

Priznanja za inovacije osrednjeslovenske regije za leto 2023

*Awards for best innovations
in the Central Slovenia region
for the year 2023*



Inovacija = ideja x energija²



Inovacije so energija!



Nagovor

Innovation is the energy, and lifeblood of progress, and in a rapidly evolving global economy, companies must continually adapt, create, and reinvent themselves to thrive. The Central Slovenian Chamber of Commerce recognizes this imperative and champions a culture of innovation as the cornerstone of success for our vibrant business & social community. By harnessing the collective energy of our members, we create an environment that nurtures creativity, cultivates ground-breaking ideas, and supports the development and implementation of pioneering solutions.

At its core, innovation is about challenging the status quo and pushing boundaries to unlock new opportunities. It is about embracing change, seeking out emerging technologies, and transforming the way we think, work, and connect. Through our diverse range of programs, initiatives, and collaborative platforms, we provide a supportive ecosystem that encourages knowledge-sharing, bridging deep tech research findings to companies, fosters partnerships, and enables deep tech businesses to stay at the forefront of the innovation cycle and commercialization.

We firmly believe that innovation holds the key to unlocking a company's full potential, which lies in the energetic, mental, and physical abilities of each individual. It enables organizations to streamline processes, optimize resources, and create products and services that meet the evolving needs of the market. Moreover, innovation is not limited to technological advancements alone. It encompasses a broader perspective that includes embracing sustainability, social responsibility, and diversity. Companies that prioritize these values and integrate them into their innovation strategies are well-positioned to meet the demands of today's socially conscious consumers and contribute positively to society and the planet.

Through inspiring success stories, informative case studies, and practical advice, we aim to illuminate the path toward a more innovative and prosperous future. Guided by this year's slogan "Energy creates innovation," we aim to inspire and empower businesses to embrace forward-thinking strategies that drive growth, competitiveness, and sustainable development in Slovenian companies for a better and more responsible future.

mag. Marjana Majerič, direktorica
Director of Central Slovenian Chamber of commerce

Seznam nagrajenih inovacij



Zlato priznanje

Razvoj in implementacija okrepljenega bioprocesa z dohranjevanjem in uvedba perfuzije v predprodukcijsko fazo (iFB) 5
Development and implementation of an enhanced bioprocess with feeding and introduction of perfusion in the pre-production phase (iFB)

Sugamadeks raztopina za injiciranje: Kompleksna zdravilna učinkovina za prekinitvev blokade živčno-mišičnega prenosa po anestezijah 6
Sugammadex injection solution: A complex active ingredient used for the reversal of neuromuscular blockade after anesthesia

Najtanjša, nosilna, lesena masivna stena brez lepil na svetu 7
The thinnest, load-bearing, solid wooden wall in the world, without adhesives



Srebrno priznanje:

GO TO karta za umeščanje večjih sončnih elektrarn v Sloveniji 8
GO TO map for locating larger solar power plants in Slovenia

Dashboard za spremljanje in upravljanje gibanja denarnih sredstev iz naslova finančnih instrumentov 9
Dashboard for monitoring and managing the movement of funds from financial instruments

GeoZS centralizirana senzorska mreža 10
GeoZS centralized sensor network

Kontejnerski terminal in vzpostavitev direktne železniške povezave luke Trst z lokacijo Velenje, za dostavo ladijskih kontejnerjev 11
Container terminal and establishment of a direct railway connection between the Port of Trieste and the location of Velenje for the delivery of shipping containers

Formulacija kanabinoidov in njihovih kislinjskih oblik s povečano stabilnostjo in vodotopnostjo 12
Formulation of cannabinoids and their acid forms with increased stability and water solubility

Prenosnik toplote vmesnega stanja 13
Intermediate state heat exchanger

Hitro sušiči lak za avto reparaturo, RX 6830 E-SPEED UHS CLEAR COAT 2:1 14
Fast-drying refinish clear coat, RX 6830 E-SPEED UHS CLEAR COAT 2:1

Vodni akrilni premazi HIDROHEL za trajnostno zaščito lesenega pohištva 15
HIDROHEL coatings for sustainable furniture protection



Prebojna invencija:

Električni voziček Oldi, pomožna mobilna postelja 16
Electric cart Oldi, auxiliary mobile bed

Razvoj in implementacija okrepljenega bioprocasa z dohranjevanjem in uvedba perfuzije v predprodukcijsko fazo (iFB)

Development and implementation of an enhanced bioprocess with feeding and introduction of perfusion in the pre-production phase (iFB)



ZLATO PRIZNANJE

Inovatorji: dr. Ajda Trdin, Davi Jeric, dr. Andrej Renčelj, dr. Štefan Starčević, dr. Jernej Horvat, Blaž Komar, Arijana Gajič, dr. Dejan Arzenšek, Eva Udovič

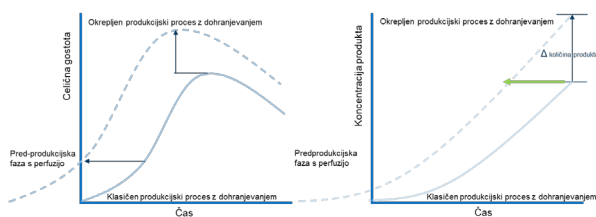
Predlagatelj: LEK farmacevtska družba d.d.
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OPIS INOVACIJE

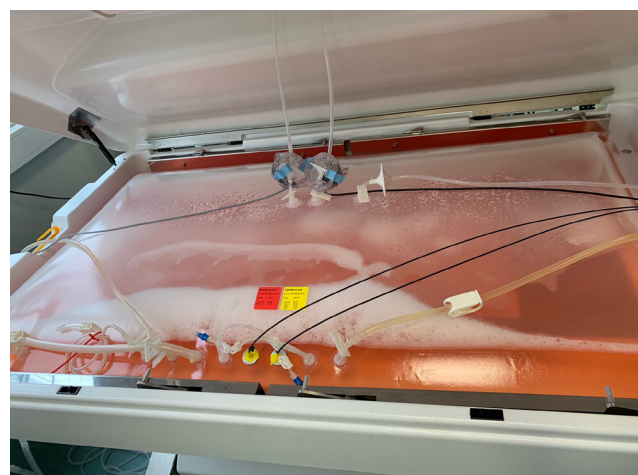
Biološka zdravila predstavljajo možnost za zdravljenje težje ozdravljivih bolezni, a so zaradi zahtevnega ter dolgotrajnega razvoja in proizvodnje draga. Procesna inovacija iFB omogoča nižje stroške proizvodnje s primerljivo količino surovin, izboljša produktivnost proizvodnega procesa ter pozitivno vpliva na okolje. Implementirana prebojna tehnologija spodbuja Novartisovo konkurenčnost in omogoča boljšo dostopnost bioloških zdravil širši populaciji bolnikov.

Description

Biological drugs offer the possibility of treating challenging diseases, but due to their complex and lengthy development and production process, they are expensive. The process innovation iFB enables lower production costs with comparable raw material quantities, improves the productivity of the manufacturing process, and has a positive impact on the environment. The implemented breakthrough technology enhances Novartis' competitiveness and enables better accessibility of biological drugs to a wider population of patients.



Slika 1: Prednosti iFB so krajša nizko produktivna faza rasti celic in pospešen prehod celic v produkcijsko fazo, kar vodi do večje volumetrične produktivnosti. Izračuni na pilotnem procesu proizvodnje biološke molekule kažejo skrajšanje proizvodnega cikla do 30 % in do 11 % nižje proizvodne stroške na gram produkta.



Sugamadex raztopina za injiciranje: Kompleksna zdravilna učinkovina za prekinitev blokade živčno-mišičnega prenosa po anestezijah

Sugammadex injection solution: A complex active ingredient used for the reversal of neuromuscular blockade after anesthesia



ZLATO PRIZNANJE

Inovatorji: mag. Andreja Šegatin Trampuš, dr. Mateja Cegnar, dr. Damjan Šterk, dr. Gregor Arh, Matej Avanzo, dr. Matevž Vospernik, dr. Miroslav Planinc Kovačević, dr. Jan Pelipenko, dr. Rok Grahek, Andrej Bastarda, dr. Ivana Gazić Smilović, Jasmina Jasna Jovanović, mag. Lea Valjavec, dr. Tjaša Zlobec, dr. Ajda Podgoršek Berke, Špela Zakšek

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OPIS INOVACIJE

Učinkovina sugamadex se v obliki raztopine za injiciranje uporablja za prekinitev blokade živčno-mišičnega prenosa po anestezijah. Je kompleksna učinkovina, ki se pridobiva z izjemno zahtevno sintezo in predstavlja izziv za razvoj varnega, učinkovitega in kakovostnega farmacevtskega izdelka. Z inovativnimi razvojnimi pristopi so Lekovi strokovnjaki med prvimi razvili generično zdravilo, ki se že danes proizvaja v Sandozovem sterilnem obratu v Ljubljani.

Description

The active ingredient sugammadex, in the final dosage form of an injection solution, is used for the reversal of neuromuscular blockade after anesthesia. It is a complex active ingredient that is obtained through an extremely demanding synthesis process, posing a challenge for the development of a safe, effective, and high-quality pharmaceutical product. With innovative development approaches, Lek's experts were among the first to develop a generic medicine, which is already being manufactured at their Sandoz aseptic facility in Ljubljana.



Najtanjša, nosilna, lesena masivna stena brez lepil na svetu

The thinnest, load-bearing, solid wooden wall in the world, without adhesives



ZLATO PRIZNANJE

Inovatorji: Martin Hladnik, Matic Javoršek, Peter Zajc, Miha Bogataj (Ekoart d.o.o.), Marko Balantič (Ekoart d.o.o.)

Predlagatelj: iQwood, proizvodnja lesnih elementov, d.o.o.

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OPIS INOVACIJE

Podjetje iQwood d.o.o. je razvilo vitko a hkrati visoko nosilno masivno leseno steno izdelano brez uporabe lepil in drugih kemikalij. S pomočjo te inovacije omogočajo, da bodo najbolj zdrave masivne lesene stene postale dosegljive širšemu trgu. Hkrati nov produkt omogoča širitev uporabe iz segmenta enodružinske gradnje tudi na večje javne objekte.

Description

The company iQwood has developed a lean yet highly load-bearing solid wooden wall made without the use of adhesives and other chemicals. With this innovation, they enable the most healthy solid wooden walls to become accessible to a wider market. Additionally, this new product allows for the expansion of its use from single-family construction to larger public buildings.



GO TO karta za umeščanje večjih sončnih elektrarn v Sloveniji

GO TO map for locating larger solar power plants in Slovenia



SREBRNO PRIZNANJE

Inovatorji: Andreja Smole, Nina Kocbek, Izidor Ostan Ožbolt, Danijela Strle, Jelko Plošinjak, Živa Stepančič, Katja Pivec, Katja Bučar Bricman, Gašper Vidmar, Tjaša Kovačević, Alja Debeljak Šokič

Predlagatelj: Gen-I d.o.o
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OPIS INOVACIJE

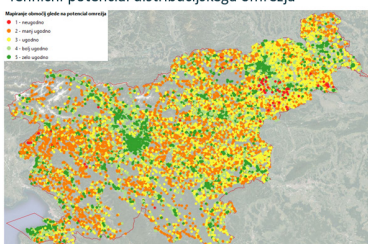
GO TO karta izpostavlja najprimernejše lokacije za postavitev večje sončne elektrarne. Karta je prva razvita rešitev, kjer so upoštevani vsi pomembni družbeni, okoljski in tehnični omejitveni kriteriji, vsak s svojimi podkriteriji, namenska raba tal in usmeritveni dejavniki, ki dodatno usmerijo na primerno parcelo. Rešitev občutno prispeva k razogljičenju podjetja GEN-I in Slovenije in širše, saj bistveno pohitri proces iskanja primernih lokacij za investicije.

Description

The GO TO map highlights the most suitable locations for the placement of larger solar power plants. The authors have considered guiding factors such as adequate sunlight, ownership, and proximity to a free transformer station, which further guide the selection of the appropriate parcel. The prepared GO TO map is user-friendly, significantly facilitates the search for suitable parcels, greatly reduces potential conflicts with various stakeholders, and expedites the placement process. The map is the first developed solution that takes into account all the important social, environmental, and technical criteria. This solution significantly contributes to the decarbonization efforts of GEN-I and Slovenia, as it greatly accelerates the process of finding suitable locations for investments.

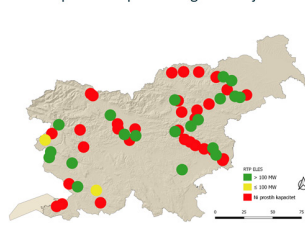
3.4. Tehnični omejitveni vidiki (I/II)

Tehnični potencial distribucijskega omrežja



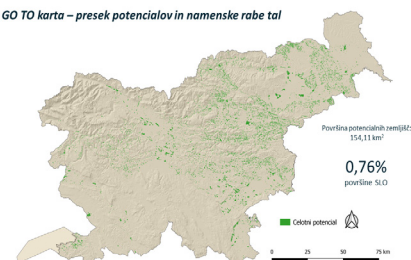
Vir: SODO (2022). Razvojni načrt distribucijskega omrežja električne energije v Republiki Sloveniji za desetletno obdobje od leta 2023 do 2032.

Tehnični potencial prenosnega omrežja



Vir: Lastna karta na podlagi podatkov ELES (2021). Močni obseg priklopa in lokacije dodatnih proizvodnih virov v ELESove RTP.

GO TO karta – presek potencialov in namenske rabe tal



geni | c o o

Dashboard za spremljanje in upravljanje gibanja denarnih sredstev iz naslova finančnih instrumentov

Dashboard for monitoring and managing the movement of funds from financial instruments



SREBRNO PRIZNANJE

Inovatorji: Sandi Kavalič, Borut Sluban, Matic Mori, Anja Trop, Nace Zavrtnik, Petra Kavčič, Irena Čepin, Gregor Zajc, David Danev, Jan Harb, Janez Konečnik, Gašper Rugelj

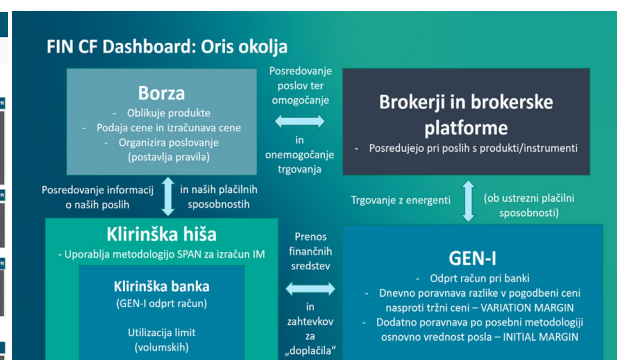
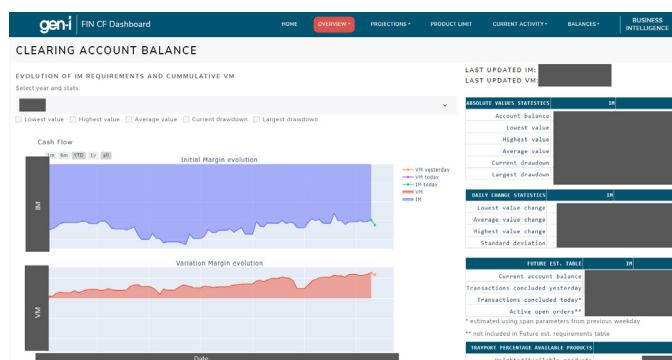
Predlagatelj: Gen-I d.o.o
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OPIS INOVACIJE

FIN CF Dashboard zagotavlja podatke, napovedi in simulacije, ključne za obvladovanje tveganj in za uspešno delovanje. Dodana vrednost se je posebej izkazala v kriznih energetskih časih, saj so se zaradi več kot 14-tih funkcionalnosti rešitve lahko hitro odzvali na razmere in strateško načrtovali prihodnje odločitve. Tako ohranjajo konkurenčnost na trgu in učinkovito oskrbujejo slovenske odjemalce z električno energijo in zemeljskim plinom.

Description

The FIN CF Dashboard provides data, forecasts, and simulations crucial for risk management and successful operations. Its added value has proven particularly valuable during times of energy crisis, as the solution's more than 14 functionalities have enabled it to quickly respond to circumstances and strategically plan future decisions. This allows the dashboard to maintain competitiveness in the market and efficiently supply Slovenian customers with electricity and natural gas.



GeoZS centralizirana senzorska mreža

GeoZS centralized sensor network



SREBRNO PRIZNANJE

Inovatorji: univ. dipl. inž. geol. Jasna Šinigoj, dr. Ela Šegina, univ. dipl. inž. geod. Jernej Bavdek, mag. Andrej Vihtelič, univ. dipl. geogr. Matija Krivic, Maks Šinigoj

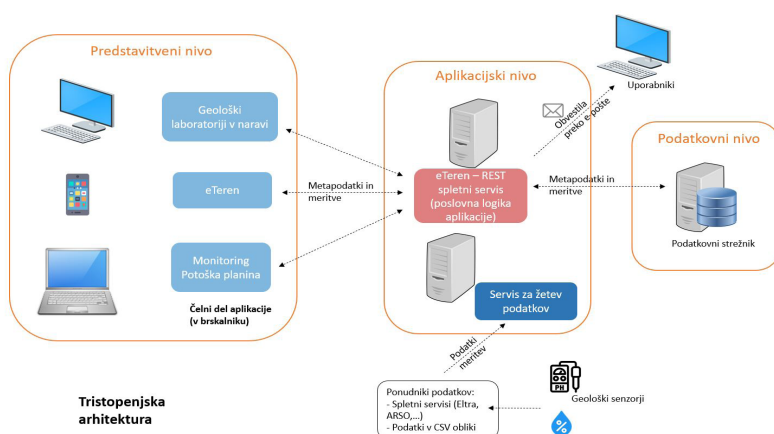
Predlagatelj: Geološki zavod Slovenije (GeoZS)
Dimičeva ulica 14, 1000 Ljubljana
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E: ela.segina@geo-zs.si
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S: glvn.geo-zs.si/
S: geopark-karawanken-waters.eu/dashboard/sl-SI/home

OPIS INOVACIJE

eTeren je centralizirana senzorska mreža, ki omogoča shranjevanje, obdelovanje in prikazovanje geoloških podatkov, ki se z merilnimi instrumenti različnih tipov pridobivajo na terenu. Dnevno posodobljeni podatki s terena so preko spletne aplikacije neposredno na voljo različnim končnim uporabnikom: raziskovalcem pri njihovem znanstvenem delu, skrbnikom za nadzor nad delovanjem naprav in zunanjim naročnikom za spremljanje parametrov, pomembnih za njihovo dejavnost.

Description

eTeren is a centralized sensor network that enables the storage, processing, and visualization of geological data acquired in the field through various types of measuring instruments. The daily updated field data is directly accessible to various end users through a web application. These end users include researchers in their scientific work, device operators for monitoring device operations, and external clients for monitoring parameters relevant to their activities.



Kontejnarski terminal in vzpostavitev direktne železniške povezave luke Trst z lokacijo Velenje, za dostavo ladijskih kontejnerjev

Container terminal and establishment of a direct railway connection between the Port of Trieste and the location of Velenje for the delivery of shipping containers



SREBRNO PRIZNANJE

Inovatorji: Xiaofei Li, Hanfei Wu, Goran Vukelić, Anton Turinek, Boštjan Zager

Predlagatelj: Hisense Gorenje Europe d.o.o.
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OPIS INOVACIJE

Zaradi neugodnih razmer na trgu in predvsem visokih cen prevozov in skladiščenja ladijskih kontejnerjev so v začetku leta 2022 pričeli z razvijanjem ideje za direktno železniško povezavo ene od severno jadranskih luk s proizvodnjo lokacijo Velenje. Potekale so tudi aktivnosti za pridobitev gradbenega dovoljenja in izbira izvajalca za izgradnjo lastnega kontejnerskega terminala. To jim bo dolgoročno zmanjšalo stroške prevoza in odvisnost od posrednih partnerjev.

Description

Due to unfavorable market conditions, particularly high transportation and storage costs of shipping containers, the authors began developing the idea for a direct railway connection between one of the Northern Adriatic ports and the production location of Velenje in early 2022. Activities were also carried out to obtain a construction permit and select a contractor for the construction of their own container terminal. This will ultimately reduce transportation costs and dependence on intermediaries.



Formulacija kanabinoidov in njihovih kislinskih oblik s povečano stabilnostjo in vodotopnostjo

Formulation of cannabinoids and their acid forms with increased stability and water solubility



SREBRNO PRIZNANJE

Inovatorji: Dr. Jure Zekič, dr. Mitja Križman, dr. Primož Šket, dr. Alojz Anžlovar, dr. Barbara Zupančič, dr. Jože Grdadolnik

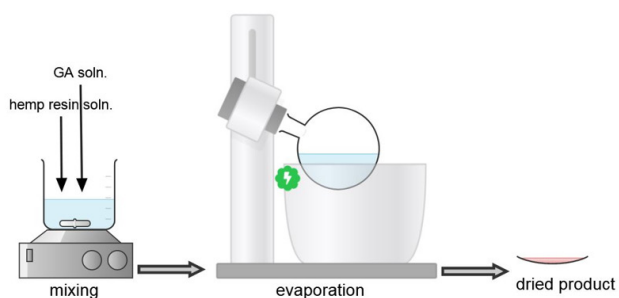
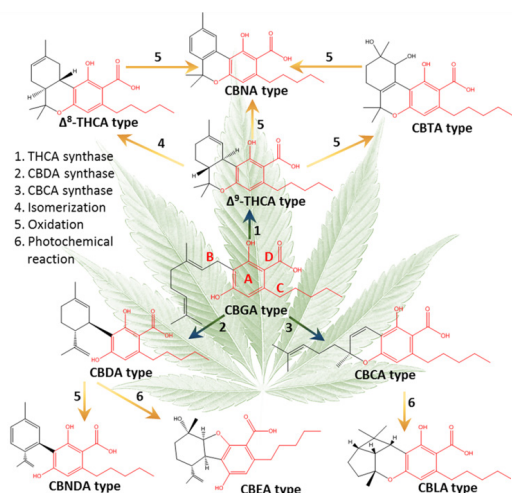
Predlagatelj: Kemijski inštitut
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OPIS INOVACIJE

Kanabinoidi so postali pomembna svetovna dobrina in so našli svoje mesto v industriji hrane in pijač, prehranskih dopolnil in kozmetike, pa tudi drugod (npr. v farmacevtski industriji). Glavna težava, povezana s kanabinoidi, je njihova zelo nizka topnost v vodi. Njihov izum zagotavlja vodne raztopine kanabinoidov in konopljinih smol z večjo stabilnostjo in biološko razpoložljivostjo.

Description

Cannabinoids have become an important global commodity and have found their place in the food and beverage industry, dietary supplements, cosmetics, as well as other areas (e.g., the pharmaceutical industry). The main problem associated with cannabinoids is their very low solubility in water. Their invention provides water-soluble solutions of cannabinoids and hemp resins with increased stability and bioavailability.



Prenosnik toplote vmesnega stanja

Intermediate state heat exchanger



SREBRNO PRIZNANJE

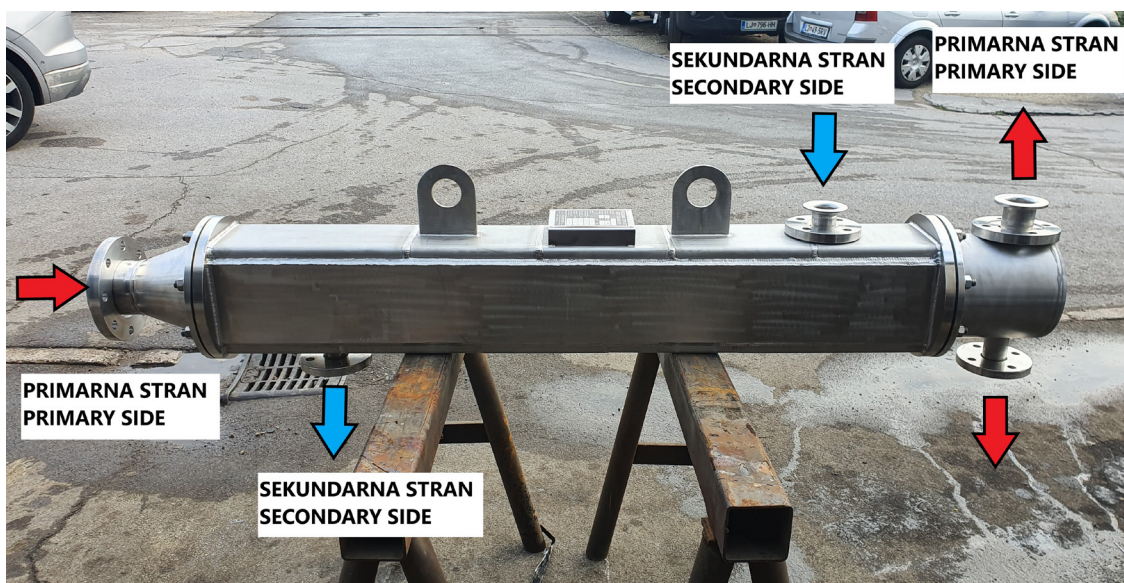
Inovator: inž. Marjan Gorišek**Predlagatelj:** Trgocomerce d.o.o.
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OPIS INOVACIJE

Prenosnik toplote vmesnega stanja (PTVS) predstavlja popolno novost v svetu na področju konstrukcije cevnih prenosnikov toplote. Bistvena prednost prenosnika toplote vmesnega stanja je, da s posrednim ogrevanjem oziroma ohlajanjem preko vmesnega medija – aluminija prenašamo toploto iz enega v drugi cevni snop ne da bi obstajala možnost mešanja obeh medijev.

Description

The Intermediate Heat State Exchanger (HEIS) represents a completely new innovation in the world of tube heat exchanger design. The key advantage of the Heat Exchanger in an Intermediate State is that it allows for indirect heating or cooling through an intermediate medium - aluminum, transferring heat from one tube bundle to another without the possibility of mixing both media.



Hitro sušeči lak za avto reparaturo, RX 6830 E-SPEED UHS CLEAR COAT 2:1

Fast-drying refinish clear coat, RX 6830 E-SPEED UHS CLEAR COAT 2:1



SREBRNO PRIZNANJE

Inovator: Marko Mulec

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OPIS INOVACIJE

Hitro sušeči lak za avto reparaturo RX 6830 E-SPEED UHS CLEAR COAT 2:1 je namenjen prihrani energentov pri postopku sušenja pobarvane površine v avtoličarskih delavnicah. Izdelek se lahko suši brez dodatnega segrevanja ali ima 3 krat krajši čas sušenja v komori v primerjavi z standardnim avto lakom. Uporaba izdelka dovoljuje avtoličarjem prihranek 30-60% energentov ali povečanje produktivnosti dela. RX 6830 se uspešno trži na evropskem trgu.

Description

The fast-drying automotive clear coat RX 6830 E-SPEED UHS CLEAR COAT 2:1 is designed to save energy during the drying process in auto body shops. This product can be dried without additional heating or if put under heating in the spray booth has a drying time three times shorter than a standard automotive clear coat. The use of this product allows auto body shop professionals to save 30-60% of energy or increase work productivity. RX 6830 is successfully marketed in Europe.



Vodni akrilni premazi HIDROHEL za trajnostno zaščito lesenega pohištva

HIDROHEL coatings for sustainable furniture protection



SREBRNO PRIZNANJE

Inovator: Gordana Savkovič, Nejc Kolman, dr. Ema Šušteršič Jagodič, Nina Bizjak, Blaž Cerar, Mateja Šlibar, Janez Novak, Damjan Durn, Jožefa Zabret, mag. Tina Razboršek, Ana Zafran, Janez Kecelj, J aka Petrovčič, dr. Martin Ocepek, Roman Pestotnik

Predlagatelj: Helios TBLUS d.o.o.
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OPIS INOVACIJE

Nova generacija premazov na vodni osnovi predstavlja trajnostne materiale za obdelavo notranjega lesenega pohištva. Nova serija izdelkov laki in emajli HIDROHEL serije D, ki vsebuje visok delež akrilnega veziva iz domače proizvodnje, dosega visoko stopnjo zaščite notranjih lesenih elementov in je odgovor na mnoge ekološke zahteve po Evropskih standardih. Inovacija jim omogoča uspešno prodajo izdelkov z visoko dodano vrednostjo na številnih evropskih tržiščih.

Description

A new generation of water-based coatings introduces sustainable materials for interior wood furniture treatment. The HIDROHEL lacquers and enamels D-series, which contain a high proportion of domestically produced acrylic binder, achieve an elevated level of interior wood element protection and are the answer to many ecological requirements of European standards. This innovation allows us to successfully sell high-added-value products in many European markets.



Električni voziček Oldi, pomožna mobilna postelja

Electric cart Oldi, auxiliary mobile bed



PREBOJNA INVENCIJA

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 S: imoldi.com

OPIS INOVACIJE

Voziček Oldi je inovacija, ki omogoča večjo vključenost, mobilnost in svobodo gibalno oviranim in nepomičnim ljudem. Namenjen je vsem starostnim skupinam tistim, ki ne morejo več sedeti, so ležeči in tako izključeni iz okolja. Voziček Oldi jim omogoča izhod v naravo, da lahko zadihajo sveži zrak, občutijo toploto sonca in so v družbi prijateljev in sorodnikov. Električni voziček Oldi je slovenska inovacija, ki omogoča večjo vključenost, mobilnost in svobodo nepomičnim.

Description

Oldi cart is an innovation that enables greater inclusion, mobility, and freedom for individuals with mobility impairments and immobility. It is designed for all age groups, especially those who are unable to sit and are confined to a lying position, thus being excluded from their environment. Oldi cart allows them to venture into nature, breathe fresh air, feel the warmth of the sun, and enjoy the company of friends and family. Oldi electric cart is a Slovenian innovation that promotes greater inclusion, mobility, and freedom for immobile individuals.



Priznanja za inovacije osrednjeslovenske regije za leto 2023

Izdala: Zbornica osrednjeslovenske regije
Dimičeva 13, 1000 Ljubljana



Zbornica osrednjeslovenske
regije

Uredila: Severin Hutinski

Ljubljana, junij 2023

Gospodarska
zbornica
Slovenije



Zbornica osrednjeslovenske
regije