A 20140313; CA 2906062 A 20140313; CN 201480014607 A 20140313; EP 14737349 A 20140313; IL 24128015 A 20150907; KR 20157027886 A 20140313; MX 2015012413 A 20140313; US 201414208017 A 20140313; US 201414774562 A 20140313