#### <mark>SECTOR</mark> TRANSFORMADOR PLÁSTICO

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Oficina Española de Patentes y Marcas

La Oficina Española de Patentes y Marcas tiene como misión impulsar la innovación y compartir sus resultados como valores y activos de diferenciación y desarrollo tecnológico. Por ello sus dos objetivos principales son proteger la innovación tramitando distintos títulos de propiedad industrial y difundir la información técnica contenida en las patentes a través de sus servicios de Información Tecnológica, uno de ellos estos Boletines.

En esta nueva andadura del Boletín de Vigilancia Tecnológica del Sector Transformador Plástico que comenzó el primer trimestre de 2021, se ha reestructurado el contenido del Boletín, intentando reflejar la realidad en propiedad industrial de la Industria del Plástico para hacer llegar a las empresas e investigadores del sector, con periodicidad trimestral, una selección de las patentes más recientemente publicadas en el sector de transformación de los materiales plásticos. Las patentes aparecen clasificadas en los siguientes apartados: nuevos productos en los principales sectores de aplicación, invenciones que contribuyen al desarrollo sostenible, mejoras de procesos productivos y nuevos materiales plásticos con propiedades avanzadas. No se ha incluído en este Boletín información sobre la tecnología de impresión 3D, ya que ésta aparece recogida en el boletín de Vigilancia Tecnológica Impresión 3D que la OEPM comenzó a publicar en el 2020

A través de las imágenes que representan cada sección y que aparecen en la portada del Boletín, se accede de forma directa a los contenidos de las mismas, donde encontraremos el número de publicación de cada patente, quien la solicita, una pequeña descripción de la invención y el enlace de acceso al texto completo del documento. De forma complementaria, se incluye una selección de noticias sobre propiedad industrial y actividades relevantes de la OEPM.

Si se desea recibir este Boletín periódicamente basta con cumplimentar el correspondiente formulario de suscripción

### Contenido



NUEVOS PRODUCTOS



SOSTENIBILIDAD Y ECONOMÍA CIRCULAR



NUEVOS PROCESOS INDUSTRIALES



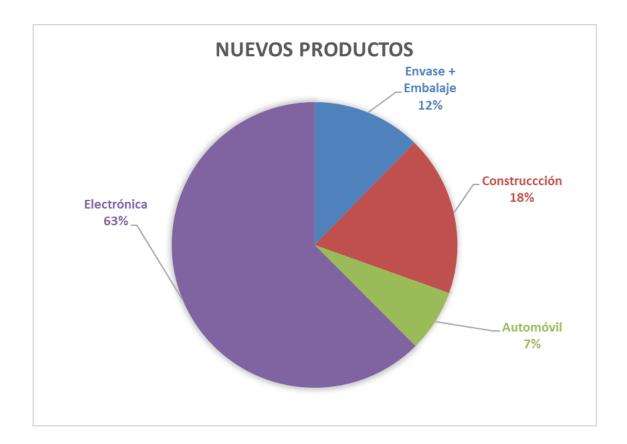
MATERIALES CON PROPIEDADES AVANZADAS O MEJORADAS



Oficina Española de Patentes y Marcas

## **NUEVOS PRODUCTOS**

En el siguiente gráfico se muestra la distribución de las 12.664 familias de documentos de patente recuperadas en este trimestre en el apartado de Nuevos Productos. Tal y como viene ocurriendo, el sector dedicado a la electrónica sigue siendo el que más documentos de patente aporta.





Las siguientes tablas muestran una selección de los documentos más representativos, junto con un enlace directo a la base de datos Espacenet, el solicitante y una breve descripción de la invención.

#### Envase y Embalaje

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US12103761	(DYER) DYER ARCTIC CONSULTING LLC	Octagon shaped child-resistant cigarette packaging closure for use by adults of different intelligence levels, has top cap located to removably mate with first open end of outer tube for closing first open end of outer tube
EP4438522	(JAFI) GEBROEDERS KOLKMAN B V; (KOLK) JAFIKO B V	Packaging for fresh foods E.G. fruits in E.G. wholesaler's, has flanged edge for providing engagement for protrusions with which protrusion can enter into co-action to bring about reclosable connection therebetween, where cover rim provides attaching surface for sealing film
DE102023107750	(BRKM) KIEFEL GMBH	Product E.G. bottle for drinks I.E. fruit juices, has first connecting section formed with functional layer by which first connecting section and second connecting section are connected to one another
US2024343456	(PDQM) PDQ MAZOO LLC	Container for dispensing food products or medications that are connectable so that a user may easily store, travel, and carry, comprises a rectangular compartment with gripping elements for gripping the compartment by a user, and connecting members on two opposite sides of the compartment
FR3147700	(HEIM) HEIM MARGAUX	Wooden refillable toothpaste tube, represents major step forward in reducing plastic waste produced by dental industry, where natural wood is used for main body of tube
WO2024218312	(COMP) SAINT GOBAIN ECOPHON AB	Method for handling compressible acoustic panels contained in box-shaped distribution units loaded to cargo space of vehicle for distribution, involves pressing top portion of uppermost box-shaped distribution unit towards bottom portion of lowermost box-shaped distribution unit
WO2024227672	(PULP) PULPAC AB	Producing cellulose product from multi-layer cellulose blank structure used as food tray, by E.G. forming blank structure from dry-formed cellulose fibers layer, and arranging first tissue layer and plastic layer on first and second sides
WO2024228686	(UYAL) ALANYA ALAADDIN KEYKUBAT UENIVERSITESI IDARI VE MALI ISLER DAIRE BASKANLIGI	Active feature-enhanced food packaging useful for packaging food product E.G. meat, processed fruit and vegetable, and traditional sweet, comprises nested trays made of polyethylene terephthalate glycol material or polylactic acid material, and antimicrobial-antioxidant substance



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024233337	(BERR) BERRY GLOBAL INC	Insulative container I.E. polymeric container for package for packaging food products, has sidewall support, which interconnects upper and lower supports and extends partway around central axis, and side panel is spaced apart from bottom panel
US2024367852	(GREE) GREEN EAGLE USA LLC	Structurally reinforced block type pallet assembly for quick and efficient assembly, and for supporting goods in stable fashion during transport from one destination to another destination, has mechanical fastener for traversing profile wall of lineal engagement stringer
DE102023002008	(HNIN) HN INNOVATION FLEXCO	Ecologically sustainable stackable reusable container for filling and transporting liquid paints, has axial end groove of lid base body overlaps shell end section and between axial end groove and shell end section, and lid molding film is pressed circumferentially sealingly against mold insert
US2024383635	(SUSH) SUSHI BOAT INC	Configurable food delivery system for contemporaneous warm and cold delivery of food products in configurable package used for transport as well as stylish serving platform, has container that maintains interior temperature below ambient temperature, and chopstick holder attaches chopsticks to case
WO2024249100	(MEAC) WESTROCK MWV LLC	Sustainable barrier board used in bacon board, comprises cellulosic board substrate having two major sides, hydrophobic substance impregnated into substrate, biopolymer barrier film, and biopolymer heat sealable coating coupling barrier film

### Construcción

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
EP4438836	(HERM) HERMAT METALLWAREN B PORST GMBH	Locking system installed in leaf of door/window of E.G. toilet, has polygonal pin which is switched between holding state in which polygonal pin is set in rotationally fixed manner relative to base pin, and release state in which polygonal pin is rotated relative to base pin through locking slide
WO2024200827	(VEOS) VOESTALPINE SADEF NV	Steel frame construction for use as structure for solar carport placed at large parking space to mount solar panels on top, comprises load-bearing columns, which are structural components subjected to axial load, where first elongated profile and second elongated profile extend in length direction



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024201399	(NOBU) NOBUYOSHI MORIMOTO	System for collecting micro-plastics in aquati environment using adhesion properties of syntheti polymers or starch, has collection unit that i provided to collect micro-plastics flow with way through hole in vessel bottom in stem section
WO2024205713	(IBAC) IBACOS INC	Site-optimized exterior shading device for use i window of I.E. residential home, has sliding ra attached to brackets, and shading module slidin along curved rail to adjust shading projection for controlling amount of radiation
EP4446511	(NOOI) S NOOIJENS BEHEER B V	Method for post-insulating building wit cantilevered system floor post-insulated (PS) of typ corresponding to ribbed floor, of insert module involves attaching set of form-retaining inser modules, where step of attaching modules coincide with, or is performed after, step of applying
СН720715	(FISC) FISCHER RISTA AG	Concrete construction connection element for connecting adjacent components E.G. wall an adjacent ceiling in building i.e. underground car par has support element for extending through therma insulation body along longitudinal direction of support element
WO2024216316	(TANT) TANTE LOTTE DESIGN GMBH	Acoustic insulation panel installed in walls an ceilings of rooms of E.G. open-plan offices, ha projection and cover which are designed such tha panel is releasably connectable to transverse rai where panel is elastically deformable to enter int releasable snap-fit connection with rail
EP4455418	(ESIN) ESINPLAST S R L	Fixing system of light loads on insulating pane mounted on exterior walls of buildings, has suppo comprising front and rear surfaces and flat head, an pairs of holes used for accommodating screws for engaging in first transverse edge of base according t direction parallel to axis x-x of base
WO2024233731	(DELS) DELSTAR TECH INC; (MATI) MATIV LUXEMBOURG	Adhesive used as pressure sensitive adhesive for tape for assembling roofing structure, comprise elastomeric material, and is chlorinated
WO2024232865	(CLOP) CLOPAY CORP	De-bridged extrusion structure for panel of section door, has insulation essentially for filling volum between first side and second side, where first side and second side are derived from single piece of extrusion
EP4464921	(SPEC) SPECTRO PLAST OY	Structural profile joint for use in pipe of wall container, has structural profile joint main boo whose structural profile is provided with counter fastener shaped from outer wall corresponding fastener of first structural profile for positionin structural profiles



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
EP4467744	(BEPL) BEPLUSC SELBSTKLEBESYTEME UG HAFTUNGSBESCHRAENKT	Composite material for sealing and covering in the roof and facade area of building and for covering arrangement in a connection area, and is plastically deformable for optional attachment to a contour, and the substrates have at least one thermoplastic elastomer
EP4467737	(BALC) BALCO GROUP AB	Prefabricated system for assembling balcony, has deformation portion formed in inner wall portion of groove, where fastening element is subjected to force in transverse direction and longitudinal extension of groove
WO2024243579	(MACK) THE MACKINAC TECH COMPANY	Retrofit window insulation system for existing window frame or surrounding wall structure, comprises pane assembly with rigid frame structure with front and rear surfaces, where low emissivity coating polymer film is bonded to front surface
WO2024245666	(COMP) SAINT GOBAIN	Spacer for insulating glass units, has cavity that is enclosed by side walls, glazing interior wall, and outer wall, and connecting walls, where base portion is arranged with alternating arrangement of segments A and B that are extended along longitudinal direction of spacer
EP4474594	(VAND) VANDEL BV	Auxiliary tool for installing window reveal on glass surface of window, has suction cup comprising suction surface with outermost edge, where first direction is parallel to plane in which edge of surface is located and second direction is transverse to plane
WO2024251444	(COMP) SAINT GOBAIN	Composite pane used as vehicle roof pane for E.G. passenger car, has vacuum insulating glazing which is incorporated into composite pane between exterior pane and interior pane, or interior pane which forms inner pane of vacuum insulating glazing
WO2024250061	(RAPT) RAPTOR SPORTS PTY LTD	Protection device, comprises panel component moveable between storage condition and use condition, overlying window or door in use condition and containing layers of fire-resistant material comprising boron nitride structures containing forms of crystalline boron nitride structures
DE102023116572	(MACO) MACO TECHNOLOGIE GMBH	Floor threshold for door such as sliding door or window such as sliding window, has threshold element that has solid material profile made of closed-pore foam and cover profile resting on solid material profile
WO2024260827	(COMP) SAINT GOBAIN	Spacer for insulating glazing, has UV protection layer which comprises polymeric layer, in which material of polymeric base structure differs from material of UV protection layer, and polymeric base structure whose wall thickness is provided between 0.5 mm and 1.5 mm



## Automoción

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US12103471	(SULL) SULLIVAN ROYCE JOHN; SULLIVAN JERRY STANLEY	Strong cargo area lateral extension capsule for use with vehicle, has peripheral wall for projecting forward from perimeter of wall panel, and inner and outer capsules arranged through extension aperture of side wall of vehicle, and inside cargo area that is expanded outwardly into extension capsule
CN118790013	(VOLS) VOLKSWAGEN AG	Interior component for being designed as grid element of air vent of vehicle i.e. motor vehicle, has grid element made of plastic, and comprises one- piece design and made of fiber-reinforced plastic, where grid element comprises coating that overlays plastic on visible side of grid element
US2024367310	(PREC) PREC CUT 3D LLC	Railroad brake stick comprises first end has first opening receiving hilt region and cross-support to have interlocking coupling located within lumen of hollow shaft, and binder in contact with lumen of hollow shaft and in contact with hilt region and cross- support to couple hilt region
US2024375429	(REBU) RE BUILD MFG LLC	Wheel i.e. configurable thermoplastic wheel, for use in system of E.G. electric vehicle, has halo connected to wheel drum in interstitial band defined on first end between first diameter and second diameter
WO2024230916	(ADIN) GIANLUCA FABRIS; (GIAN) ADINOLFI MASSIMILIANO	Three-wheel vehicle used for transport, comprises two parallel and directional front wheels and one rear wheel, in which front wheels and/or rear wheel is/are driving wheel(s) in which electric motor(s) is/are incorporated or are external to wheel(s) and connected to it (s), and floor
US2024375491	(SANS) SANSALONE WILLIAM; SANSALONE EDWARD	Protective shields for convertible vehicle rear window mounted in a roof material when in a folded roof position, comprises first protective panel and second protective panel that are held in place by compressive force of folded convertible roof
US2024375469	(HYMR) HYUNDAI MOTOR CO LTD; (INHI) KIA CORP; (KIAK) UNIV INHA RES & BUSINESS FOUND	Body structure for realizing modular assembly to chassis frame of E.G. multi-wheeled vehicle, has corner module fastened with side portion of chassis frame and provided with knuckle that is fastened with wheel, and elastic element mounted between module bracket and bottom end portion of knuckle
CN119018248	(HYMO) HYUNDAI MOTOR CO LTD; (HYMR) KIA CORP; (KIAK) HYUNDAI MOBIS CO LTD	Front-end module frame for vehicle, used for securing load path against vehicle frontal collision, has upper unit that is formed to extend above front bumper beam in width direction of vehicle, where upper unit includes plastic structure covering steel closed cross-section unit



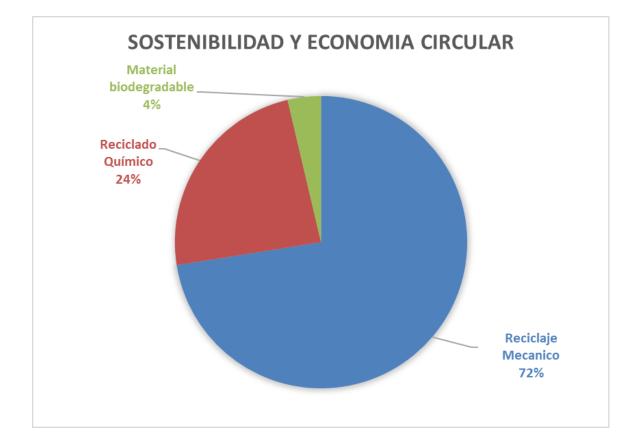
Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
DE102023114280	(NSUM) AUDI AG	Mounted Jack Holder for being installed on underbody side on body of motor vehicle in vehicle vertical direction as longitudinal direction, has latching element designed to be elastically resilient and/or fastened to main body of fastening section in such elastically resilient manner
DE102023115207	(NEXT) NEXT E GO MOBILE SE	Housing for vehicle battery E.G. traction battery, has housing wall which has cavity that delimits receiving volume of housing in which battery cells of vehicle battery are received, where cavity is filled with dilatant liquid





# SOSTENIBILIDAD Y ECONOMÍA CIRCULAR

En el siguiente gráfico se muestra la distribución de las 1.512 familias de documentos de patente recuperadas en este trimestre en el apartado de Sostenibilidad y Economía Circular. El reciclado mecánico sigue siendo el sector que mayor actividad innovadora presenta.





Las siguientes tablas muestran una selección de los documentos más representativos, junto con un enlace directo a la base de datos Espacenet, el solicitante y una breve descripción de la invención.

### Materiales Biodegradables

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
CN118725525	(SGNO) SUGINO MACH	Biodegradable resin composition for biomass nanofiber particle, comprises biomass nanofiber and biodegradable resin
KR20240147339	KIM JIN SU [KR]	Eco-friendly plastic sheets that can be naturally decomposed
KR20240147067	DAE YOUNG PLASTICS CO LTD [KR]	PLA PBS Manufacturing method of biodegradable resin composition using PLA and PBS mixture
KR20240150282	KYUNGPOOK NAT UNIV IND ACADEMIC COOP FOUND [KR]	PLA Biodegradable polymer composition containing surface-treated nanofillers and PLA and method for preparing the same
JP2024152464	(DAIL) DAICEL CORP	Polylactic acid modifier used in polylactic acid resin composition for forming molded product, is block copolymer containing structural unit derived from L- type or D-type polylactic acid, and structural unit derived from polyol, and has structure of polylactic acid/polyol/polylactic acid
PL444411	(SIEC) SIEC BADAWCZA LUKASIEWICZ – LODZKI INSTYTUT TECH	Production of biodegradable spun-bonded nonwoven fabric with active antipathogenic layer, involves forcing melted and plasticized fiber-forming polymer through multi-hole spinneret to obtain fibers, and forming fleece
WO2024225224	(TKAG)	Polyester used for resin composition, is obtained by reacting dicarboxylic acid or its acid anhydride, trialkylene glycol and alcohol
WO2024225052	(DNIN) DAINIPPON INK & CHEMICALS	Biodegradable resin composition for producing molded product, comprises biodegradable resin having ester bond or amide bond in main chain and biodegradability promoter containing polyarylene sulfide having specific weight-average molecular weight
WO2024225221	(TKAG)	Polyester used as resin plasticizer in resin composition, is obtained by reacting dicarboxylic acid or its acid anhydride, polyalkylene glycol comprising optionally branched alkylene group having preset number-average molecular weight, and alcohol
KR20240167459	I S TECH CO LTD [KR]; KOREA INSTITUTE OF MATERIALS CONVERGENCE TECH [KR]	Biodegradable biofilm for baled silage capable of blocking UV rays and its manufacturing method



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
PL445006	SIEC BADAWCZA LUKASIEWICZ INST CHEMII PRZEMYSLOWEJ IMIENIA PROFESORA IGNACEGO MOSCICKIEGO [PL]	Biodegradable composite based on foamed biomass of plant origin, optionally with hygienizing properties
KR20240170292		Biodegradable resin composition biodegradable molded article comprising same
WO2024248115	(KURS) KURARAY CO	Resin composition comprises cyclic ester compound, and block copolymer containing block structural unit composed of polylactic acid unit and another block structural unit composed of polyester unit containing unit derived from aliphatic diol and aliphatic dicarboxylic acid
JP2024170052	(NISN) NISSHINBO HOLDINGS INC	New marine biodegradable polymer compound used as promoter in resin composition, comprises repeating unit comprising bond(s) E.G. ester bond, having aliphatic unsaturated carbon-carbon bond in main chain, and substituent i.e. carboxyl group, sulfonate groups and/or phosphonate group in side chain
CN119079314	(MYTE) MY TEA CUP AG	Capsule for preparing a beverage, comprises container comprising at least one side wall having a circular rim are formed by injection molding or by thermoforming comprising: polymer chosen from polyhydroxyalkanoates (PHA); and polymer chosen from polyhydroxyalkanoates

### Reciclado Mecánico

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
CN118719295	(SUMH) SUMITOMO HEAVY INDUSTRIES	Management device for use in management system for managing crusher used for performing molding in molding machine using molding material E.G. textile and thermoplastic resin material, has control device to transmit information to be displayed on display unit of injection molding machine
EP4438261	(HAKS) HAKSAN CO LTD; (KOMA) KOREA INSTITUTE OF MATERIALS CONVERGENCE TECH	Manufacturing plastic foam product added with ethylene-vinyl acetate recycled pellets, I.E. for manufacturing shoe sole, involves mixing and dispersing mixed and dispersed ethylene-vinyl acetate foam compound and pellets in high viscosity state at set rotation speed and injecting into foam mold



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
EP4438782	(JOHM) JOHNS MANVILLE	Recycling glass fiber product to obtain recycled glass fibers involves providing glass fiber waste products containing glass fibers and binder, mechanically treating glass fiber product by compacting or partitioning, extracting/removing binder, separating glass fibers, cooling and drying
WO2024199681	(REBA) REBA D O O	System for reuse of waste fiberglass-comprising composite materials, has angle of sides of first portion to tubular section is larger than angle of sides to tubular section and wider portions are longer than 20 mm, and grounding cable for grounding all metallic portions of device to line
US2024327601	(UNWS) UNIV WASHINGTON STATE	Recycling thermosetting polymer containing polymer resin and fiber embedded in polymer resin used in adhesives, sealants, involves reacting thermosetting polymer with catalytic solution containing catalyst and solvent having sulfolane and/or its derivative, and maintaining reaction temperature
JP2024139693	(KANF) KANEKA CORP	Separating fibers for recycling fibers, involves mixing fiber mixture containing at least two selected from group consisting of modacrylic fiber, polyvinyl chloride fiber and polyester fiber
WO2024200604	(PLAX) PLAXTIL	Polyolefin-based material loaded with polycotton- type textile fibers comprises textile fibers in crushed form, polyolefin is polyethylene, polypropylene, polymethylpentene, and/or polybutene-1, and does not contain any chemical agents
JP2024147292	(TOZA) TOYODA GOSEI KK	Method for manufacturing plastic molded article E.G. exterior component, such as vehicle bumper cover by collecting waste material as plastic product with painted surface, involves producing granular waste material by finely pulverizing waste material with base made of thermoplastic
EP4442423	(DOOS) DOOSAN ENERBILITY CO LTD	Recovery apparatus for recovering carbon fibers and glass fibers from waste blades in E.G. aerospace application, has preprocessing unit with rolling module for rolling shredded waste blades, reaction unit for pyrolyzing obtained preprocessed shredded waste blades, and separation unit
WO2024209136	(COMP) COMPOSITES RECYCLING SOLUTIONS	Device for breaking down flow of material to be fed, has domed disc that is placed between injector- mixer and rotor and stator inside reactor to deflect in targeted manner
US2024343913	(UYKI) UNIV KING FAISAL	Making freestanding superhydrophobic film involves providing first group of plastics consisting of semi- crystalline polymers comprising polypropylene, high density polyethylene, low-density polyethylene, linear low-density polyethylene, or combination



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2024343912	(UYKI) UNIV KING FAISAL	Freestanding superhydrophobic film for anti- corrosion or anti-wetting applications, comprises nonporous base layer comprising first semi- crystalline polymer(s), and porous top layer comprising second semi-crystalline polymer(s)
CN118812984	(CANO) CANON KK	Producing stretch-blow-molded article used as toner bottle, involves producing preform from melt- kneaded product of resin mixture comprising at least wax, styrene-based resin and carbodiimide compound and performing stretch-blow molding on the preform to produce the stretch-blow-molded article
DE102023110406	(POLY) POLYTEC PLASTICS GERMANY GMBH & CO KG	Production of recyclate used as filler for forming thermosetting fiber composite semi-finished product, involves breaking thermosetting starting materials with two-shaft shredder to obtain fragments, shredding fragments to form multiple flakes, and finely grinding flakes with grinding device
US2024351248	(UYSF) UNIV SOUTH FLORIDA	Forming article from refuse collection involves providing refuse collection comprising first polymer mixture, comprising second polymer mixture, comprising polyethylene, polypropylene, polystyrene, polyethylene terephthalate, polyvinyl chloride, or any combination
WO2024226862	(VALE) VALERIO THOMAS A	Method for separating materials using screen bed and gravity separators for separating plastics in waste stream, involves feeding waste stream into screen of specific size, and recovering heavier material from gravity separator
WO2024227147	(BATT) BATTELLE MEMORIAL INSTITUTE	Materials separator assembly E.G. clarifier and flocculator for separating materials within flowable matrix, has exposed body force slide surface formed within linear section, where slide surface extends at angle other than normal to body forces
WO2024229026	(VART) VARTEGA INC	Method for preparing fiber-reinforced composite in variety of reinforcing applications, involves preparing agglomerates comprising tumbling process mixture comprising non-continuous reinforcing fibers and binder material
DE102023111310	(FASE) FASERINSTITUT BREMEN E V; (FRAU) FRAUNHOFER GES FORSCHUNG	Use of matrix material for stabilizing orientation of fibers for fiber composite materials to one another, during and after recycling process for fiber composite materials, comprises
US2024367352	(COFF) COFFEY KIMBERLEY RENEE	Plastic burning furnace system used for recycling plastic in plastic burning furnace, comprises stainless steel cylinder, burner, base, disc mold, and structure of supporting portion, where cylinder is mounted on base and supported with supporting portion, and cylinder has door



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
EP4461528	(ADLE) ADLER WERK LACKFABRIK JOHANN BERGHOFER GMBH & CO KG	Composite component comprises substrate, coating in form of varnish which covers surface of substrate, and intermediate layer arranged between coating and surface
WO2024231781	(SERO) SELLE ROYAL GROUP S P A	Support element I.E. bicycle saddle, for human body, has element main body provided with padding element and provided with component in expanded material to surface of support base, and component in expanded material provided with granules
WO2024233309	(MCDN) MACDERMID GRAPHICS SOLUTIONS LLC	Method for producing granulated product from photopolymer printing plate materials, involves sorting materials based on identifiable property, and optionally shredding or chipping the materials
WO2024240883	(BORA) BOREALIS AG	Mechanical polyolefn recycling process, involves providing precursor polyolefn recycling stream that contains polyolefn-containing pieces, sorting pieces of polyolefn recycling stream by sorters to form polyolefn recycling fractions, washing each of polyolefn recycling fractions individually
DE102023113721	(SGPS) SGP SPEZIAL GUMMIPRODUKTE GMBH	Producing plastic granulate, preferably plastic granulate based on polyurethane (PU) for fill of projectile trap, involves providing first input materia based on PU, providing second input material, based on thermoplastic polyurethane, which is formed differently from first input material
CH720802	(ALPL) ALPLA WERKE ALWIN LEHNER GMBH & CO KG	Method for recycling color-mixed polyolefir containers for producing post consumer recycled (PCR) granules used for producing consumer product packaging e.g. bottles, involves carrying out first washing step without cleaning additives at predetermined temperature with supply of therma energy
US2024391139	(KENT) UNIV KENTUCKY RES FOUND	Method for recycling end-of-life solar panel and recovery of E.G. recyclable aluminum, involves removing frame from solar panel, and delaminating cover, silicon wafers and plastic backing of solar panel using green solvent adapted to weaken, rather than dissolve, adhesive used in lamination of panel
WO2024241171	(GARB) GARBIN MAURO	Recovery of material from waste manufactured article, used for producing composite material involves reducing inert material coming from waste manufactured article into fragments, grinding fragments to obtain powder having predefined particle size, and mixing powder with polyurethane based material
WO2024240793	(GENE) LM WIND POWER AS	Method for separating pultrusion element from wind turbine blade portion, involves separating first and second elements at separation line extending in interlayer arranged between elements



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024246507	(JOHM) UNIV COURT UNIV OF EDINBURGH; (UEDG) JOHNS MANVILLE	Composite material used in construction sector, in transport sector, in sports sector, and/or in agricultural sector, comprises at least one layer of waste glass fiber mat laminated to at least one layer of recycled polymer material
WO2024251871	(KUNS) KUNSTSTOFF RECYCLING GRUENSTADT GMBH	Producing plastic recyclate using purification plant, comprises producing starting composition comprising target plastic I.E. polyethylene, polypropylene and polystyrene, comminution of the starting composition in a comminution unit, cleaning, extruding and granulating
US2024408797	(HALV) HALVERSON RICHARD R	Method for producing flattened strip of construction material I.E. solid raw material for wide range of product fabrications, involves receiving harvested tread from tire including strip of flexible material including radial curvature memory in direction
WO2024256687	(ARIS) ARISTA CONSTRUCTION SYSTEMS FZE	Metal recovery system used for recovering metal from laminate, comprises laminate comprising backing side, metal side, backing material, and metal layer containing metal, inlet roller, outlet roller, heater, metal removal device comprising brush
WO2024260883	TOMRA SORTING GMBH [DE]	A method and system for obtaining a purified textile material from a mixed textile stream, such as a stream of singulated garment
WO2024260882	TOMRA SORTING GMBH [DE]	Method and system for obtaining a purified plastic material from a mixed waste material stream
WO2024261634	BASF SE [DE]; BASF CHINA CO LTD [CN]	Plastics waste sorting and recycling
WO2024260881	(TOMR) TOMRA SORTING GMBH	Method for obtaining food grade plastic material from mixed waste material stream, involves diverting type of food grade plastic material from other types of material in plastic material fraction into food grade plastic material fraction

## Reciclado Químico

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024200203	(SABI) SABIC GLOBAL TECHNOLOGIES BV	Method of depolymerizing polymer E.G. plastic waste, involves passing polymeric feed stream through vessel of reactor, flowing polymeric feed stream through void volume of vessel, and heating polymeric feed stream by passing electric current through electrically-resistive elements
WO2024211326	PROCTER & GAMBLE [US]	Method for purifying reclaimed polymers



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024216111	(ROCK) ROCKYTECH LTD	Process for recycling materials resulting from additive manufacture process for producing filament, involves processing waste articles, dispersing granular thermoplastic material, separating sunken and floating granular thermoplastic materials, and combining thermoplastic materials
WO2024215777	(UCNT) UNIV CONNECTICUT	Recyclable composition used in manufacture of articles E.G. furniture, comprises proteinaceous biopolymer that forms matrix of recyclable composition, and recyclable material dispersed in proteinaceous biopolymer
WO2024220053	(AKSA) AKSA AKRILIK KIMYA SANAYII ANONIM SIRKETI	Producing acrylic fiber by recycling waste acrylic fibers used in clothing materials, comprises feeding waste dope to slurry tank, and feeding waste acrylic fiber with dilute dope to slurry tank
WO2024218505	(UYWW) UNIV WARWICK	Method for recycling compound E.G. polymer used as adhesive, involves providing polymer comprising pyrrolidine-based moieties and heating polymer at preset temperature to generate oligomers or monomers comprising thiol-based moieties
DE102023111010	(UYLE) UNIV LEIPZIG KOERPERSCHAFT DES OEFFENTLICHEN RECHTS; (ZIMM) ZIMMERMANN WOLFGANG	Enzymatic recycling of polyesters with crystalline components involve dissolving polyester with crystalline components in solvent, precipitating dissolved polyester from polyester solution by precipitating polyester solution with anti-solvent
WO2024227121	(VIRG) VIRGINIA TECH INTELLECTUAL PROPERTIES INC	Preparing waxes and/or oils from olefin-derived products, comprises heating polymer comprising polypropylene and/or polyethylene, in a vessel in fluid communication with condenser to provide sublimated mixture of waxes and/or oils
WO2024224303	(GRAS) GRASIM INDUSTRIES LTD	Modified curing agent component used for recyclable epoxy resin system, comprises 2,4- bis((dimethylamino)methyl)phenol compound, 2- ((dimethylamino)methyl)phenol compound, and phenol compound
WO2024227681	(EVON) EVONIK OPERATIONS GMBH	Producing polyether polydimethylsiloxanes used as additive for producing polymer foam, has E.G. reacting cyclic-polydimethylsiloxane-containing composition comprising cyclic polydimethylsiloxane and hydrosilylating with polyether
WO2024231394	(CNRS) INSTITUT NAT DES SCIENCES APPLIQUEES DE TOULOUSE; (NASC) CENTRE NAT RECH SCIENT; (UTOS) UNIV TOULOUSE 3 PAUL SABATIER	Process for transforming solid or liquid substrate into hydrocarbon(s) from substrates formed from plastic material(s) and heavy oils comprises bringing substrate and heating element formed of ferromagnetic metal compound into contact



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024235691	(INSF) IFP ENERGIES NOW; (JEPL) JEPLAN INC	Method for depolymerizing polyester filler comprising polyethylene terephthalate comprises decolorizing pre-purified monomer effluent in presence of adsorbent and carrying out crystallization of produced purified monomer effluent
WO2024236008	(CARB) CARBIOS	New esterase having identity to specific amino acid sequence, amino acid substitution, polyester degrading activity and increased thermostability and/or increased polyester degrading activity used to degrade E.G. polyester
WO2024236009	(CARB) CARBIOS	New esterase variant useful for degrading polyester E.G. polyethylene terephthalate, polytrimethylene terephthalate or polybutylene terephthalate, has specific amino acid sequence with specific amino acid substitution
WO2024238512	(NOUN) UNIV NORTHWESTERN	Depolymerizing polyamide, used in plastics applications requiring material/product to withstand harsh mechanical and environmental conditions comprises combining polyamide and alkali metal catalyst to depolymerize the polyamide to product
WO2024238111	UNIV NORTHWESTERN [US]	Methods for depolymerizing polyamides using organolanthanide catalysts
WO2024238775	(REGC) UNIV CALIFORNIA	Up-cycling of waste material comprising hydrocarbon polymer, in production of alkylbenzene compounds, involves feeding waste material into reactor comprising transition metal catalyst, and operating reactor under sufficient hydrogen gas pressure to form product comprising alkylbenzene compounds
WO2024243082	(STRD) UNIV LELAND STANFORD JUNIOR	Degrading nylon, comprises contacting nylon substrate with polyethylene terephthalate- degrading enzyme under conditions suitable for degradation of nylon substrate using polyethylene terephthalate-degrading enzyme
WO2024241231	(GUPT) GUPTA MITHILESH MADANLAL; GUPTA KRITIKA RAKESH	Conversion of bulky mixed plastic waste into flowable powders and/or flakes used in recycling of plastic wastes, involves partial depolymerizing plastic waste and forming flakes/minichips from partially depolymerized mix
WO2024246420	NESTE OYJ [FI]	Method for upgrading liquefied waste plastic
WO2024246419	(NESO) NESTE OYJ	Method for upgrading liquefied waste plastic, involves E.G. subjecting liquefied waste plastic-based feedstock to mild hydrotreatment in presence of hydrogen and hydrogenation catalyst, providing hydrotreated waste plastic, hydrocracking in moving-catalyst type reactor system and fractionating



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024245996	(SULZ) SULZER MANAGEMENT AG	Recycling polystyrene waste having organic halogen compound by converting polystyrene to styrene, used as jewel cases and food packaging, by subjecting melt polystyrene waste having organic halogen having compound to devolatilization
WO2024248613	(CURE) CURE TECH B V	Recycling textile waste involves treating polyester yarns with solvent to extract portion of dye from polyester yarns, depolymerizing solvent treated polyester into oligomeric ester, and separating oligomeric ester from particulate matter comprising adsorbed dye
WO2024248614	(CURE) CURE TECH B V	Recycling of mixed polymer waste material involves dispersing mixed polymer waste material comprising polyurethane items, polyester items in 2-(2- ethoxyethoxy)ethanol, and leaving until at least portion of dye is extracted
WO2024248887	(DOWC) DOW SILICONES CORP; DOW GLOBAL TECHNOLOGIES LLC	Method for stabilizing starting recyclate polyol dispersion involves shearing starting recyclate polyol dispersion at preset mean shear rate for period of time sufficient to produce stabilized recyclate polyol dispersion exhibiting lumisizer instability index
EP4474415	(BADI) BASF SE; (STUD) STUDIENGESELLSCHAFT KOHLE GGMBH	Depolymerization of polyurethanes involve providing material comprising polyurethanes, preparing mixture M1 comprising material provided in Bronsted base, protic solvent, and optionally cleavage reagent, grinding mixture M1, and obtaining mixture M2 comprising polyols
WO2024252038	PATENTES TALGO S L U [ES]	Recycling of epoxy resin and carbon fibre composite material by combining a first pyrolysis step with a second solvolysis step
WO2024253517	(IONI) IONIQA TECH B V	Method of recovering polyurethane polymer for bis 2-hydroxyethyl terephthalate product, involves E.G. contacting waste polymer textile material in shredded or cut form with polar aprotic solvent, separating polyester from solvent mixture, precipitating, separating and reusing
WO2024253516	(IONI) IONIQA TECH B V	Method of removing ethylene vinyl alcohol copolymer from waste polymer material for E.G. carpets, involves E.G. contacting waste polymer material in size-reduced form with alcoholic solvent, separating polyester from solvent mixture, precipitating dissolved vinyl alcohol copolymer and separating
WO2024251759	(BADI) BASF SE	Hydrolytically depolymerizing polyamide 6, by E.G. mixing chemical feedstock with liquid aqueous stream, subjecting to polyamide 6 depolymerization, generating aqueous stream, and feeding aqueous stream back to chemical reaction unit



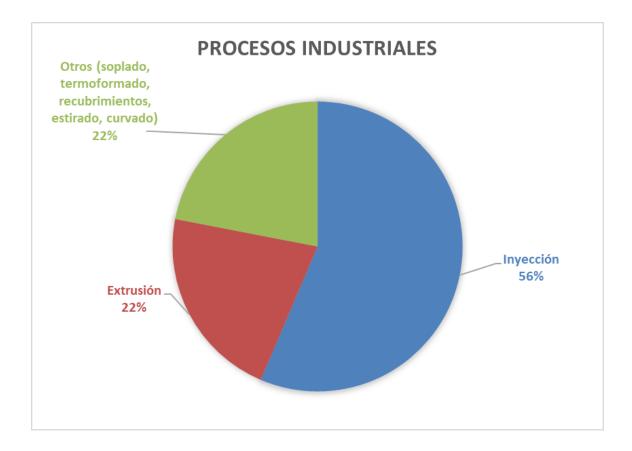
Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024251758	BASF SE [DE]	Process for hydrolytically depolymerizing a polyamide
WO2024251760	BASF SE [DE]	Process for hydrolytically depolymerizing a polyamide
EP4477694	BAERLOCHER GMBH [DE]	Method for treating halogenated polymers
WO2024257006	PRIMPEX PLASTICHE RIUNITE ITALIANE IMP EXPORT S P A [IT]	Polyamide recovery process
WO2024260990	BASF SE [DE]	Process for recycling of a colored polymeric material including discoloration and chemical processing
WO2024260991	BASF SE [DE]	Process for recovery of a polyethylene terephthalate based polymer from a polymeric material
WO2024260972	BASF SE [DE]	Method for discoloration and/or separation of a polymeric material
WO2024260969	BASF SE [DE]	Process for recovery of a polyalkylene terephthalate based polymer from a colored polymeric material
WO2024260976	BASF SE [DE]	Process for recycling of a colored polymeric material and extrusion product obtained therefrom
WO2024260970	BASF SE [DE]	Method for removal of additives from a polymeric material





## **NUEVOS PROCESOS INDUSTRIALES**

En el siguiente gráfico se muestra la distribución de las 9.351 familias de documentos de patente recuperadas en este trimestre en el apartado de Nuevos procesos industriales. Los procesos que mayor actividad innovadora reflejan son el de inyección y extrusión.





Las siguientes tablas muestran una selección de los documentos más representativos, junto con un enlace directo a la base de datos Espacenet, el solicitante y una breve descripción de la invención.

#### Inyección

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US12151415	(ACUS) ACUSHNET CO	Method for forming golf ball component, that is golf ball cover, by injection molding of thermoplastic material about core, involves positioning golf ball core into injection mold getting spherically shaped mold cavity
DE102023205431	(REHA) RAUMEDIC AG	Device for connecting two silicone hose sections in context of pharmaceutical media transfer process, such as pharmaceutical media transfer processes, has overmolding mold for over-molding two adjacent end face areas of two hose sections
EP4454850	(KING) KING STEEL MACHINERY CO LTD	Molding device for use in injection molding system for forming article i.e. foamed article, has first mold cavity defined by first mold and second mold when first mold arranged opposite to second mold, and first mold and second mold movable by position control mechanism individually
EP4467315	(DRAY) DRAY SR ROBERT F	Injection molding apparatus for injecting resin into mold, has nozzle extending from injection cylinder into bore in mold and including central bore in fluid communication with injection cylinder, and selectively permiting flow of resin into mold
WO2024235565	(GBRT) GEBERIT INT AG	Method for manufacturing toilet seat used by user to sit over bowl during use, involves filling first mold on first side of seat heating with flowable material, solidifying flowable material to produce composite of seat heating, and placing solidified material in first mold
EP4470743	(CANN) CANNON ERGOS S P A	Injection molding apparatus for manufacturing product, comprises sleeve body movable within annular supply gap and configured to transfer dose of material from annular supply gap to molding cavity
DE102023205218	(SUMH) SUMITOMO SHI DEMAG PLASTICS MACHINERY GMBH	Method for operating injection molding machine, involves carrying out injection process, recording course of variable characteristic of injection process, and evaluating recorded course of variable characteristic of injection process by evaluation algorithm
CN118769492	(SUMH) SUMITOMO HEAVY INDUSTRIES	Management device for use in injection molding machine to repeatedly execute shot that is series of operations for producing molded product in molded unit, comprises numerical value of physical quantity of object that is taken out from inside of molded unit to outside



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024243275	(TESM) TESLA INC	Manufacturing structural element used for forming a cross vehicle beam, involves heating blank shape comprising composite material having fiber and first thermoplastic followed by overmolding the thermoformed member with molding material having second thermoplastic to form the structural element
CN118990932	(ILLT) ILLINOIS TOOL WORKS	Method for manufacturing handle element actuated by vehicle occupant to open or close inner door handle assembly of E.G. passenger car, from interior, involves providing plastic tool with tool molding in form of lug protruding into first cavity
US2024359379	(TAAE) TAIWAN AEROGEL TECH MATERIAL CO LTD	Preparing high temperature resistant material covering aerogel insulation composite material involves adding siloxane precursor to aqueous ethanol solution to form mixed solution, where siloxane precursor comprises hydrophobic modified siloxane compound
US12157255	(AKOP) AKOPYAN LEV R	Method for molding items such as stock shapes from plastic material, involves providing mold including mold sidewall surrounding mold cavity and open end opening into mold cavity, where mold cavity filled with plasticized material to extent extending proximate open end
DE102023110959	(MENS) GEORG MENSHEN GMBH & CO KG	Method for producing closure cap for containers E.G. bottles and canisters with injection molding tool, involves forming jacket tool which overlaps core tool around common central axis, where core tool has axial end face in which recess surrounding central axis is formed
CN118842213	(ТОҮТ) ТОҮОТА ВОЅНОКИ КК	Rotor, has gate mark being trace created when plastic gate portion formed in gate passage of plastic filling device is separated during process of filling housing hole with plastic through gate passage
NL2034976	BESI NETHERLANDS BV [NL]	Method and system for pre-conditioning a mould cavity of a mould for encapsulating electronic components
DE102023205835	(MGIN) MAGNA POWERTRAIN GMBH & CO KG	Injection molding tool for coating hollow component for current measurement or suppression device, has component arranged in second cavity of second shaping portion in such way that second partial cavity is formed between closed second shaping portion and component on inside surrounding component
DE102023109494	(MHTM) MHT MOLD & HOTRUNNER TECH AG	Injection molding tool used for producing molded portion in molding space, has spacer element that prevents movement of tool elements in direction of closed position, where tool elements and spacer element form section of expanded mold space for receiving plasticized melt



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
CN118721787	(GENK) GM GLOBAL TECH OPERATIONS LLC	Method for making fiber reinforced composite panel E.G. roof panel, mounted in opening in structure, such as roof of vehicle, involves providing continuous reinforcing fiber on surface in predetermined pattern to form structural insert
DE102023115372	(BAYM) BAYERISCHE MOTOREN WERKE AG	Shaping tool for producing composite component E.G. vehicle portion of vehicle, has lifting insert that is designed to be movable in order to create gap between lifting insert and upper tool that corresponds to layer thickness of component and/or lower tool
EP4442425	(NEDA) NEDAP NV	Method for manufacturing animal tag for use in animal monitoring system, involves performing second step of over molding, for embedding molded interior portion in water resistant portion, and solidifying water resistant portion such as to yield animal tag
CN119058041	(SUMH) SUMITOMO HEAVY INDUSTRIES	Display device for use in three-dimensional injection- molding machine, for injecting molding material E.G. resin, from cylinder into mold unit, has guidance screen including input field configured to receive input of conditions upon completion of filling process in first test molding
CN118769499	(SUMH) SUMITOMO HEAVY INDUSTRIES	Management device E.G. controller for injection molding machine, detects abnormal heat generation due to shear of molding material based on actual temperature of predetermined zone of zones excluding most upstream zone and most downstream zone and set temperature in predetermined zone
CN118849317	(SHIH) SEIKO EPSON CORP	Material dispensing device for use in injection molding apparatus for dispensing plasticized material I.E. thermoplastic resin, has comprises plasticization unit including screw and heater and configured to generate shaping material by plasticizing part of material
WO2024240665	(BUSQ) QUIET; (CHAU) CHAUVIN SEBASTIEN; (QUIE) BUSQUET PIERRE	Mold for injection overmolding tableware container with material comprising silicone, has shaping cavity that is extended circumferentially between central stud and peripheral seal, where shaping cavity and peripheral seal are adapted to allow movement of edges during overmolding
CN118809939	(NIKL) JAPAN STEEL WORKS LTD	Method for adjusting shut-off nozzle provided in injection device of vertical injection molding machine, involves releasing fixing device to allow bracket to slide by predetermined width with respect to fixing unit, and heating injection device and nozzle portion by heater



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2024342961	(USNA) US NAVY	Molding cables and connections using additive manufacturing, such as undersea cables and connections, involves removing the mold from printer, cleaning support material from mold, checking the mold, applying mold release composition to ensure that urethane does not adhere to mold and applying heat
EP4467317	(ALLM) ABB SCHWEIZ AG	Mold insert for injection molding, has first half provided with part of contact surface and sealing layer, sealing layer fills part with rough and contact surface of first half, and sealing layer has shape corresponding to shape of contact surface of other of first half and second half
US2024391150	(JETZ) JETZERO INC	Mold I.E. two-sided mold, for molding nose portion of aircraft, has mold first portion defining outer mold line surface, mold second portion and mold insert, where mold first portion and mold insert forms mold cavity defining aircraft component
DE102024113634	(LREA) LEAR CORP	Making foam-containing component used for manufacturing vehicle seat back panel used in vehicle, involves injecting foam resin into cavity and onto trim portion, where mold cavity is partially defined by mold portion, and curing foam resin to form component comprises foam molded on trim portion
EP4446086	(WWST) WWS TECHNIK IN FORM UND KUNSTSTOFF GMBH	Housing shell for accommodating circuit board with passive and/or active electrical components and for accommodating filler material made of injection molding compound made of thermoplastic elastomer, comprises plastic material
DE102023114776	(GROC) GROCHE TECHNIK GMBH	Injection molding arrangement for use in injection molding machine for producing plastic unit, has adapter piston supported in receiving opening, which has fastening interface through which adapter piston is fastened to screw
US2024408805	(BOSC) BOSCH GMBH ROBERT	Molding machine for receiving mold and being operated to create molded products, in molding machine system, has molding machine that receives crane load signal where crane load is less than marginal load value
CN118721648	(SHIH) SEIKO EPSON CORP	Method for controlling injection molding system for producing molded article, involves stopping injection molding machine in second state of first window is opened, and driving injection molding machine in second drive mode in third state of second window is opened
DE102023112956	(GUEN) GUENTHER HEISSKANALTECHNIK	Nozzle arrangement for hot runner system for processing flowable mass, has multiple regulation elements whose respective regulation elements are thermally coupled to nozzle bar of multiple nozzle bars for regulating thermal energy in nozzle arrangement unit



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
CN118809942	(NIKL) JAPAN STEEL WORKS LTD	Shut-off nozzle for use in vertical injection molding machine, has bracket that is allowed to slide by predetermined width with respect to fixing element allowing slide position of bracket to be adjusted by slide position adjustment mechanism
JP2024167554	(BRID) BRIDGESTONE SPORTS CO LTD	Manufacturing golf ball involves forming intermediate layer-encased sphere by encasing core with intermediate layer, subjecting intermediate layer-encased sphere to heat treatment a temperature of at least melting point of base resin o resin composition of intermediate layer
US2024375331	(FENG) FENG TAY ENTPR CO LTD	Injection mold for manufacturing golf ball, has runner system included with primary runner, annula runner and injecting runner, and phantom corona plane defined to pass through injection mold to divide first and second mold halves into proxima portion and distal portion
US2024327614	(JABI) TAIWAN GREEN POINT ENTPR CO; JABIL CIRCUIT SINGAPORE PTE LTD	Manufacturing play-of-color article used in play-of color product, involves adding initiator to mixture with iridescent pattern, followed by injecting mixture and disturbing in mold, so as to allow functionalized colloidal particles in mixture to self-assemble to form crystalline arrangement
DE102023107979	(GEMU) GEMUE GEBR MUELLER APPBAU GMBH & CO KG	Lost mold core for producing valve body for E.G diaphragm valve, has main section comprising inne sealing negative section that provides negative contour for inner sealing section of valve body to-be produced
CN118769457	(SUMH) SUMITOMO HEAVY INDUSTRIES	Manufacturing device i.e. injection molding machine for manufacturing molded product in manufacturing facility, has electrical component provided on support surface, and fan provided on surface different from support surface and opposing surface of heat sink for cooling heat sink
DE102023205430	(REHA) RAUMEDIC AG	Method for connecting two hose sections of hose assembly used in pharmaceutical or biomedica media transfer processes, involves positioning mutually facing end face regions of hose sections to be connected and cover sleeve, and curing flowable overmolding medium
JP2024151885	(BRID) BRIDGESTONE SPORTS CO LTD	Method for manufacturing golf ball with cover layer forming resin material with injection mold, involves molding layer of cover with separating two-par injection mold, where injection mold has spherica cavity and three or more support pins arranged to be advancing and retracting in direction
CN118906380	(ZIZA) ZKW GROUP GMBH	Injection molding tool for molding exterio component of vehicle, has mold half comprising venting hole penetrating mold half such that mole half leads from recess surface to venting opening of outer surface of mold half, where outer surface of mold half faces away from recess surface



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2024369831	(MICT) MICROSOFT TECHNOLOGY LICENSING LLC	Method for manufacturing plastic reflective waveguide, involves applying partially-reflective coating to base part to form reflective mirror elements, and injection molding secondary part of waveguide around reflective-coated base part
WO2024216370	(MLDM) MOLD MASTERS 2007 LTD	Valve assembly for injection molding system, h valve comprising valve proximal end, valve dist end, and first valve surface at valve proximal en where diameter seal is formed between first inl surface of inlet and first valve surface of valve whe valve is in closed position
CN119019742	(BOEI) BOEING CO; (COAC) BEIJING AIRCRAFT TECH RESEARCH INSTITUTE BATRI OF COMAC LTD	Manufacturing tray table involves homogenizin halogen-free flame retardant to obta homogeneous halogen-free flame retardar blending molten thermoplastic resin with pla fibers, homogeneous halogen-free flame retardar and compatibilizer to obtain plant fiber composi material
CN119058007	(NIKL) JAPAN STEEL WORKS LTD	Injection unit for use in I.E. hydraulic injection molding machine, has support unit located between screw and drive shaft that allows rotation an movement in axial direction of connecting shaft an supports connecting shaft in vertical direction
JP2024157334	(TOYT) TOYOTA BOSHOKU KK	Method for manufacturing magnet-embedded rot used as rotor for rotating electric machine, involv removing core and magnet from space between fir die and second die, when temperature thermoplastic injected into magnet housing hole higher than or equal to glass transition point
DE102023112957	(GUEN) GUENTHER HEISSKANALTECHNIK	Nozzle bar for hot runner system of injection moldi tool for processing flowable mass, has recess form in direction of head region above connection regio in pipe main part of each pipe, where two recess of adjacent tubes form intermediate spaces
DE202024103560	(SIOP) SICK AG	Injection molding device for producing plast connection by using injection molding tool f optoelectronic sensor, designed to inject chemic modifier in position of injection molding tool in injection molding tool in preparation for producing shape of plastic portion
DE102023115266	(MRQU) MARQUARDT GMBH	Translucent metal decorative panel for mot vehicles, has base body and filling material togeth provide visible surface towards visible side, which coated with translucent metallic cover layer, su that rear side illumination of recess filled with fillin material is visible on visible side
DE102023109878	(HQMS) HQM SCHERDEL GMBH	Device for producing hybrid component by injecti or over-molding E.G. pipes of joint rod for vehic chassis using injection molding tool, has seali region provided with two sealing jaws that a respectively provided with two inner contours



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
DE102024103562	(DART) DART CONTAINER	Injection molded cutlery item such as fork, has injection gate mark at central portion of housing where housing is made of biomaterial injected at pressure that is less than preset injection pressure required for injection at end of housing
DE102023115262	(MERK) MERKLE PORTUGAL UNIPESSOAL LDA	Device for demolding cast component with undercut from cavity plate for casting process, has stabilizing device that is arranged between first end of ejector element and guide element to reduce deflection of ejector transversely to direction of translational movement of pusher
AT527104	(RAYS) RAYSPERT PREC INDUSTRIAL INC	Mold with variotherm mold temperature structure for plastic injection molding of granular plastic raw materials, has heating device located outside base body and communicating with both ends of hot runner through circulation pipeline
US2024344505	(DENK) HUTCHINSON TECHNOLOGY	Shape memory alloy (SMA) actuator for use in camera lens element as auto-focusing drive, has insulator that comprises dielectric material arranged at fixed end of base, where insulator electrically isolates first set of electrical contacts at fixed end of base
DE102023112958	(GUEN) GUENTHER HEISSKANALTECHNIK	Distributor for hot runner system in injection molding tools during processing flowable mass, has lateral distributor that comprises flow channel which deflects mass flowing from first direction into second direction
CN119017632	(NIKL) JAPAN STEEL WORKS LTD	Injection molding machine, has mold clamping device provided on bed, injection device provided on bed, hose support element fixed to injection device below opening, and hose whose exposed section is partially supported by hose support element
DE102023110984	(IGGI) IGUS GMBH	Plastic injection molding process for producing plastic injection molded component, involves joining shell-shaped core elements to form hollow core, and overmolding hollow core with thermoplastic plastic, where hollow core has internal stiffening so that joined hollow core is dimensionally stable
US2024326296	(CAST) CASTEEL JOSH	System for forming handlebar grip, for E.G. motorcycle, has mold insert that is inserted into recessed areas in first and second mold portions, where liquid resin is injected under pressure between outer surface of pipe and surface of mold sections
EP4450250	(INGL) INGLASS SPA	Injector body for being mounted on plate in injection molding assembly of molding system, has first channel for extending to axis, where portion comprises radial protuberance part that radially extends from axis beyond second channel



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
DE102023114678	(BAYM) BAYERISCHE MOTOREN WERKE AG	Charging cable plug of charging cable used in charging partially electrically powered vehicles, has cable grommet that envelops region of cable which connects to plug housing, and is formed from layer of three-dimensional and isotropic structure
DE102024113637	(PROC) PROCTER & GAMBLE	Control system, I.E plastic injection molding system for manufacturing equipment used in production of products using molten polymeric material, has pressure sensor provided to sense only molten material that has passed through filter
CN119099107	(SUMH) SUMITOMO HEAVY INDUSTRIES	Information processing apparatus i.e data processing device implemented by computer, has display control unit for displaying input screen for inputting information relating to quality of molded product, where content displayed in diagram is changed according to operation received from receiving unit
DE102023109577	(KURZ) LEONHARD KURZ STIFTUNG & CO KG	Method for producing film body with heatable surface of cover element by using injection molding device, involves back-injecting or back-flooding carrier film, heating wire and decorative layer with first flowable composition to obtain first carrier component of film body
EP4467318	(HAID) HAIDLMAIR HOLDING GMBH	Pre-chamber bushing for hot runner nozzle of hot runner system of injection molding tool of injection molding machine, has base body made of first steel alloy, and lateral jacket section for contact with tool part of injection molding tool of injection molding machine
CN118990962	(GENK) GM GLOBAL TECH OPERATIONS LLC	Method for controlling six degrees of freedom of component prior to injection molding for manufacturing components, of vehicle system devices, involves determining actuation command to operate actuation assembly coupled to tool based on orientation adjustment by control module
WO2024254432	(GORE) GORE & ASS	Mold for device for forming polymeric product E.G. tubing, has inner component that is single unitary piece comprising inner surface that defines second inner cavity for receiving polymeric material during molding of product
WO2024215266	(TULG) TULGA UERUEN GELISTIRME MUEHENDISLIK LTD SIRKETI	Remote-controlled smart plastic injection machine for use in office, has control unit including cartridge slot in which cartridge is connected to machine in package, and remote access protocol contained in system computer
US2024399632	(YUAN) YUAN PENG PLASTIC CO LTD	Method for continuously forming plastic caps used in conjunction with nail gun, involves forming a first plastic cap strip in a mold by a first injection molding process, and clamping mold cavity located at a front end of mold cavity



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
CN119078135	(NIKL) JAPAN STEEL WORKS LTD	Mold clamping device used in injection molding machine, has fixed platen fixed on bed, movable platen slidably provided on bed, mold clamping housing slidably provided on bed, tie bars coupling fixed platen and mold clamping housing
GB2629576	(TTTA) JAGUAR LAND ROVER LTD	Method for locating compression limiter during production of injection molded vehicle component of commercial vehicles, involves injecting materia into space between first tool component and second tool component to mold injection molded vehicle component
US2024410480	FREUDENBERG NOK GENERAL PARTNERSHIP [US]	Umbrella valve with overmolded core
US2024344643	MURZANSKI ENG [US]	Rotary Union
LU506780	CHANGYUAN FANGYUAN RUBBER AND PLASTIC CO LTD [CN]	Device for forming protective sleeve of rubber part
CN118832819	(NIKL) JAPAN STEEL WORKS LTD	Operating condition correction method of industrial machine for use in molding machine, involves acquiring measurement data obtained by measuring state of industrial machine and data, and correcting operating condition based on correction quantities determined as having correction direction
US2024375332	(NAUR) NAU ROBOTICS CO LTD	Multi-joint robot I.E. Cartesian robot, for use in injection-molding machine for taking out E.G. injection-molded product, and performing motion control, has overrun detector for detecting overrun operation by measuring degree of deformation of joint axis relative to force applied to joint axis
EP4464497	(HAID) HAIDLMAIR HOLDING GMBH	Injection molding tool for use in injection molding machine for demolding injection-molded part i.e plastic component, has ejector and slide form driver pair, ejector moves in ejection direction, and driver pair, ejector and slide coupled to one other by magnetic frictional connection
DE102023109660	(KERA) KERAFOL HOLDING GMBH	Thermally conductive injection molding material useful E.G. for producing component arrangement, preferably electrical control system, comprises substrate made of thermoplastic elastomer, and contains thermally conductive particles
WO2024229026	(VART) VARTEGA INC	Method for preparing fiber-reinforced composite in variety of reinforcing applications, involves preparing agglomerates comprising tumbling process mixture comprising non-continuous reinforcing fibers and binder material
DE102023115487	(SNER) SANNER GMBH	Container for packaging E.G. food goods, has tab that is arranged on tear-off section connected to edge portion via web portion including outer contour such that dispensing opening is smaller than container opening after removal of tear-off section



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
CN118769634	(TOYT) PRIME PLANET ENERGY & SOLUTIONS INC; TOYOTA MOTOR CO LTD; PRIMEARTH EV ENERGY CO LTD	Aluminum member useful to produce aluminum- resin composite, which is useful in sealed lithium-ion secondary battery to be mounted in vehicles E.G. hybrid cars, is made of metal aluminum, and has member surface on which protrusions are densely arranged, where protrusions each has proximal end portion
WO2024261342	KONINKLIJKE PHILIPS NV [NL]	Biological material testing device and methods for manufacturing and using the same
EP4474229	(LINE) LINEA 3 S R L	Liquid mixture container for supplying windscreen wipers of motor vehicle, has shell and cover whose external parts of edges are identified in combination, consequently to coupling
US2024335989	(GREC) GRECEA ALIN EDUARD	Method for using T-split hose, Y-split hose and cross split hose with injection molding for swimming pool spas above E.G. ground pools, involves injecting molten plastic to take shape of T, Y and cross pipes, and molding dies and retractable rods to form cross pipes
US12163462	PRATT & WHITNEY CANADA [CA]	Internal combustion engine with monolithic pilot chamber structure
EP4442441	(EADS) AIRBUS OPERATIONS GMBH	Method for in-situ manufacturing protective liner on elongated structural portion of aircraft, involves curing or letting cure wet sealant into cured sealant that is bonded to surface and forms protective liner, and removing sealant mold portion from elongated finished structural portion
DE102023115580	(BAYM) BAYERISCHE MOTOREN WERKE AG	Method for producing radar sensor cover for motor vehicle, involves processing selected plastic material during manufacturing process with mold, where thickness of sensor cover produced is adjusted to optimal thickness for producing radar sensor cover
CN118769497	(SUMH) SUMITOMO HEAVY INDUSTRIES	Controller for controlling components of injection molding machine, has controller for performing filling in which forward movement speed of injection unit is controlled such that actual value of pressure applied from injection unit to molding material does not exceed upper limit of pressure
WO2024259187	(ALTO) PROCTER & GAMBLE; (GIAC) ALTONEN GENE MICHAEL; (MORR) GIACHETTO RICHARD MATTHEW; (PROC) MORRIS CHAD	Method for manufacturing products by molding machine for operating injection molding system, involves receiving data provided by primary sensor and secondary sensor, and analyzing data to detect indicia of sensor health failure
JP2024147292	(TOZA) TOYODA GOSEI KK	Method for manufacturing plastic molded article E.G. exterior component, such as vehicle bumper cover by collecting waste material as plastic product with painted surface, involves producing granular waste material by finely pulverizing waste material with base made of thermoplastic



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
CN118927517	(PLAS) PLASTAL CO LTD	Preparing metal-polymer resin composite by etching metal member from copper, copper clad, or copper alloy, forming adhesive coating layer on surface of pre-treated metal member in electrolyte solution with sulfur-containing compound and metal chelate compound and drying the member with coating layer
DE102023112955	(GUEN) GUENTHER HEISSKANALTECHNIK	Nozzle bar for nozzle arrangement for hot runner system for processing flowable mass used in injection molding tools, has tempering channels that are formed in nozzle bar for receiving tempering element for tempering nozzle bar
WO2024236243	(SFRA) SAFRAN	Mold has push device that moves base and belt from each other automatically, locking assembly that is secured to belt which locks hook axis in low position and pusher having spring which is compressed, when hook axis is in low position
GB2629401	(SILV) SILVERSTONE PERFORMANCE TECH LIMITED	Method for forming structural element, E.G. impact energy absorber, for vehicle, involves arranging thin- walled tubes into cluster, providing support to internal surfaces of thin-walled tubes, and overmolding material to portion of external surfaces of thin-walled tubes to bond cluster together
US2024426697	UEDA KENJI [JP]	Resin molded article and determining method
US2024335985	OTRAJET INC [TW]	Molding device and molding method
DE102023111740	(ARBH) ARBURG GMBH CO KG	Mold closing unit for a machine for processing plastics and plasticizable materials for an injection molding machine, has drive plate that is arranged between movable mold clamping plate and support plate, and toggle lever strand is connected to support plate
WO2024236428	(SERV) SERVIZIO S R L	Apparatus for injection molding of plastic material used in manufacturing of components such as consumable articles E.G. toys, has specific injection hole which is provided to connect flow channel with external surface of one of two mold halves through gas inlet channel
US2024335983	(STAC) STACKTECK SYSTEMS LTD	Collapsing core mold for forming molded part E.G. container, has peripheral sections whose longitudinal withdrawal of peripheral sections enabling distinct subsequent lateral movement of remaining peripheral sections toward each other to allow removal of molded part
WO2024260877	(TETR) TETRA LAVAL HOLDINGS & FINANCE	Opening device for package filled with E.G. fruit juice, has leg elements protruding from closing element and coupled to lid, where leg elements are arranged asymmetric with respect to each other and to intersection plane



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2024342537	(EBRA) EBRAHIM ZADEH AZIN; (KHOS) KHOSHGOFTARMONFARED ALIREZA	Resistance loop for use in exercise band used by individuals to strengthen and tone their muscles in addition to rehabilitation of patients with wide variety of physical ailments, has exterior surface including greater distance between top edge and bottom edge than interior surface
DE102023114758	(BAYM) BAYERISCHE MOTOREN WERKE AG	Vacuum pressure gelling tool for pouring casting material onto component E.G. rotor of traction machine for motor vehicle, has conveying device which is arranged by which casting material is conveyed in connecting line, and guided from holder to casting mold and vacuum-pressure cast onto component
EP4461968	(DAIK) DAIKIN IND LTD	Fan structure for fan unit of air conditioner used for heating indoor space of E.G. dwelling house, has resin element that is molded integrally with porous element in which some of pores are filled with resin

#### Extrusión

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
EP4438263	(STLG) STERLITE TECH LTD	Manufacturing optical fiber involves preparing silica slurry by mixing solvents, binders, additives, and silica particles, pushing slurry from inlet end to outlet end of barrel, extruding slurry to form soot preform, drying for eliminating physisorbed moisture, and sintering to obtain glass preform
WO2024224244	(UHCS) UHCS PROPERTY SA	Building construction system has load-bearing element having polyhedral shape preferably parallelepiped that extends along longitudinal axis between two open ends defining peripheral wall comprising four lateral faces
WO2024216315	(PLAS) PLASMICS GMBH	Extrusion head for additive manufacturing of molded portion with tubular body opening into extrusion nozzle, has inductance coil which encloses ferromagnetic jacket of tube in melt zone
EP4477380	FASERBETON S R L [IT]	Method for manufacturing extruded spacers
WO2024238816	(NKEN) NIKE INNOVATE CV; NIKE INC	Direct print extruder for extruding material on surface of footwear sole portion E.G. Midsole to form outsole element, has linear drive that is coupled with frame and screw and is adapted to provide linear movement coaxial with longitudinal axis to linearly move screw



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
CN118952519	(WERN) COPERION GMBH	Device for processing plastic recycling materi and/or plastic waste, has two-shaft screw machir with multiple treatment element shafts mounted housing for plasticizing supplied plastic material t form plastic melt, and storage element for storir plastic melt
EP4450257	(DYZE) DYZE DESIGN	Extruder head assembly for additive manufacturin machine E.G. Three-dimensional printer, has passag and melt channel that fluidly connects downstrea from aperture, and nozzle is configured to receiv heated filament material from passage and me channel
US2024367362	(EDIS) EDISON WELDING INST INC	Extrusion system E.G. Polymer extrusion system ar thermoplastic extrusion system used in plast forming processes, such as injection molding, ha extrusion apparatus to receive ultrasonic vibration from ultrasonic component, where extrusion die connected to heated barrel
WO2024240540	(BORA) BOREALIS AG	Producing pellets of polyolefins by melting polyolef containing the pelletization agent and additive forming a molten polyolefin composition, extrudin the composition via die plate into pellet water bar in pelletizer to form strands
DE102023203382	(WERN) COPERION GMBH	Device for producing film for electrical energy storage systems E.G. Battery, has treatment-eleme spindles which are each composed of treatme elements, such that ratio of outside diameter to co diameter of treatment elements is maintained preset value, for one treatment element per spind
EP4474129	SIKORA AG [DE]	Device and method for checking the adjustment an extrusion device
EP4477382	ROLAN INVEST OUE [EE]	A cooling system for an extrusion line of a polym profile
US12123585	(SIGN) SIGNCOMPLEX LTD	Silicon co-extrusion method for LED light str integrated with corresponding space in e.g. Hom involves extruding fed light blocking and diffusio adhesive material by means of co-extrusion to silico light bar outlet to realize forming light blocking an diffusion adhesive material on board
SE2350434	RELIEFED AB [SE]	An extruded product, an extrusion device, and a extrusion method
CN118990991	(CARL) MILACRON LLC	Extruder assembly for extruding striped wires on conductor to manufacture wire, has fir subassembly for extruding first sleeve on conductor second subassembly for extruding second sleeve onto first sleeve, and cross-section provided wi first annulus sector and second annulus sector
CN119036691	(WERN) COPERION GMBH	Device for processing plastic material E.G. plas recycling material or plastic waste, has melt chanr for bridging damming zone and connecti plasticizing zone and compounding zone to o another, and melt filter device filtering plastic me which is effectively arranged in melt channel



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024256927	(UNIN) UNILIN BV	Manufacturing sheet flooring product, preferably decorative panel- or sheet-shaped floor covering material, having substrate layer and decorative top layer, comprises providing substrate layer on basis of PVC of suspension grade
CN119058055	(RICO) TANAKA TAKASHI; (TANA) RICOH CO LTD	Flow path forming device in extrusion device for foaming plastic sheet, comprises first flow path forming member having first flow path forming surface, second flow path forming member having second flow path forming surface, where first flow path forming surface of first flow path forming member
US2024396012	(ENVT) ENEVATE CORP	Forming composite material for forming battery cell, involves providing mixture comprises precursor and silicon particles, and pyrolysing mixture to convert precursor into carbon phases to form composite material comprises silicon and carbon between silicon particles and carbon phases
CN118789718	(WERN) COPERION GMBH	Method for processing plastic material E.G. plastic recycling material such as high-density polyethylene, in screw machine such as two-shaft screw machine, involves adjusting viscosity of plastic melt by screw speed of screw machine, and adjusting melt index of plastic melt
DE102023115469	(KELL) KELLERHOLZ GMBH & CO KG	Underlay I.E. pallet block, for use as squared timbers in transport and storage logistics to secure and store goods during transport, has underlay main body extruded and comprising flat side at groove produced during extrusion
WO2024211053	(DOWC) DOW GLOBAL TECHNOLOGIES LLC	Process for mixing fluid melt flow stream and recycle, involves feeding fluid flow stream and second fluid into inlet, mixing second fluid with fluid flow stream to form mixed fluid flow stream (MFFS) in gear chamber, and discharging mffs from outlet
US2024400852	SHANGHAI KENDA IND CO LTD [CN]	Process of polyvinyl chloride (PVC) cladding wood
DE102023109413	(KRAU) KRAUSSMAFFEI EXTRUSION GMBH	Lubrication device for melt pump of extrusion device for producing strand-shaped profile or hose, has removal section which branches off molten material arranged with respect to conveying direction of device immediately after melting zone of extruder or after filter device
WO2024211054	(DOWC) DOW GLOBAL TECHNOLOGIES LLC	Process for producing crosslinked article, involves feeding flow stream and specific fluid into inlet, mixing fluid with flow stream to form mixed fluid flowstream in gear chamber, where mixed fluid flowstream is discharged from outlet and into die head to form shaped article



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
EP4446084	(SHOR) SHORT BORTHERS PLC; (SPAE) SPIRIT AEROSYSTEMS EUROPE LTD	Apparatus for forming noodle within elongate groove of product, has gantry system that moves extruder nozzle and levelling device along elongate product groove, such that noodle material is extruded along product groove and is levelled to form noodle within product groove
US2024374531	(BLAE) BLAESI ARON H	Apparatus for manufacture of pharmaceutical solid dosage forms, comprises internally hollow housing having internal surface encapsulating extrusion channel and terminating into exit port, conveying element for extruding plasticized matrix in extrusion channel via exit port and form plasticized fiber
US2024383202	NIKE INC [US]	Direct print extruder with a multi-faceted adjustable output pressure
WO2024246164	(WERN) COPERION GMBH	Plant for producing homogenized coating mixture for electrode e.g. Anode or cathode of battery cell e.g Lithium-ion battery cell for vehicles, has degassing device that is provided downstream of extrusion device and continuously degasses coating mixture homogenized by extrusion device
WO2024211052	(DOWC) DOW GLOBAL TECHNOLOGIES LLC	Producing grafted polymer, comprises mixing second fluid with FFS1 in gear chamber to form mixed fluid flowstream (mffs), discharging mffs from outlet, and grafting radically graftable species to polymer in curing chamber
TW202440220	DOW GLOBAL TECH LLC [US]	Process for mixing a fluid meltflow stream
WO2024211055	(DOWC) DOW GLOBAL TECHNOLOGIES LLC	Process for mixing polymer melt streams, involves feeding first flow stream and fluid into inlet, and mixing fluid with flow stream to form mixed fluid flow stream in gear chamber and discharging mixed fluid flow stream from outlet
WO2024252098	(AQOR) ARKEMA FRANCE	Composition used for forming sealing layer for manufacturing single-layer or multi-layer structure for transport, distribution and storage of fluid comprises polyamide having preset inherent viscosity, polar graphene having preset average thickness, and impact modifier
EP4454856	(URZE) POLITECHNIKA RZESZOWSKA IM IGNACEGO LUKASIEWICZA	Feed hopper for E.G. Powdered biodegradable materials, in screw extruder used for plastics, has multiple mixing arms mounted on shaft, and brush whose bristles are directed downwards and arranged in outlet port of feed container, where bristle ends of brush are protruded from outlet port
US2024401589	STEER ENGINEERING PRIVATE LTD [IN]	Element for a counter-rotating twin-screw processor
US2024351264	(PROC) PROCESSING TECH INTERNATIONAL LLC	Method for handling die unit usable on sheet extrusion system, involves obtaining carriage placing first die unit in supported staging position or carriage, where carriage is configured such that die unit is moved around axis, and moving first die unit around axis to desired angular orientation



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2024399638	QUAKER CHEM CORP [US]	Transferable Maskants Suitable for Chemical Processing
WO2024263880	KOPPERS PERFORMANCE CHEMICALS INC [US]	Methods of manufacture of biocidal compositions, articles for storing biocidal compositions, wood preservative solutions, and wood products produced therefrom
WO2024261725	FITT SPA [IT]	Spiral hose with low environmental impact, as well as method of manufacturing thereof
DE102023115260	(NEXN) NEXNOA GMBH	Extruder arrangement comprises mixing extruder with inlet zone for supplying base mixture which contains one protein mixture and water, mixing zone and ejection zone, where mixing extruder is designed to produce multiphase gel from base mixture across zones
WO2024245912	(CVST) COVESTRO DEUTSCHLAND AG	Security document E.G. To produce polymer film printed with dyes of class offset printing ink comprises e.g. Second outer side opposite first outer side, comprising first polymer film containing thermoplastic polyurethane and printing layer
DE102023111800	(NORS) NORDSON CORP	Method for controlling filter device I.E. BKG and hicon R-Type 250 filter, for filtering highly viscous fluids, involves comparing controlled variable with target variable to determine deviation, and changing manipulated variable depending on determined deviation
EP4480669	BRUECKNER MASCHBAU [DE]	Electronic overload clutch system
US2024337112	(ENGI) ENG FLOORS LLC	Flooring component I.E. Stone plastic composite flooring component for use in E.G. Residential flooring field, has core comprising embossed pattern permanently formed in surface of core, and embossed pattern formed by embossing device selected from embossed roller and press plate
FR3149538	(EURO) EUROSTYLE SYSTEMS TECH CENTER FRANCE	Method for manufacturing three-dimensionally formed trim portion to produce decorative element in passenger compartment of motor vehicle, involves performing hot forming of intermediate portion and obtaining three-dimensionally formed trim portion
WO2024252373	(LOGI) LOGICA EXTRUSIONS SRL	Method for producing interface element of lighting device used in E.G. Station and vehicles, involves compressing strip between mold halves, and retrieving strip when exiting molds in separation area of mold halves
DE102023114621	(MAHN) HENNECKE GMBH	Method for producing molded components made of polyurethane, involves ending flow path in region of constriction, such that further component is mixed with chemical component, and flow rate of chemical component to which further component is added is increased by constriction



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024252293	(UNIN) UNILIN BV	Method for manufacturing board or sheet material utilized as substrate layer of decorative panel, involves compounding polyvinyl chloride composition, and extruding composition using extruder including screw
CN118718160	(BECT) CAREFUSION 303 INC	Continuous tube E.G. Medical tubing for infusing drug E.G. Diazepam, comprises inner layer comprising polyethylene composition, and outer layer comprising thermoplastic elastomer, in which inner layer and outer layer are concentrically arranged without having intermediate layer between both layers
EP4470742	(PIOV) PIOVAN SPA	Apparatus for processing incoherent material I.E. Polymer granule, micro-granule, pellet, powder and flakes, with process gas, has container internally including material volume configured to contain incoherent material, and inner part occupying in part central area of container
US2024387075	(PURD) PURDUE RESEARCH FOUNDATION	Forming thermoplastic composite with electrically and thermally conductive constituents used in automotive, aerospace, involves receiving molten rod comprising polymer composite core, embedding rod with conductive wire, and wrapping conductive wire around rod
WO2024259189	PROCTER & GAMBLE [US]; LAWLESS WILLIAM FRANCIS [US]; GIACHETTO RICHARD MATTHEW [US]; MORRIS CHAD [US]	High-fidelity pressure control of extrusion manufacturing processes using primary and auxilary pressure sensors
US2024417239	LEAR CORP [US]	Cushion and system and method of manufacture
WO2024246180	(MICL) MICHELIN & CIE	Internal mixer for manufacturing rubber mixture, has degassing valve that is installed in well and is provided to take closed state in which degassing valve not allows evacuation of gases from mixing tank and open state in which degassing valve allows evacuation of gases from mixing tank
CN118791851	(NSSK) NISSEI PLASTICS IND CO	Injection molding pellet used for injection molding, has base material, I.E., polylactic resin, which is mixed with wood grains with specific grain size



## **Otros Procesos**

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2024375340	WEILER ENG INC [US]	Gas shield for a blow/fill/seal machine
US2024408806	(SIDL) SIDEL PARTICIPATIONS	Installation unit for regulating angular position of hollow bodies used in production of E.G. Bottles, from preforms, has compensating unit compensating angular position of subsequent hollow bodies in compensation zone upstream of measurement zone
DE102023113915	(SALZ) KHS GMBH	Device for holding and transporting plastic container E.G. Bottle, filled with filling material used as hydraulic pressure medium I.E. Molding fluid, in container treatment machine, has gripping device arranged in use position of device at level of mouth section of container
CN119126181	(SIDL) SIDEL PARTICIPATIONS	Heat treatment unit for preforms of container manufacturing facility, has processing device which is configured to identify presence of radiation leak outside enclosure if image acquired by image acquisition device shows radiation emitted outside fairing
WO2024260975	KHS GMBH [DE]	Blow-moulding machine for producing containers from container preforms
CN119120842	(SIDL) SIDEL PARTICIPATIONS	Heat treatment unit for preforms of container manufacturing facility, has image acquisition device that acquires image of predefined area, where processing device detects presence or absence of removable wall in acquired image
WO2024240510	(SIEI) SIEMENS GAMESA RENEWABLE ENERGY AS	Method for applying film to outer surface or inner surface of casting mold in wind turbine blade, involves providing wind turbine blade, applying film from film roll to outer or inner surfaces of blade or mold, and smoothening applied film
US2024375339	(WEIL) WEILER ENG INC	Gas shield generator for blow/fill/seal machine, has base plate adapted for attachment to parison mold carriage, and reciprocating gas-emitting dispenser associated with linear actuator for back-and-forth movement over carriage
EP4480680	SCM GROUP SPA [IT]	Edging machine for applying an edging tape on a profile of a door/jamb
US2024391156	CELANESE INT CORP [US]	Article laminated with thermoformed film
US2024351267	(EACH) EASTMAN CHEM CO	Thermoformable article used in E.G. Packaging, has multilayer film comprising layer (A1) which comprises polyester composition comprising polyethylene terephthalate (PET), layer (B) which comprises copolyester composition comprising 2,2,4,4-tetramethyl-1, 3-cyclobutanediol (TMCD) modified PET



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024200635	(PLON) PLASTIC OMNIUM ADVANCED INNOVATION & RES	Blow molding tool for manufacturing thermoplastic tank for storing liquid for vehicle, comprises insertion pin that is configured to position component through opening at first distal end of closed tubular parison, and mold is configured to receive closed tubular parison
WO2024211396	(BROW) BROWN LLC	Press-ware extractor assembly for use in press-ware thermoforming system, has powered drive mechanism shiftably supporting car relative to another car for vertical movement of extractor elements relative to mold assembly
GB2628673	(GREI) GR8 ENG LTD	Forming container to thermoformed container such as pots, jars, trays, cups or tubs, involves forming an intermediate article by a first process comprising providing a sheet comprising biaxially-orientable thermoplastic material, and theating sheet to molding temperature
WO2024233336	(BERR) BERRY GLOBAL INC	Insulative polymeric container for storing product i,e food product, has container-support frame defining interior product storage space and including brim defining open mouth opening into space, and container shell has lower end spaced apart from floor
US2024368768	(LEAD) LEADBEATTER PHILLIP	Preventing deterioration to fencing due to oxidation for enclosing exterior surface of galvanized fence post, involves fastening standing unit to fence post, and inserting bottom end and standing unit into ground surface to frictionally anchor fence post in ground surface
CN118775386	(KURZ) POLYLC GMBH & CO KG; (POLY) LEONHARD KURZ STIFTUNG & CO KG	Method for producing component E.G. Cladding component or operating element or display element for vehicle, involves placing label and carrier on top of one another by defined relative movement of label receiver and carrier receiver such that adhesive is arranged between label and carrier
WO2024213958	(MINN) SOLVENTUM INTELLECTUAL PROPERTIES COMPANY	Making thermoformed article comprises thermoforming first film into article at a thermoforming temperature while the second protective film is in contact with the thermoplastic structured surface of the first film
WO2024243061	(NAOV) FIBER GLASS SYSTEMS L P	Fiber reinforced thermoplastic pipe for transporting E.G. Liquids, has bond material arranged between pipe and outer layer of fiber reinforced laminate and partially embedded within pipe, where pipe or bond material include compatible material
WO2024261705	(SSEM) GD SPA	Machine for covering article E.G. Battery that is utilized in automotive sector, has pressing element, located in covering station and engages portion of adhesive sheet, held by covering conveyor at application position, and to press that portion of adhesive sheet against surface
WO2024261702	GD SPA [IT]	Machine and method for coating articles with an adhesive sheet



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024231811	(BEND) BENDIT TECH LTD	Method for assembling a liner in a catheter tube during surgical or medical procedures for reducing friction and facilitating sliding an object in the tube involves heated portion radially outwards is expanded by using a solid expander into the liner, so portion abuts against an inner wall of a tube
WO2024246378	(GASS) GASSO EQUIPMENTS S A	Device for helically winding wire around mandrel or on external layer of composite hose on mandrel during composite hose manufacture, has control unit to regulate rotation of closed-loop control mechanisms of carriage based on position data of carriage unit and rotation speed of mandrel
WO2024243054	(NAOV) FIBER GLASS SYSTEMS L P	Thermoplastic pipe for transporting liquids, gasses and slurries, has induction heating compatible material that is provided in or between inner thermoplastic pipe or outer layer, where the pipe is electrically conductive and reinforced with fiberglass
WO2024200598	(STIR) STIRLING MOULDED COMPOSITES LTD	Method for manufacturing article, involves providing material, heating material, restricting edge or region of material within frame element, and moving mold towards frame or vice versa such that material is in contact with mold
CN119058060	(KROE) KRONES AG	Method for forming plastic preforms into plastic containers with transport starwheel, involves applying bottom area of plastic preform and/or plastic container with flowable medium through stretching rod
DE102023113007	(SALZ) KHS GMBH	Container manufacturing machine for producing containers from preforms, has first heating device for thermally conditioning preform according to first heating profile, and forming device for forming thermally conditioned preform into container
CN118992028	(LFTM) LIFETIME PROD INC	Watercraft E.G. Sit-inside kayak, has sacrificial portion whose configurations are removable from blow-molded plastic hull such that respective seating configuration is defined in blow molded plastic hull
WO2024228702	(AMCO) AMCOR RIGID PACKAGING USA LLC	Cooling tube for cooling preform configured to be injection blow-molded into container, has groove extending helically around exterior of cooling tube, where groove progressively increases in depth as groove extends towards end
AU2024202721	(LEAD) LEADBEATTER PHILLIP	Fence post assembly for use in fencing and trellis applications for E.G. Retention or exclusion of human beings, has anchoring device positioned at level between predetermined depth and surface of ground such that anchoring device anchors fence post at upright position
US2024352745	(SUNC) SUNCAST TECHNOLOGIES LLC	Decorative plastic panel for resembling stone for producing plastic articles with decorative attributes, has first color that is provided with base color forming preponderance of the decorative layer, and second color forming elongated streaks



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
EP4480671	B&T ENTW UND VERMARKTUNGSGESELLSCHAFT MBH [DE]	Method for manufacturing an ecological product from dryly placed fibers
DE102023112598	(WTIP) W TIP GMBH & CO KG	Manufacturing device for laminating upper material, i.e. Leather onto component I.E. Base body for laminating process used in vehicle construction, has overpressure air hose that is arranged such that fold of upper fabric is pressed directly or indirectly onto component by air hose in expanded state
CH720838	(ALPL) ALPLA WERKE ALWIN LEHNER GMBH & CO KG	Extrusion blow molding machine for producing hollow structure E.G. Bottle, has extruder head, blow molding tool with cavity and blow mandrel that are arrabged orderly, and cooling mold that is formed with cavity corresponding to finished hollow structure for cooling blown hollow structure
WO2024261303	(SYNE) SYNERLINK	Food jar for containing liquid or semi-liquid products, E.G. Yogurt, comprises main element having collar of specific thickness, and paper sleeve surrounding side wall, which is arranged in contact with collar
EP4438268	(GAMM) GAMMA MECC S P A	Apparatus for covering pipe sections for insulation for processing pipe sections made of rock wool or glass wool, has transfer assembly that comprises adjustment unit which are functionally associated with actuation unit so as to obtain variation of wrapping stroke imparted to guiding unit
DE102023112866	(SALZ) KHS GMBH	Treatment device for containers and/or preforms, has housing with interior space and first measuring device for measuring concentration of fluid, second measuring device connected to interior space in fluid-communicating manner, and separating device providing fluid communicating connectione
WO2024261706	GD SPA [IT]	Machine and method for covering articles with an adhesive sheet
US2024399647	MURATA MACHINERY LTD [JP]; TOYOTA MOTOR CO LTD [JP]	Numerical controller for filament winding machine
WO2024231798	(SCMI) SACMI	Method for forming container E.G. Bottle used in packaging sector, involves joining first component and second component during a pressing step in which joining portion of first component is pressed into contact with second component
WO2024213991	(IMAI) IMA SPA	Method for making packages containing liquid or pasty food product E.G. Processed cheese, involves adjusting predefined volume of food product to dispense into internal cavity of cup shaped container at filling station to re-establish desired weight
DE102023112021	(SALZ) KHS GMBH	Method for removing E.G. Defective preforms from processing line for processing hollow bodies, involves carrying out Second diversion process for diverting detected defective hollow body from processing line
US2024375840	TERUMO BCT INC [US]	Preformed lyophilization containers and methods of preparing the same



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024227158	(PLTK) PLASTIPAK PACKAGING INC	Mold assembly for molding articles E.G. Hollow plastic containers, has surface insert support configured to support portion of surface insert, where portion of surface insert and/or portion of surface insert support are formed by additive manufacturing,
WO2024206970	(SCOT) SCOTT GREGORY	Device for forming square-nose flooring in residential and light commercial settings, has clamping device for including clamp bar arranged on frame, and actuator operatively connected to plate joint to rotate forming panel about plate joint
WO2024261704	GD SPA [IT]	Machine and method for covering articles with an adhesive sheet
EP4477386	SUPERNODE LTD [IE]	A reinforced thermoplastic cryostat for a high temperature superconductor
EP4446092	(JOHM) JOHNS MANVILLE	Method for insulating piping system E.G. Insulated piping system, involves coupling uncured insulation substrate to piping system, and setting uncured insulation substrate to cure uncured insulation substrate to cured insulation substrate
WO2024240451	(SIDL) SIDEL PARTICIPATIONS	Method for controlling opening of single shutter in installation for production of bottles, involves regulating speed of opening of shutter such that overpressure inside enclosure remains between operating value and maintenance threshold
WO2024246324	(PLON) PLASTIC OMNIUM ADVANCED INNOVATION & RES	Blow molding tool for manufacturing thermoplastic tank for vehicle, has displaceable spacer which comprises two half displaceable spacers, and configured to be positioned into alignment with movement element that is presented in cavity of mold portions
DE102023110499	(SALZ) KHS GMBH	Device for transporting preforms in container treatment station I.E. Heating module for preforms, of plant for producing containers from plastic, has safety stop element forming stop for flexible band element of pivoting portions which are in incorrect position and move past safety stop element
WO2024236607	(CELL) CELLA CRISTIANO	Production of stretched multilayer film used for producing packaging article, involves providing multilayer film having two external layers comprising virgin thermoplastic material and internal layer comprising thermoplastic material, heating, stretching multilayer film, and annealing
WO2024240666	(BITR) BIOTRONIK SE & CO KG	Method for manufacturing E.G. Diagnostic or treatment catheter for introduction into patient body, involves positioning end section of a solid wire, and removing solid wire by pulling and removing cover layer material from assembly



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
CN119071950	(SIDL) SIDEL PARTICIPATIONS	Heat treatment unit for preforms of container manufacturing facility, has first wall provided wit first heating element, first and second heatin elements supplied with electricity by current source and first and second heating elements electrical connected in series to current source
EP4467309	(RAYT) RAYTHEON TECH CORP	System for forming braided preform used in E.C. Aerospace, has mandrel for comprising rotation axis, and radial braider for winding fibers ont mandrel to form braided layer, where mandrel translated and rotated along rotational axis
US2024409190	(MELI) MELISSA GRONDA LLC	Grip pack for providing a slip-resistant, wate resistant, and antibacterial surface to deck skateboard, comprises middle adhesive layer, whic is configured to adhere top printable layer to surface of component of sporting equipment
EP4458551	(ENER) ENERCON IND CORPORATION	Roll end air fitting adapter mechanically couplable open end of cylindrical roll extending along roll as used in systems for treating surfaces of materia has compliant sleeve that overlaps peripheral outl openings upon fitting compliant sleeve onto adapt ring
CN119078150	(KROE) KRONES AG	Method for forming plastic preforms into plast containers, involves regulating first manipulate variable and second manipulated variable on basis characteristic value, and controlling manipulate variable in prioritized manner
US2024341921	ALIGN TECHNOLOGY INC [US]	Dental appliance occlusal element
DE102023112836	(MUSE) MULTIVAC HAGGENMUELLER KG	Molding tool lower unit for packaging machine f forming packaging cavity in film, comprises mo cavity with concave shoulder that is arranged sections on inner circumference of mold cavity, an shoulder is arranged at upper region of mold cavit
CN118813005	(CANO) CANON KK	Stretch blow-molded article or pellet such as ton bottle, has polyester such as material recycle polyester E.G. Polyethylene terephthalate polyethylene naphthalate, wax and inorganic layere double hydroxide or zeolite, where inorganic layere double hydroxide comprises hydrotalcit compound
WO2024260525	VESTAS WIND SYS AS [DK]	Method of making a wind turbine blade
CN118937443	(UYPK) UNIV BEIJING; UNIV PEKING FIRST HOSPITAL	Threadlike sensor for use in wearable device f monitoring blood glucose level in body in real tin and providing immediate feedback for clinic decision for diabetes monitoring, has thread co and outside electrode layer that are configured f sensitivity testing
WO2024237843	(CERL) CERALOC INNOVATION AB	Method for manufacturing board element e.g. W panel, involves providing substrate comprisi polymer-based material and multiple cavities in re- side, arranging printing pattern on front side substrate, and coordinating position of printi- pattern with location of cavities



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
DE102023203421	(GEIG) GEIGER KANALTECHNIK GMBH & CO KG	Profile unit for forming a winding tube used in lining for renovation of channel, has channel that extends along channel longitudinal direction and is delimited by channel peripheral wall, and profile unit is provided in channel
DE102023204668	(WINM) WINDMOELLER & HOELSCHER	Stretching device for monoaxially stretching film well in transport direction, has first movement device that is provided for moving support point relative to pressure roller in direction parallel to axis of rotation of pressure roller
DE102023110180	(KROE) KRONES AG	Device for forming plastic preforms into plastic containers, has transport device, which transport plastic preforms along predetermined transport path, and transport device has transport carrier or which multiple forming stations are arranged fo forming plastic preforms
WO2024251515	(OREA) OREAL	Molded preform for manufacturing recipient of E.G Polyethylene material, has shoulder bearing locking lug projecting from outer upper surface of shoulde in direction parallel to longitudinal direction of neck
DE102023109230	(MANR) MANROLAND GOSS WEB SYSTEMS GMBH	Wrapping device for wrapping substrate well running in infeed direction with web width on side of substrate web, has infeed turning bar enclosing angle to exit plane perpendicular to center plane in projection onto exit plane
DE102023109956	(KROE) KRONES AG	Method for utilizing waste heat from filling line use for filling liquid products into polyethylen terephthalate bottles in industrial plant, involve heating one heating area spatially separated from filling line using heated exhaust air, in productio processes for packaging product containers
DE202024105369	(GAPL) GAPLAST GMBH	Container for filling liquid or pasty contents, ha tubes co-extruded and arranged between opened halves of blow mold, and air slot openings are formed in seam of outer container through which ambient air can enter space between inner bag and outer container to equalize pressure
FR3147513	(TEPA) SOC GEN DES TECHNIQUES PAR ABREVIATION S G T	Preform for manufacturing five-gallon carboy type container, comprises cylindrical preform component, cylindrical internal volume and cylindrical neck, and includes material constituting preform comprising copolymer of polyethylene terephthalate and isophthalic acid
EP4457094	SUEPER FILM AMBALAJ SANAYI VE TICARET ANONIM SIRKETI [TR]	White opaque bopet films with dead-fold propertie
DE102023203405	(FRAU) FRAUNHOFER GES FORSCHUNG	Film for transporting liquid has front side and bac side and contains thermoplastic material, wher microchannels are formed on front side and on th back side of film, and thermoplastic material is e.g Polyester, polyamide, polyetherimide, polylactide polyethylene naphthalate



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024243041	CARBON INC [US]	Hollow dental molds configured for high throughpu cleaning
US2024416642	TAIKISHA KK [JP]; FU SE VACUUM FORMING LTD [JP]	Jig and coating apparatus
CN118812985	(CANO) CANON KK	Stretch blow-molded article or pellet, has inorgani layered double hydroxide or zeolite, styrene-base resin, and wax, where inorganic layered doubl hydroxide comprises hydrotalcite compound, an styrene-based resin is material recycled polystyren or impact-resistant polystyrene
DE102023110672	(SALZ) KHS GMBH	Blowing module for blow molding system for formin plastic preforms into containers with blow mold an blowing device assigned to blow mold, ha temperature control device including temperatur control units arranged in mold portion, where mol portion is fixed to mold carrier via media interface
DE102023107757	(BRKM) KIEFEL GMBH	Producing product from biodegradable materia used for storage of media and substances, involve providing at least one first layer which has cove layer and at least in first connecting section an functional layer, aligning at least one first connectin section of at least one first layer
GB2628815	(LOOP) LOOP TECH LTD	Flexible material rolling machine for picking up moving/storing and placing piece of flexible materia has drive unit to drive first material storage spool of roller and supply of flexible support layer which wound onto first material storage roller or spool when drive unit is operational
CN118812984	(CANO) CANON KK	Producing stretch-blow-molded article used as tone bottle, involves producing preform from mel- kneaded product of resin mixture comprising at leas wax, styrene-based resin and carbodiimid compound and performing stretch-blow molding o the preform to produce the stretch-blow-molde article
US2024336022	(ROJA) ROJAS LOESCH DENIS	Method for reinforcing thermoplastic polymer involves providing acrylonitrile butadiene styren (ABS) plastic panel, heating desired body to resir bonding temperature with enclosed chamber, an layering quantity of resin as reinforcement coatin onto desired body
GB2628592	(ENOF) ENOFLEX LTD	Composite pipe used for conveying fluid, comprise annular composite layers comprising polymer fibre chosen from carbon fibres, glass fibres, fibres mad of iron-nickel alloy, aramid fibres and basalt fibre embedded in polymer matrix
CH720709	(HOFF) HOFFMANN NEOPAC AG	Method for expanding a portion of initial tube blan made of plastic or metal, involves blowin compressed air into interior of expanded tube blan through first mandrel provided with correspondin first air channel, or mechanically stripping expande tube blank



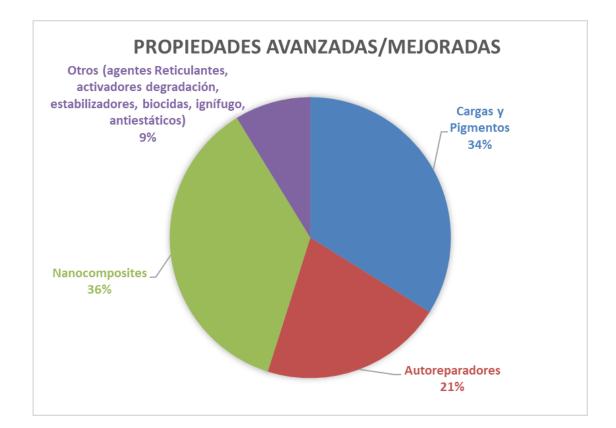
Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
CN119141836	(CHUZ) CHUZHOU YUJIAN TRAVEL PRODUCT CO LTD	Negative-mold blister mold for molding luggage during process of blister molding, has convex mold configured to press stretched sheet and driven by drive member to move relative to upper mold holder
DE102023115440	(RELI) RELINEEUROPE GMBH	Device for curing lining tube with high-energy radiation comprises carrier device and radiation source arranged on carrier device, where radiation source is arranged on outside of hollow body section, and fan which generates air flow
DE102023107667	(BRAW) BRAWO SYSTEMS GMBH	Device for pulling liner into pipe by inversion process, has limiting element arranged at free end of shaft and decoupled from rotational movement of shaft, and limiting movement of liner in direction parallel to rotational axis of shaft
WO2024209302	(SCMI) SACMI	Method for folding flaps into guarantee bands for capsules for closing containers, involves inserting locking element inside cup-shaped body against end wall of capsule to lock capsule in position between locking element and end wall

VOLVER A CONTENIDO



# MATERIALES CON PROPIEDADES AVANZADAS O MEJORADAS

En el siguiente gráfico se muestra la distribución de las 918 familias de documentos de patente recuperadas en este trimestre en el apartado de Materiales con propiedades avanzadas o mejoradas. En este trimestre, el volumen de documentos de patente a nanocomposites sobresale seguido por cargas y pigmentos y autorreparadores.





Las siguientes tablas muestran una selección de los documentos más representativos, junto con un enlace directo a la base de datos Espacenet, el solicitante y una breve descripción de la invención.

## Cargas y Pigmentos

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024202537	(TOYM) TOYOBO MC CORP	Resin composition used for hot-melt adhesive composition, comprises polyolefin resin, acid modified polyolefin resin, styrene-isobutylene- styrene block copolymer, adhesion imparting agent, and plate-shape filler
WO2024204753	(SEKI) SEKISUI CHEMICAL CO LTD	Thermally conductive sheet for bonding semiconductor chip and heat spreader, contains reactive double bond-containing acrylic adhesive layer on surface of thermally conductive layer containing polymer matrix and thermally conductive filler
GB2629902	(ROSE) ROSEHILL POLYMERS GROUP LTD	Rubber material used for forming consolidated material for playground surface, is obtained by mixing saturated polyolefin, curative, and cross- linking agent
WO2024203486	(JAPG) ZEON CORP	Resin composition used for forming molded component in form of arbitrary shape, comprises polymer containing structural unit derived from norbornene-based monomer and flake-like filler
WO2024202881	(ELED) DENKA COMPANY LTD	Clay used for craftwork, comprises modified polyvinyl alcohol-based polymer comprising alkyl vinyl ether unit, and having preset viscosity average polymerization degree, powder(s) chosen from fiber substance, inorganic substance, and synthetic resin, and water
WO2024204673	(SEKI) SEKISUI CHEMICAL CO LTD	Resin sheet used for forming heat dissipation component, comprises resin, and thermally conductive filler containing single crystalline filler and having preset average particle diameter
WO2024210148	(FORG) SEKISUI CHEMICAL CO LTD; (SEKI) FORGE NANO INC	Diamond composite particles used in resin composition, comprise diamond particles and coating film containing metal oxide and having preset average coating thickness and covering surface of diamond particles and preset ratio of standard deviation of coating thickness to average coating thickness
WO2024210001	(SEKI) SEKISUI CHEMICAL CO LTD	Polyvinyl alcohol resin used in composition for preparing ceramic green sheet used for preparing ceramic capacitor, has preset adsorption amount to barium titanate



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024209737	(MURA) MURATA MANUFACTURING CO; (UNTS) UNIV TOKYO SCIENCE FOUND	Thermally conductive composition comprises matrix having cross-linked structure and filler dispersed within matrix which is cellulose derivative in which portion of hydroxyl group of alkyl cellulose is substituted with acryloyl group, methacryloyl group and/or alkanoyl group
WO2024225223	(SUMB) SUMITOMO BAKELITE CO	Epoxy resin composition particles used for manufacturing columnar tablets and structure for magnet fixing, electronic control unit sealing, coil sealing, and stator core sealing, comprise epoxy resin and fibrous or needle-like filler
WO2024224784	(TOKQ) TOKYO OHKA KOGYO CO LTD	Radiation film used for producing heat dissipation film, comprises composition containing component obtained by crosslinking sodium polyacrylate with crosslinking agent made of metal compound containing divalent or higher metal ion, and polyvinyl alcohol crosslinked component
WO2024232340	(TOKT) THREE BOND CO LTD	Epoxy resin composition used for structural adhesion for bonding vehicle mainframe structure, comprises particles of castor oil, epoxy resin, and curing agent and/or curing accelerator
CN118994909	(TOYT) TOYOTA MOTOR CO LTD	Heat conductive material useful in battery module, comprises matrix resin and filler including first filler and second filler
WO2024236999	(DOWO) DOW TORAY CO LTD	Curable silicone composition used for producing pellet-shaped or tablet-shaped molded product, comprises thermosetting silicone, functional inorganic filler and polyolefin wax, and exhibits hot melt properties
WO2024241612	(BRID) BRIDGESTONE CORP	Tire for two-wheeled vehicle, has center portion including tire equatorial plane, pair of edge portions including tread ends, and pair of traction portions that is provided between center portion and edge portions
WO2024241806	(TORA) TORAY INDUSTRIES	Liquid crystal polyester resin used in liquid crystal polyester resin composition, comprises structural units derived from aromatic hydroxycarboxylic acid, aromatic diol, and aromatic dicarboxylic acid
GB2630578	(SMIS) TRAK MICROWAVE LTD	RF circulator comprises nonconductive preform layer arranged between ferrite layer and spacer, where non-conductive preform comprises spherical glass particles arranged within epoxy resin
WO2024247771	(SHIE) SHINETSU CHEMICAL CO	Thermally conductive silicone composition used to form cured product, comprises silicone having specific kinetic viscosity, organohydrogenpolysiloxane, hydrolyzable organopolysiloxane, thermally conductive filler, platinum group metal catalyst, and hydrosilylation reaction inhibitor



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024252208	(IBMC) IBM; IBM ISRAEL SCIENCE AND TECH LTD	Thermal interface material useful in semiconductor package and computing device, comprises hydroxy- terminated polysiloxane blended with catalyst generator that, when activated by thermal stimulus, catalyzes cleavage of silicon-oxygen bonds

## Autorreparador

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
US2024359403	(ATSP) ATSP INNOVATIONS LLC	Three-dimensional printing method for creating temperature-resistant, low-wear, self-healing objects, involves forming gel precursor from two solids that react to create high-performance polymer when heated, where gel precursor dissolved in strong solvent
JP2024159092	(UNTS)	Composition for producing self-repairing polymer for self-healing material, comprises alginic acid or derivative and epoxy compound containing two or more epoxy groups
WO2024231719	(HAMR) MADANI SEYED MORTEZA; (MADA) SANGPOUR PARVANEH; (SANG) VAEZI MOHAMMADREZA; (VAEZ) HAMRAHI BEHNAZ	Self-healing anticorrosive coating for metal surface, comprises layer of epoxy-silanized graphene oxide nanocomposite comprising graphene oxide nanosheets, layer of electrospun core-shell nanofibers comprising core containing polydimethylsiloxane, and shell comprising polyvinyl alcohol
KR102734699	(SYSY) SY CO LTD	Rigid polyurethane insulation board used for inner wall of building, comprises reinforcing finishing materials, rigid polyurethane foam containing polyol mixture, isocyanate and inorganic powder, and self- healing layer made of polymer material having self- healing properties



## Nanocomposite

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
GB2628673	(GREI) GR8 ENG LTD	Forming container to thermoformed container such as pots, jars, trays, cups or tubs, involves forming an intermediate article by a first process comprising providing a sheet comprising biaxially-orientable thermoplastic material, and theating sheet to molding temperature
US2024326356	(BASA) DJAOUED YAHIA; (DJAO) BASARAN IHSAN; (GUIT) MORIN BERNARD; (LAPL) LAPLANTE GABRIEL; (MORI) THIBAULT MARIE HELENE; (THIB) GUITTON MAURICE	Liquid thermoplastic resin for producing composite structures made of thermoplastic nanocomposite/fiber-reinforced composite, comprises methyl methacrylate, polymeric viscosity- promoting agent, nano-clay, nitro compound retarder, and internal lubricant
GB2628755	(MAPL) MAPLEX TECH LTD	Method for manufacturing of composite boards from textile and wood fibers, involves pressing and forming uniform blend of fibrous composite fluff and woodbased fibers to produce composite fiber board
US2024326331	(ADPR) ADVANCED PRINTED ELECTRONIC SOLUTIONS LLC	Replacement build platform for additive manufacturing system for fabrication of complex multidimensional objects, has frame removably coupled with structure, and two-axis build portion rotationally coupled to frame about first axis, where two-axis build platform rotates about second axis
CN118769634	(TOYT) PRIME PLANET ENERGY & SOLUTIONS INC; TOYOTA MOTOR CO LTD; PRIMEARTH EV ENERGY CO LTD	Aluminum member useful to produce aluminum- resin composite, which is useful in sealed lithium-ion secondary battery to be mounted in vehicles E.G. hybrid cars, is made of metal aluminum, and has member surface on which protrusions are densely arranged, where protrusions each has proximal end portion
WO2024216295	(USCA) UNIV SOUTHERN CALIFORNIA	System for constructing article by three-dimensional (3D) vat photopolymerization printing, hasradiation source that is continuously changing photomask image produced is projected to photopolymer resin in vat as building platform is elevated during 3D printing
WO2024213958	(MINN) SOLVENTUM INTELLECTUAL PROPERTIES COMPANY	Making thermoformed article comprises thermoforming first film into article at a thermoforming temperature while the second protective film is in contact with the thermoplastic structured surface of the first film
US2024351272	(GTEK) GEORGIA TECH RES INST	Additive manufacturing method for rapid nanoscale 3D printing of large and deterministic 3D structures with sub-micrometer features and porosities, involves generating patterned light sheet on polymer resist with temporally-focused femtosecond pulse



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024226710	(JABI) JABIL INC	Production of composite powder used for formin additive manufactured article, involves contactin thermoplastic polymer powder and inorgani powder to form mixture and shearing
US2024359379	(TAAE) TAIWAN AEROGEL TECH MATERIAL CO LTD	Preparing high temperature resistant materic covering aerogel insulation composite materic involves adding siloxane precursor to aqueou ethanol solution to form mixed solution, wher siloxane precursor comprises hydrophobic modifie siloxane compound
WO2024226808	(SIMP) SIMPLIFYBER INC	Shaped soft goods article comprises first materi comprising unitary non-woven material having a least one three-dimensional feature, and at least or second element at least partially embedded with first material, and first material is comprised of or type of natural or synthetic fibers
EP4464488	(ROHR) ROHR INC	Zoned heat treatment tooling fixture arrangement for performing heat treatment process on fibrour preform, comprises heat treatment tooling fixture to receive fibrous preform, and one zone comprises multiple temperature control channels provided heat treatment tooling fixture to receive fluid
US2024367398	(PURD) PURDUE RESEARCH FOUNDATION	Fabricating infrared bandpass filter for used a critical optical elements of multispectral imagin systems, involves forming metallic and dielectri spacer layers on mold, metallic and dielectric space layers by mold, depositing stress-absorbing layer applying force and removing absorbing layer
CN119019742	(BOEI) BOEING CO; (COAC) BEIJING AIRCRAFT TECH RESEARCH INSTITUTE BATRI OF COMAC LTD	Manufacturing tray table involves homogenizin halogen-free flame retardant to obta homogeneous halogen-free flame retardan blending molten thermoplastic resin with pla fibers, homogeneous halogen-free flame retardan and compatibilizer to obtain plant fiber composi material
US2024396012	(ENVT) ENEVATE CORP	Forming composite material for forming battery ce involves providing mixture comprises precursor ar silicon particles, and pyrolysing mixture to conve precursor into carbon phases to form composi- material comprises silicon and carbon betwee silicon particles and carbon phases
WO2024245912	(CVST) COVESTRO DEUTSCHLAND AG	Security document E.G. to produce polymer fil printed with dyes of class offset printing in comprises E.G. second outer side opposite first out side, comprising first polymer film containing thermoplastic polyurethane and printing layer
WO2024245925	(SABI) SABIC GLOBAL TECHNOLOGIES BV	Method for preparing welded structure used a automotive portion E.G. tailgate of electric vehicl involves positioning first portion comprisin polyolefin, and positioning second portion onto fir portion to define weld joint, and second portion comprises polyolefin



Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
DE102023114621	(MAHN) HENNECKE GMBH	Method for producing molded components made of polyurethane, involves ending flow path in region of constriction, such that further component is mixed with chemical component, and flow rate of chemical component to which further component is added is increased by constriction
WO2024252098	(AQOR) ARKEMA FRANCE	Composition used for forming sealing layer for manufacturing single-layer or multi-layer structure for transport, distribution and storage of fluid, comprises polyamide having preset inherent viscosity, polar graphene having preset average thickness, and impact modifier

## Otras propiedades

Nº DE PUBLICACIÓN	SOLICITANTE	CONTENIDO
WO2024211672	(CELA) CELANESE INT CORP	Polymer composition used as flame resistant polymer composition in electrical connector, comprises thermoplastic polymer of polybutylene terephthalate polymer, flame retardant composition, reinforcing fibers and insulating adjuvant of wax





# NOTICIAS

# 'LA INTELIGENCIA ARTIFICIAL Y LAS PATENTES', RIESGOS Y OPORTUNIDADES

La Semana de la Ciencia y la Innovación es una gran oportunidad para conocer algunas de las tecnologías que están transformando el mundo y, cada vez más rápido, nuestro día a día. La Inteligencia Artificial (IA) es, sin duda, una de las que ha irrumpido con más fuerza en todos los ámbitos de nuestra vida, también en el laboral.

La aparición de una tecnología diseñada para realizar tareas que normalmente requieren de la inteligencia humana ofrece oportunidades enormes para mejorar la eficiencia de los métodos y dinámicas de trabajo. No obstante, una tecnología capaz de imitar las facultades cognitivas humanas, entraña también riesgos e interrogantes que han de ser analizados y resueltos.

Este tema tan de actualidad fue el abordado en la exposición 'La inteligencia Artificial y las Patentes', que acogió la Oficina Española de Patentes y Marcas (OEPM) durante el evento organizado por la Universidad Carlos III de Madrid. La interacción de estos dos campos entre sí ha supuesto una serie de retos y desafíos para los profesionales y usuarios del ámbito de la Propiedad Industrial (PI).

¿Puede la IA inventar o el inventor ha de ser humano? ¿Pueden patentarse las invenciones generadas

autónomamente por la Inteligencia Artificial? ¿Puede una IA infringir derechos de patente? Y, si es así, ¿quién sería el responsable? Son preguntas que han surgido a raíz del uso cada vez más cotidiano y extendido de una tecnología capaz de crear de manera autónoma. El sector debe pronunciarse y dar respuesta a estos dilemas, tarea que no es sencilla, pues existen varias corrientes de pensamiento y distintas posturas al respecto.

No obstante, la IA ofrece también múltiples oportunidades que pueden hacer más eficiente el trabajo de los profesionales de las administraciones



competentes en esta materia. Algunos de estos ejemplos son: la asignación automática de expedientes, el examen y resumen de documentos o la asistencia en la redacción de dictámenes, comunicaciones y actas.

En definitiva, esta exposición ha permitido conocer cómo el sector de la PI se relaciona actualmente con la Inteligencia Artificial, los riesgos que entraña, las oportunidades que brinda, cómo los distintos ordenamientos jurídicos lo regulan y anticipar qué otros retos y vicisitudes podría traer consigo el futuro más inmediato.



#### MILES DE EMPRESAS SE HAN BENEFICIADO EN TODA LA UE DE LAS AYUDAS DEL SME FUND PARA LA PROTECCIÓN DE LA PROPIEDAD INDUSTRIAL



En la era digital, la de la protección Propiedad Industrial (PI) es una necesidad, sobre todo para las pequeñas y medianas empresas. El SME Fund nació en 2022 con el propósito de prestar apoyo financiero a las pymes de la Unión Europea (UE) en la protección de sus derechos de Propiedad Intelectual e Industrial.

Se trata de un programa financiado por la Comisión Europea y gestionado por la Oficina de la Propiedad Intelectual de la Unión Europea (EUIPO), que bonifica el pago de las tasas a aquellas pymes que deseen registrar sus activos de PI, tanto a nivel nacional como europeo.

Esta iniciativa cobra especial relevancia en un país como España, cuyo tejido empresarial está formado mayoritariamente por pymes. De hecho, nuestro país es el que cuenta con un mayor número de pequeñas y medianas empresas de toda la UE (3,5 millones), a los que se suman aproximadamente otros 3,5 millones de autónomos que también se benefician de estas ayudas.

Desde el inicio del programa en 2022 se han presentado unas 90.000 solicitudes en la UE, de las que 13.600, alrededor del 15% del total, tienen su origen en España. Esto supone que en nuestro país se han reembolsado unos 6,6 millones de euros de los 40,6 millones que este programa ha repartido en toda la Unión. Tal es así que España ha ocupado desde el inicio la primera posición de solicitudes al SME Fund en toda la Unión Europea, con un total de 3.623 solicitudes en 2022, 5.038 en 2023 y 4.926 en 2024 para los distintos Bonos que ha habido disponibles.

Desde su origen y a lo largo del tiempo se han ido ampliando las diferentes modalidades de ayuda hasta la coexistencia de los 4 bonos de ayuda que han estado disponibles para las pymes de todos los países de la UE durante 2024:

- Bono 1: para IP Scan
- Bono 2: para marcas y diseños
- Bono 3: para patentes
- Bono 4: para variedades vegetales

Próximamente se darán a conocer el alcance y los detalles de iniciativas similares a esta que se desarrollarán a lo largo de 2025 y que tan importantes son para España, dada la configuración del tejido empresarial de nuestro país.

#### Más información



## LA REVISTA ECONOMÍA INDUSTRIAL DEDICA UN MONOGRÁFICO A LA OEPM POR SU 200 ANIVERSARIO

Han pasado nada más y nada menos que dos siglos desde la creación del Real Conservatorio de Artes en 1824. Esta institución es la antecesora directa de la actual Oficina Española de Patentes y Marcas (OEPM) que, a lo largo de la historia y bajo distintas denominaciones, ha sido la encargada de proteger los derechos de Propiedad Industrial en España.

Para conmemorar este acontecimiento histórico, la revista Economía Industrial, del Ministerio de Industria y Turismo, ha dedicado su número 433 a la elaboración de un monográfico con motivo del 200 aniversario de la OEPM.

Economía Industrial es una publicación oficial de periodicidad trimestral que nace en 1964 con una vocación de servicio público que conserva en la actualidad. Con la sociedad civil como público objetivo, afronta la misión de ser un foro de reflexión, prescripción y rendición de cuentas para una mejor formulación de las políticas



públicas del ámbito competencial del Ministerio de Industria y Turismo.

El monográfico dedicado al aniversario de la OEPM recorre los 200 años de historia de esta institución desde sus orígenes hasta el día de hoy, sin olvidar los retos que presenta el futuro. La revista se constituye, por tanto, como una lectura indispensable para quienes ejercen su profesión o llevan a cabo sus estudios en el sector de la Propiedad Industrial.

La presentación corre a cargo del subsecretario de Industria y Turismo y, a la sazón, presidente de la OEPM, Pablo Garde. La publicación se estructura en cuatro bloques respectivamente dedicados a los dos siglos de propiedad industrial en España, al papel de la OEPM como organismo de referencia en la materia, a la encrucijada actual en la que se desenvuelven los sistemas de propiedad industrial y, finalmente, a los retos futuros.

La OEPM agradece profundamente a todos los autores su contribución a la conmemoración de un acontecimiento que la convierte en una institución bicentenaria. Este mes de diciembre ha tenido lugar la celebración del acto conmemorativo de este evento en el que han participado varios de los autores.

Más información



### CÓMO DEFENDER TUS DERECHOS DE PI EN EL MUNDO DIGITAL

Los consumidores somos conocedores, con mayor o menor detalle, de que en internet hay que ser precavidos a la hora de comprar, ya sea a través de buscadores, redes sociales o *marketplaces*.

En el número 122 de esta revista publicada en mayo de 2020 ya se trató esta cuestión: *InfoPI mayo 2020:* Las ventas del comercio online se disparan en España por el coronavirus. Reglas básicas para detectar las falsificaciones de productos en internet.



Así mismo, para las pymes y autónomos, el e-comercio sigue creciendo y desempeña un papel importante para ellos, y para otras, está suponiendo un despegue del negocio y una forma de

adaptación a los nuevos tiempos.

Pero, ¿qué puede hacer si descubre una falsificación de su producto a la venta en un mercado de ecomercio? ¿O qué hacer si alguien está usando su marca en una lista de e-comercio aprovechando su buena reputación para inducir a error a los consumidores?

El Observatorio Europeo de las Vulneraciones de los Derechos de Propiedad Intelectual (DPI) cuenta con un apartado dentro de su página web: la *protección de los derechos de propiedad industrial e intelectual en los mercados de comercio electrónico*.

Este apartado contiene herramientas de protección de los DPI en los mercados de e-comercio. Se ofrece información de qué debemos hacer si descubrimos que nuestra marca o nuestro negocio está siendo vulnerado en un mercado de e-comercio. Para proteger a su empresa y a sus clientes, el primer paso consiste en eliminar esas publicaciones.

Se ofrecen tres herramientas principales:

- Un sistema de notificación: permite a los titulares notificar ofertas que podrían estar vulnerando sus derechos de propiedad industrial (PI). Existen sistemas diferentes, como los formularios web. Normalmente se pedirá al titular que proporcione información sobre su empresa, sus derechos de PI (por ejemplo, el número de registro de la marca) y las publicaciones que supuestamente suponen una vulneración de sus derechos (por ejemplo, URL).
- 2. Programas de protección de DPI: los aplican un número limitado de mercados para apoyar la cooperación con los titulares de DPI. Ponen a disposición de los titulares un proceso simplificado para que notifiquen cualquier publicación que presuntamente vulnera sus derechos y un panel de control para hacer un seguimiento de sus notificaciones y de los resultados. También pueden ofrecer herramientas que faciliten la búsqueda de publicaciones que puedan vulnerar los derechos de los titulares. Puede ser necesario registrarse antes de poder utilizar estos programas, así como facilitar información detallada sobre su empresa y sus derechos (por ejemplo, el número de registro de la marca).
- 3. Asistencia al usuario: punto de contacto para obtener asistencia en el uso de un sistema de notificación o en el proceso para utilizar un programa de protección de la PI.

Más información



