



Ikhlyas Waste to Energy innovations are the eco-friendly engine of the fourth industrial revolution.



1 kg of plastic waste – 1 litre of clean products – 5 kW of clean energy

Hello, honoured ladies and gentlemen.

Our company Ikhlas Waste to Energy is based in the USA and has a representative office in Turkey. We are citizens of Ukraine.

Our goal: reliable partnership, promotion, distribution - and commercialisation of our technologies and technological programmes.

I. First steps, ideas, R&D, emergence of prototypes.

- 2006 - 2008 - Production of biodiesel from all types of organic waste.
- 2008, a project was initiated to produce oil from the lipid mass of algae for biodiesel production. Calculations showed that it is unprofitable to use electricity from the utility grid to grow algae. The task was set to find an alternative way of obtaining cheap energy.
- 2011, the first laboratory prototype of the unit for recycling polyethylene and polypropylene waste, with a volume of 3 litres, was manufactured. After it, the second prototype was built, with a loading volume of 300kg. During two years it was subjected to comprehensive tests on a daily basis. The plant consistently produced three products in the ratio: 1 kg - 1 litre of product.
- 2013, an industrial prototype was built to recycle solid polymer waste at 5 tonnes/day.
- 2013 - 2018, R&D, long-term cyclic operation.
- 2018, modernisation and refurbishment of the prototype, for the recycling of mixed, non-liquid polyethylene and polypropylene waste. Innovative technology of thermal vacuum loading of polymer waste with low bulk density was applied.
- 2019, patenting of the method and device for its implementation was started. The patent office proposed industrial application of the method and device.

Unlike other technologies, our innovative method and industrial model, is a completely new and efficient approach, to the utilisation of unclaimed polymer waste.

The technology allows to obtain six products in one heating, according to the formula: 1kg - 1l - 5kW.

One litre of disposal products contains:

1. 5 to 10% of a combination petrol additive;
2. 40 to 50 per cent of the combined action diesel additive;
3. 5 to 10% of universal spreading grease (not a mixing product, unlike analogues);
35 to 40 per cent of the paraffin- ceresin mixture containing paraffin oil.

In addition to this, there are additionally outlets:

4. gas mixture - 1 tonne yields 100 to 120 m³. Composition: Methane-67.336%, Ethane-10.290%, Propane-9.955%, I-Butane-1.263%, N-Butane-1.494%, I-Pentane-0.341%, N-Pentane-0.179%, Hexane+High-0.351%, CO₂-8.5%, O₂-0.028%, N₂-0.263%);
5. Carbon (about 7-10% of the mass of the load, depending on the material being recycled). Organic pigment that can be added to plastic products, toner for printers, filler for filter elements in wastewater treatment plants.

All products are free of sulphur, heavy metals and other harmful substances, as they are not present in the raw materials. The first four of the six products are almost ready for sale, while another one requires grinding and sieving to extract the aluminium foil.

Three models are available, with capacities of 5, 10 and 30 tonnes/day. They can be installed as a single unit or in blocks of several units, according to the quantity of raw materials.

Unlike pyrolysis plants, incinerators and synthetic oil plants, our plants do not leave any hazardous pollutant behind, thus avoiding decontamination and disposal costs.

III. Ikhlyas-Waste to Energy recycling products.

Only filtration and bottling is required to make the recycling products commercially available. Our team has developed and prepared several commercial products for retail and wholesale distribution.

«Force of Ecology» series synthetic fuel additives:

1. Synthetic petrol fuel additive FEP-710 – is designed to stabilise and improve petrol fuel. When added: increases its octane number, engine performance and traction characteristics, as well as improves environmental performance, reducing harmful emissions inherent in petroleum petrol. Additive density 700-710 kg/m^3 , octane number 95,5. The mixing regulation is 1 in 10.

2. Synthetic diesel fuel additive FED-795 – is designed to stabilise and improve diesel fuel. When added: increases its cetane number, engine performance and traction characteristics, as well as improves environmental performance by reducing harmful emissions inherent in petroleum diesels. Can completely replace traditional diesel fuel. Additive density 790-805 kg/m^3 , cetane number 51.7.

Adding FEP-710 and FED-795 to traditional fuels, allows:

- reduce ignition delay time and multiply the uniformity of fuel mixture combustion, which increases engine power and reduces fuel consumption by 5-7%;
 - increase the completeness of fuel combustion in the engine, which prevents the formation of carbon deposits and scuffing in the cylinders;
 - multiply improve the environmental performance of emissions and increase the life of the internal combustion engine without repair;
 - permanently clean the fuel system of deposits and deposits, thereby extending the service life and stability of the internal combustion engine without repair;
- enormously increase lubrication of the internal combustion engine compared to "dry" conventional fuels, EPA10 in the USA, European EURO 6 and Japanese Post NLT.



Synthetic additives FEP-710 and FED-795, produce emissions many times less than the maximum permissible concentration and are not subject to excise tax, which gives great environmental and tax preferences.

«Helper» series synthetic preservative and lubricant products:

1. Synthetic penetrating grease "Helper" (spacer).

Unlike analogs, is not a product of mixing. Very quickly penetrates into the rusted or stuck space of threaded and other connections, parts and mechanisms made of any materials. It loosens and rejects rust while displacing moisture. Due to the property of greasy adhesion and the absence of solvent in the composition, the lubricant is much longer on parts and mechanisms. Contributes to gentle cleaning of surfaces from complex contaminants (paint, sealant, gum, etc.) including human skin. In contact with human skin, does not cause burns, stinging, irritation, allergic reactions and other negative effects on it.



2. Helper" synthetic preservative grease (preservative).

Helper" preservative is a ceresine-paraffin mixture containing paraffin oils. It is intended for lubrication and preservation of parts and not quickly moving mechanisms. Powerful adhesion, gives 100% guarantee of preservation of corrosion and protection from it, as well as long mobility of parts and mechanisms.

When heated to 90°C, the preservative becomes liquid and makes it possible to dip parts in it, apply it to the surface with a brush or syringe.

It is recommended to use in a pair, as the wedger, frees parts and mechanisms, and applied after that the preservative, creates a protective layer that does not let moisture and dirt.



Conclusion: The products of "Force of Ecology" and "Helper" series are products of utilization of polyethylene and polypropylene non-liquid waste. They come out straight, in one heating, by patented technology. Waste polyethylene and polypropylene, which are subjected to recycling, do not contain chemical compounds of sulfur, heavy metals and other harmful substances, which is an indisputable proof that they are not in the recycling products. Analysis of emissions of maximum permissible concentrations also proves this.

IV. Plastic waste is not a problem, but an inexhaustible source of clean energy.

Let's make calculations using Canada as an example. According to Wikipedia: "Canada has an extremely high level of plastic waste generation – 3.000.000 tons per year. Of this: 9% is recycled, 2% is incinerated for energy, 12% is exported to other countries such as Malaysia, and the remaining 77% is sent to landfills.

<h1 style="text-align: center;">THE 7 TYPES OF PLASTICS</h1> <h2 style="text-align: center;">THEIR TOXICITY AND WHAT THEY ARE MOST COMMONLY USED FOR</h2>							
TOXICITY CODE: LOW HIGH							
Polymer Name	POLYETHYLENE TEREPHTHALATE	HIGH-DENSITY POLYETHYLENE	POLYVINYL CHLORIDE	LOW-DENSITY POLYETHYLENE	POLYPROPYLENE	POLYSTYRENE	All other plastics, including acrylic, fiberglass, nylon, polycarbonate, and polylactic acid (a bioplastic)
Resin Identification Code							
Abbreviation	PET or PETE	HDPE	PVC	LDPE	PP	PS	OTHER
Recyclable?	Commonly Recycled	Commonly Recycled	Sometimes Recycled	Sometimes Recycled	Occasionally Recycled	Commonly Recycled (but difficult to do)	Difficult to Recycle
Percentage Recycled Annually	36%	30-35%	<1% recycled"/> <1%	6%	3%	34%	Low
How Long to Decompose Under Perfect Conditions	5-10 Years	100 Years	Never	500-1,000 Years	20-30 Years	50 Years	Majority of these plastics: never Polylactic acid: 6 months

This table shows that 44% is accounted for by polyethylene and polypropylene. According to other data, this figure is 49%. Let's use the minimum value of 44% for calculations.

Formulas of Ikhlyas Waste to Energy technology

1 kg of polymer waste - 1 liter of finished products - 5 kW of energy - waste to energy
1 kg of plastic waste - 1 kg of clean products - zero waste

Calculation of Canada's potential losses, using the Ikhlyas-Waste to Energy formulae.

- Plastic waste that is exported from Canada to Malaysia is 12% of 3.000.000 tons, which is 360.000.000 kg x 0.44% = 158.400.000 kg, which equals:
 - a) 158.400.000 liters of environmentally friendly liquid products;
 - b) 158.400.000 liters x 5 kW = 792.000 MW of Net zero net energy;
 - c) An additional 15.840.000 m³ of gas mixture and an average of 13.464 tons of coke.
- To landfills in Canada, 77% of plastic waste is landfilled, which from 3.000.000 tons, would be 2.310.000.000 kg x 0.44% = 1.016.400.000 kg, which equals:
 - a) 1.016.400.000 liters of environmentally friendly liquid products;
 - b) 1.016.400.000 liters x 5 kW = 5.082.000 MW of Net zero energy;
 - c) An additional 101.640.000 m³ of gas mixture and an average of 86.394 tons of coke.

Extract from the Ikhlyas Waste to Energy gas mixture analysis:

The average heating value of the gas mixture is 10,455 Kcal/m³ and the average Wobbe number is 11.376 Kcal/m³.

Summary: Canada's total annual energy and financial losses are:

- 1.174.800.800 liters of high-energy clean liquid products;
- 5.874.000 MW of Net zero energy;
- 117.480.000 m³ of gas mixture and an average of 99.858 tons of coke.

Extended producer responsibility programs, environmental levies and public payment for waste removal, recycling and disposal, cover all current costs.

If the minimum cost of 1 liter of liquid products is \$1, the net profit is \$1.174.800.000. Taking into account the actual commercial value of the products, the minimum is \$5.874.000.000.

For comparison, in 2022, Canada's generating source capacity is 150.376 MW.

Source: <https://www.eeseaec.org/elektroenergeticeskij-kompleks-kanady>

Environmental and social benefits: The energy benefit is not difficult to calculate, it is more difficult to calculate the huge positive effect of saving the environment and human health from the harmful effects of so much plastic waste.

There is another positive aspect: It is not necessary to ban plastic products. It is necessary to develop a procedure for manufacturers to produce packaging and containers, (exclude non-recyclable elements from packaging and containers), and to properly collect and recycle them, thus obtaining huge benefits and advantages.

V. International PCT application and patenting.

Today, Ikhlyas-Waste to Energy technology has no analogues in the world, which is confirmed by the International Application published under the Patent Cooperation Treaty (PCT) of the World Intellectual Property Organisation on 14 May 2020 under the number WO 2020/096482 A1. The authors of the patent are Remzi Seydametov and Sabri Setmanbetov.

Link: <https://patentscope.wipo.int/search/ru/detail.jsf?docId=WO2020096482& cid=P10-KAV553-47234-1>

The technology is patented and has patents in Ukraine, USA, Canada, China, India, Russia and patent applications completing the national phase in the EU and UAE.

VI. Comparison of Ikhlyas Waste to Energy technology with other business solutions.

First option: Waste&Recycling online resource, 04 June 2023:

"NOVA Chemicals and Plastic Energy are exploring the possibility of establishing a facility in Sarnia, Ontario, using Plastic Energy's proprietary TAC (advanced pyrolysis of waste polyethylene) technology to produce TACOIL, which has properties identical to virgin polyethylene and can be used in food processing and high-performance products. Should the new facility be built, with an initial potential capacity of 66,000 tonnes per year, NOVA Chemicals will increase its investment in the province of Ontario, which has already reached CAD 2 billion."

Source: <https://www.wasterecyclingmag.ca/plastics/nova-chemicals-and-plastic-energy-studying-new-plant-in-sarnia/1003289195/>

The minus of this method of recycling: Plastic waste is not getting smaller, it is coming back as new plastic in products, adding to the huge amount of virgin plastic produced from petroleum-based raw materials. And the associated CO2 emissions from the production of new plastic pellets.

Альтернативное решение om Ikhlyas Waste to Energy:

- 66.000.000 kg = 66.000.000 litres x \$1 = \$66.000.000 US, minimum;
- 66.000.000 litres x 5 kW = 330.000 MW of Net zero net energy;
- The investment in the construction of a turnkey Ikhlyas-Waste to Energy plant for the recycling of 66,000 tonnes of polymers will not exceed \$70,000,000 US.

The upside of this method: The financial benefit is obvious \$70.000.000 versus \$2.000.000.000. This is without taking into account the mega-profitability, commercial value and demand for Ikhlyas-Waste to Energy products. At the same time, 66,000 tonnes of not only polyethylene waste but also polypropylene waste will disappear forever. They will never take their place again, neither in a landfill nor in the world's oceans.

Synopsis: The average price of refuelling fuel in Canada, from 03/27/23/23/23/23, was between 1.51 and 1.67 Canadian Dollars, while the average price of diesel fuel worldwide for the same period was 2.17 Canadian Dollars.

GlobalPetrolPrices.com: https://ru.globalpetrolprices.com/Canada/diesel_prices/

The second option:

To date, the UAE has 11 Waste to Energy plants, which it calls "clean energy". They have a combined value of \$43.000.000.000 and the amount of "clean energy" production, in 2021, has reached 7.036 MW.

Source: <https://tass.ru/ekonomika/16802991>

The minus of this method: The experience of the USA, which uses 73 incineration plants, shows that they are one of the most toxic, expensive, dangerous for human health and the environment areas of the energy industry. The energy produced in this way is 2 times more expensive than nuclear and solar energy and 3 times more expensive than wind energy. Incinerators receive millions of tax dollars in subsidies. The cities that invested in them are losing millions and some have gone bankrupt because of their debts.

Source: <https://mos-jkh.livejournal.com/10694691.html>

Alternative from Ikhlyas Waste to Energy:

The UAE invested \$43.000.000.000 US in the Waste to Energy project - the result is 7036 MW.
Let's find out the price of 1 MW: $\$43.000.000.000 \div 7.036 \text{ MW} = \$6.111.427$ per 1 MW!!!!

The Ikhlyas-Waste to Energy plant utilising 30 tonnes per day generates 30,000 litres x 5 kW = 150 MW x 365 days and we get 54,750 MW/year.

VII. Advantages of Ikhlyas Waste to Energy technology.

Environmental benefits and safeguards - Green Technology:

- 100% recycling of any non-liquid mixed waste PE, PP, HDPE, LDPE on an industrial scale. This waste accounts for 2/3 of all plastic waste
- Technological process of recycling, does not have a negative impact on the environment and human health. The rules of the Paris Agreement, dated 12.12. 2015, are observed;
- No toxic fractions after utilisation and no costs for their neutralisation and disposal;
- 100% recycling preserves the territory of the state from its contamination and loss forever;
- Utilising technology and energy independent industrial parks with a cyclical economy powered by clean energy significantly reduces carbon footprint and harmful emissions;

Operational advantages - Renewable energy:

- A huge, inexhaustible raw material base in every city and every country;
- Recycling yields ready-to-use products, from 1 kg - 1 litre - 5 kW of energy;
- Cumulative mass balance is maintained, from 1kg of waste - 1kg of products in aggregate;
- Energy independence and self-sufficiency of the plants, ensures the functioning of the plants themselves and the equipment that prepares plastic waste for recycling;
- Industrial safety of the utilising equipment, pressure up to 0.2 At;
- Full automation of the recycling process;
- Comparatively fast construction of the plant, up to 1 year;

Economic advantages - High income:

- Low cost and quick payback, up to 2 years;
- Receive all kinds of payments for: recycling, extended producer responsibility, environmental levy, carbon market and sale of finished recycling products;
- High profitability and a wide range of product applications in different sectors;
- Payments and disbursements cover all running costs, so the cost of production is 0;
- No huge expenses for filtering elements, as the maximum permissible emissions are many times less than the norm, which is confirmed by the analysis of an accredited laboratory;

Waste to Energy, Zero Waste, Circular Economy, Net Zero:

- Our concept of energy-independent industrial parks with cyclic economy means recycling waste to zero - without residue for landfill;
- Ikhlyas Waste to Energy plants can be easily integrated into the production scheme of any waste sorting plant. They transform it into an energy-independent industrial park with zero landfill residue. Such an industrial park will be able to produce finished products and building materials from sorted recyclables and construction waste, using clean energy. This energy will be produced by generators or turbines from the liquid and gaseous recycling products that will be produced daily by Ikhlyas Waste to Energy from the polymer waste from the rubbish tailings of this waste sorting plant. Such waste is usually taken to a landfill or an incineration plant. And in our case, they will become an inexhaustible source of clean energy. The use of energy-independent industrial parks with cyclic economy will make it possible to concentrate energy-consuming enterprises producing products from recycled raw materials in one place. This eliminates high logistics costs and their environmental impact, while the number of jobs is multiplied;
- Implementation of the Ikhlyas Waste to Energy technology programme can complete the construction of a circular economy in any country and achieve energy independence and environmental security.

VIII. Strategy for development and application of Ikhlyas-Waste to Energy technology.

Plastic accompanies us in all areas of life, often making it convenient and safe. This is why it is so important to move towards a circular economy.

Global environmental problems with waste and recycling are a reality for the whole world. In 13 years of technology development, we have gone from an idea to an industrial model. Serious resources and effort (about \$2,500,000 of our own money) have been spent on it.

The experience and knowledge that the Ikhlyas Waste to Energy team possesses today is reflected in a comprehensive waste management and recycling programme that can be implemented in companies, small towns and entire countries. It can and should be financed on the balance between business and the state.

The Ikhlyas Waste to Energy technology programme globally complies with the principles of the Paris Agreement under the UN Framework Convention on Climate Change, which regulates measures to reduce carbon dioxide in the atmosphere from 2020. It incorporates all global environmental and economic trends: GreenTech, waste to energy, zero waste, net zero, circular economy, high income.

The basic principles of the circular economy are based on resource recovery, recycling of secondary raw materials, transition from fossil fuels to renewable energy sources. This type of economy is seen as part of the "Fourth Industrial Revolution", as a result of which, the rationality of natural resource utilisation will increase, the economy will become more transparent, and its development will become rapid and systematic. It follows that:

Ikhlyas Waste to Energy innovations are the eco-friendly engine of the fourth industrial revolution, ensuring its energy independence and environmental safety.

IX. Calculate your minimum profit, the money is under your feet.

1. Calculation of the quantity of liquid waste products in litres: $T_v = T_{pw} \times F$,

T_v – the amount of liquid product output in litres during the period of plastic waste accumulation;

T_{pw} – the total amount of plastic waste over a period of time in kilograms;

$F = 0,44$ – the ratio of your raw material (PE, PP, HDPE, LDPE) in the total mass of plastic waste.

To convert litres into a monetary equivalent, multiply the resulting number of litres by the price of fuel from the petrol station.

2. Calculation of the amount of energy from liquid utilisation products, kW: $E_t = T_{pw} \times F \times 5 \text{ кВт}$,

E_t – calculation of the conversion of liquid products into energy, through a generator or turbine;

T_{pw} – total amount of plastic waste over a period of time in kilograms;

$F = 0,44$ – the ratio of your raw materials (PE, PP, HDPE, LDPE) in the total mass of plastic waste;

5 кВт – the average number of kW obtained from 1 litre when tested on an electric generator.

3. In addition to this, 1 tonne of polymer waste produces 100 - 120 m³ of gas mixture.

X. P.S.

It is important for every person to remember the importance of consolidation in creating a better and safer future for future generations, from really collapsing environmental pollution.

Ikhlyas Waste to Energy technology and technology programme is of such importance not only for any country in the world, but also for the whole mankind.

By purchasing our services and equipment, you will get not only energy independence and environmental safety, but also great political and social dividends.

And all this is just the visible part of the iceberg. We know and can do a little more.

Video interview with the head of the project: <https://www.youtube.com/watch?v=Ujec9YoEalQ>

XI. Contact information:

E-mail: sales@ikhlyas-waste2energy.com

Website: <https://ikhlyas-waste2energy.com/en/>

[linkedin.com/in/serhii-zarovskiy-b58430260](https://www.linkedin.com/in/serhii-zarovskiy-b58430260)

+90 (501) 075-53-48, WhatsApp Business.

+7 (978) 750-87-58, WhatsApp, Viber, Telegram.



You are kindly requested to correspond in writing in English. If there is a need for conference calls or telephone calls, we will arrange for an English-speaking member of staff.

(12) МЕЖДУНАРОДНАЯ ЗАЯВКА, ОПУБЛИКОВАННАЯ В
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- (71) Заявитель: СЕИДАМЕТОВ, Рензи Исханович (SEIDAMETOV, Renzi Iskhanovich) [RU/RU]; ул. Азиев Абдулвапидов, 7 Республика Крым, Симферополь, 295049, Republic of Crimea, Simferopol (RU); СЕТМАНБЕТОВ, Сабри Нариманович (SETMANBETOV, Sabri Narimanovich) [RU/RU]; ул. Кирова, 29, кв. 4 Республика Крым, Симферополь, село Яркое, 296514, Republic of Crimea, Saki district, village Yarkoe (RU)
- (72) Изобретатели: САМИСВИЧ, Людмила Васильевна (SAMISEVICH, Lyudmila Vasil'yevna), кв. 1319 Республика Крым, Симферополь, 295000, Republic of Crimea, Simferopol (RU)

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(54) Title: METHOD AND DEVICE FOR THE DESTRUCTIVE DISTILLATION OF POLYETHYLENE AND POLYPROPYLENE WASTE
(54) Название изобретения: СПОСОБ И УСТРОЙСТВО ДЛЯ ДЕСТРУКТИВНОЙ ПЕРЕГОНОК ОТХОДОВ ПОЛИЭТИЛЕНА, ПОЛИПРОПИЛЕНА
(57) Abstract: The invention relates to a method and device for processing industrial and domestic polyethylene and polypropylene waste by destructive distillation. A method for the destructive distillation of polyethylene and polypropylene waste includes charging a destructive distillation reactor with polyethylene and polypropylene waste that has been pre-cleaned of contaminants by flotation, and heating the furnace of the distillation reactor using a fuel burner, maintaining the temperature in a hydrocarbon collector tank using exhaust gases, regulating the outlet temperature of a vapour-gas mixture of hydrocarbons, and recovering paraffin fractions; fractionating the remaining distillation products in a fractionating column, and regulating the inlet temperature of the remaining vapour-gas mixture from the fractionating column, cooling the remaining vapour-gas mixture, separating same into a naphtha fraction and a gas fraction, and charging a subsequent destructive distillation reactor with feedstock, wherein prior to charging, the bottom part of each reactor is coated with a layer of a non-stick lubricant, the reactor furnaces are connected with the aid of air cushions, and the reactors are charged in several steps according to the following cycle: "charging a reactor with feedstock, generating a vacuum in the charged reactor space, heating the reactor to 110-260°C to barely the charged feedstock."
(57) Реферат: Изобретение относится к способу и устройству переработки промышленных и бытовых отходов из полиэтилена и полипропилена деструктивной перегонкой. Способ деструктивной перегонки отходов полиэтилена и полипропилена включает загрузку в реактор деструктивной перегонки предварительно очищенных флотацией отходов полиэтилена и полипропилена от примесей, нагрев топки реактора перегонки топливной горелкой; поддержание температуры в кубе-сборнике углеводородных отходящих газов, регулирование температуры выхода парогазовой смеси углеводородов, отбор парафинных фракций; фракционирование оставшихся продуктов перегонки в ректификационной колонне, регулирование температуры выхода оставшейся парогазовой смеси из ректификационной колонны; охлаждение оставшейся парогазовой смеси, разделение ее на бензиновую и газовую фракции и загрузку сырья в следующий реактор деструктивной перегонки, где перед загрузкой сырья донную часть каждого реактора покрывают слоем антипригарной смазки, подсоединение топок реакторов осуществляется с помощью воздушных подушек, загрузку реакторов в несколько этапов по циклу: "загрузка реактора сырьем, вакуумизация загрузки реактора, нагрев реактора до 110-260°C для разогрева загрузки реактора".

[продолжение на следующей странице]

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Toronto, ONTARIO M5J 2T9
CANADA

ISSUE NOTIFICATION

The projected patent number and issue date are specified above. The patent will issue electronically. The electronically issued patent is the official patent grant pursuant to 35 U.S.C. § 153. The patent may be accessed on or after the issue date through Patent Center at <https://patentcenter.uspto.gov/>. The patent will be available in both the public and the private sides of Patent Center. Further assistance in electronically accessing the patent, or about Patent Center, is available by calling the Patent Electronic Business Center at 1-888-217-9197.

The USPTO is implementing electronic patent issuance with a transition period, during which period the USPTO will mail a ceremonial paper copy of the electronic patent grant to the correspondence address of record. Additional copies of the patent (i.e., certified and presentation copies) may be ordered for a fee from the USPTO's Certified Copy Center at <https://certifiedcopycenter.uspto.gov/index.html>. The Certified Copy Center may be reached at (800)972-6382.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment is 439 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Center (<https://patentcenter.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.


INVENTOR(s) (Please see PATENT CENTER site <https://patentcenter.uspto.gov> for additional inventors):


Renzi Iskhanovich SEIDAMETOV, Simferopol, RUSSIAN FEDERATION;
Sabri Narimanovich SETMANBETOV, village Yarkoe, RUSSIAN FEDERATION;

APPLICANT(s) (Please see PATENT CENTER site <https://patentcenter.uspto.gov> for additional applicants):

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Patent application European Union

 <p>European Patent Office 80089 MUNICH GERMANY</p> <p>Questions about this communication? Contact Customer Services at www.epo.org/contact</p>	
<p>Date: 04.11.21</p>	
<p>Spengler, Robert Pothast & Spengler Patentanwalte PartG mbB Magius-Deutz-Strae 12 59077 Ulm ALLEMAGNE</p>	<p>Application No./Patent No. 19881868.4 - 1107 / 3916041 PCT/RU2019000475</p>
<p>Reference: 21-031YP1430</p> <p>Applicant/Requester: Seidametov, Ramzi Iskanderovich, et al</p>	
<p>Notification of European publication number and information on the application of Article 67(3) EPC</p> <p>You are hereby informed that the technical preparations for the publication of the translation of the above-mentioned international application as supplied to the EPO pursuant to Article 153(4) EPC have been completed.</p> <p>The translation will be published on 01.12.21. The publication number is: 3916041. The publication in accordance with Article 153(4) EPC will be mentioned in European Patent Bulletin number 2021/48 (http://www.european-patent-office.org/e_pub_bulletin/index.htm).</p> <p>The title of the invention in the three official languages of the European Patent Office is worded as follows: VERFAHREN UND VORRICHTUNG ZUR DESTRUKTIVEN DESTILLATION VON POLYETHYLEN- UND POLYPROPYLENABFALLEN METHOD AND DEVICE FOR THE DESTRUCTIVE DISTILLATION OF POLYETHYLENE AND POLYPROPYLENE WASTE PROCEDURE ET DISPOSITIF POUR LA DISTILLATION DESTRUCTIVE DES DECHETS DE POLYETHYLENE ET DE POLYPROPYLENE</p> <p>Provisional protection under Article 67(1) and (2) EPC in the individual contracting states becomes effective when the conditions referred to in Article 67(3) EPC have been fulfilled. Provisional protection in the individual extension and validation states is governed by the national laws of the countries concerned. For more details, see Chapter III of the EPO brochure "National Law relating to the EPC" (www.epo.org/law-practice/legal-texts/national-law.html), which also contains information about the extension and validation system. Further information can also be found in the Official Journal of the European Patent Office.</p> <p>In all future communications to the EPO, please quote the application number as indicated above, i.e. including the final four figures (which identify the Directorate responsible for the subsequent procedure).</p>	
<p>EPO Form 1203 04.16 page 1 of 2</p>	

<p>Date: _____ Application No. 19881868.4</p>	
<p>Remark For European patent applications with a date of publication after 01.04.05, no paper copies will be forwarded to the applicant any longer. The publication can be downloaded, free of charge, from the EPO publication server https://data.epo.org/publication-server/ or can be ordered from the Vienna sub-office upon payment of a fee (see Decision of the President of the EPO dated 12 July 2007 concerning the form of publication of European patent applications, European search reports and European patent specifications, Special edition No. 3, OJ EPO 2007, 97).</p>	
<p>Receiving Section</p> 	
<p>EPO Form 1203 04.16 page 2 of 2</p>	

Ukrainian patent



УКРАЇНА

ПАТЕНТ

НА ВИНАХІД

№ 127580

СПОСІБ І ПРИСТРІЙ ДЛЯ ДЕСТРУКТИВНОЇ ПЕРЕГОНКИ ВІДХОДІВ ПОЛІЕТИЛЕНУ, ПОЛІПРОПІЛЕНУ

Видано відповідно до Закону України "Про охорону прав на винаходи і корисні моделі".

Зареєстровано в Державному реєстрі України винаходів 18.10.2023.


Директор Державної організації «Український національний офіс інтелектуальної власності та інновацій»

О.П. Орлюк

Canadian patent

<p>Innovation, Sciences et Développement conomique Canada Office de l'innovation et du dveloppement conomique Canada</p>	
<p>Brevet canadien / Canadian Patent</p>	
<p>Titre de l'invention / Title of invention PROCEDURE ET DISPOSITIF POUR LA DISTILLATION DESTRUCTIVE DES DECHETS DE POLYETHYLENE ET DE POLYPROPYLENE</p>	
<p>3,126,385 Numro de brevet Patent number</p>	
<p>Brevets / Patents: SEIDAMETOV, REMZI ISKANDEROVICH, SETMANBETOV, SABRI NARIMANOVICH</p>	
<p>Inventeurs / Inventors: SEIDAMETOV, REMZI ISKANDEROVICH, SETMANBETOV, SABRI NARIMANOVICH</p>	
<p>Le commissaire aux brevets a accord un brevet pour l'invention dcrite dans le mmoire descriptif portant le numro de brevet susmentionn. Le mmoire descriptif est accessible dans la Base de donnes sur les brevets canadiens sur le site Web de l'Office de la proprit intellectuelle du Canada.</p>	
<p>The Commissioner of Patents has granted a patent for the invention described in the specification under the above-noted patent number. The specification is accessible in the Canadian Patents Database on the website of the Canadian Intellectual Property Office.</p>	
<p>Commissaire aux brevets Commissioner of Patents</p>	
	
<p>(CIPO - 91) 2020-08-15</p>	

UAE patent application

 UNITED ARAB EMIRATES
MINISTRY OF ECONOMY

26-04-2021

: Dear Messrs
Agent At the Intellectual Property Department Registered

Phone : 042358588
PO Box : 94478
E-mail :
Greetings,,

Patent Application Document Receipt	
Application No.	P6000683/2021
Filing Date	26-04-2021
Title	METHOD AND DEVICE FOR DESTRUCTIVE DISTILLATION OF POLYETHYLENE AND POLYPROPYLENE WASTE
Applicants	SETMANBETOV, Sabri Narimanovich

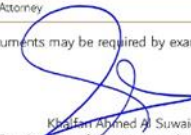
List of Submitted Documents

- Patent 2 (also) - Biographic Information
- Claims - Ar (pdf) - Claims (Arabic)
- Claims - En (pdf) - Claims (English)
- drawings - ar (pdf) - Drawing (Arabic)
- drawings - En (pdf) - Drawing (English)
- Arabic text (pdf) - Description (Arabic)
- English text (pdf) - Description (English)
- Priority doc (pdf) - Certified copy of priority followed doc
- WIPO DOC (pdf) - PCT Documents
- application as filed (pdf) - Application Form
- Filing receipt (pdf) - Sequence Listing

List of missing documents

- Power of Attorney

Additional documents may be required by examiners if necessary.
Sincerely,


Khalifa Ahmed Al Suwaidi
Director of Development of Innovation in the Economy and Patents Department

Indian patent

 INTELLECTUAL PROPERTY INDIA
भारत सरकार
केन्द्रिय प्रत्यक्ष प्रशासन

पेटेंट कार्यालय, भारत सरकार | The Patent Office, Government Of India
पेटेंट प्रमाण पत्र | Patent Certificate
(पेटेंट विन्यासकी का विनियम 74) (Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No. : 455622
आवेदन सं. / Application No. : 202117030873
पेटेंट करने की तिथि / Date of Filing : 03/07/2019

पेटेंटी / Patentee : 1 SEIDAMETOV, Remzi Iskanderovich 2 SETMANBETOV, Sabri Narimanovich

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकृत **METHOD AND DEVICE FOR THE DESTRUCTIVE DISTILLATION OF POLYETHYLENE AND POLYPROPYLENE WASTE** नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख जुलाई 2019 के तीसरे दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदान किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled **METHOD AND DEVICE FOR THE DESTRUCTIVE DISTILLATION OF POLYETHYLENE AND POLYPROPYLENE WASTE** as disclosed in the above mentioned application for the term of 20 years from the 3rd day of July 2019 in accordance with the provisions of the Patents Act 1970.


Date of Grant : 29/09/2023
Controller of Patents

टिप्पणी - इस पेटेंट के विन्यास के लिए बीस वर्ष की अवधि लागू है, जो कि 2021 के तीसरे दिन से बीस वर्ष का अवधि है जो कि हर वर्ष के लिए हर वर्ष के लिए।
Note - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 3rd day of July 2021 and on the same day in every year thereafter.

People's Republic of China patent

证书号第6116051号



发明专利证书

发明名称: 用于聚乙烯和聚丙烯废料的十馏的方法及设备

发明人: 雷姆济·伊斯坎德罗维奇·塞达梅托夫
萨布里·纳里曼诺维奇·塞特曼贝托夫

专利号: ZL 2019 8 0089875.4

专利申请日: 2019年07月03日

专利权人: 雷姆济·伊斯坎德罗维奇·塞达梅托夫
萨布里·纳里曼诺维奇·塞特曼贝托夫

地址: 克里米亚

授权公告日: 2023年07月04日 授权公告号: CN 113316608 B

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局长 申长雨
第1页(共2页)
其他事项参见续页


2023年07月04日

证书号第6116051号

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发明人: 雷姆济·伊斯坎德罗维奇·塞达梅托夫; 萨布里·纳里曼诺维奇·塞特曼贝托夫

第2页(共2页)

Russian patent

