



Novelties ITM Poland 2011

MACHTOOL

- **ABH Biuro Techniczne Waldemar Trzeźniewski**
Pavilion 5, Stand 134



AMADA FO-M2 3015 NT Laser Cutting Machine
AMADA FO-M2 Laser Cutting Machine continues the “flying optics” technology. The applied axis of rotation enables the machining of tubes and profiles, while water-cooling of the surface of the cut material results in the much smaller heat inflow zone. Rigid body, cast bed, a resonator combined with the machine, Fanuc control - these components provide maintenance-free and reliable operation.



AMADA AE-NT Servo-Electric Turret Punch Press
The new model of servo-electric turret punch presses by AMADA - an AC press successor. Modern control, rigid and massive gantry structure, capacious tool turret, trackless machining, eco-friendly and ergonomic operation has resulted in the AE presses are among the leading machines for metal sheet machining in the worldwide market.



AMADA HFE-M2 Press Brake
45 years of experience and nearly 100,000 installed press brakes have enabled the introduction of the third generation of high-precision and energy-efficient Amada press brakes with a mobile top beam. The HFE-M2 series feature a new touch screen, increased memory, is network ready, has a patented blown can defect system and is available in both versions: with 4 and 7 axes.

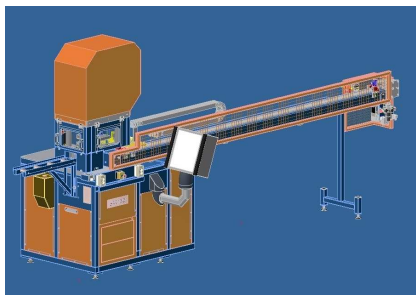
- **Alba Thyment**
Pavilion 3A, Stand 40



CB Karina 48 B
A new generation of liquid protection coating for use during metal sheet drawing instead of polyethylene films. The liquid is applied to the steel sheet, after drying for a few seconds a flexible scratch-resistant coating remains that does not crumble during the drawing process, which in turn reduces waste production. After the the drawing process the coating is washed off with warm water.

- **Amkovo Ltd. / Inteso Trade s.r.o.**

Pavilion 3A, Stand 50

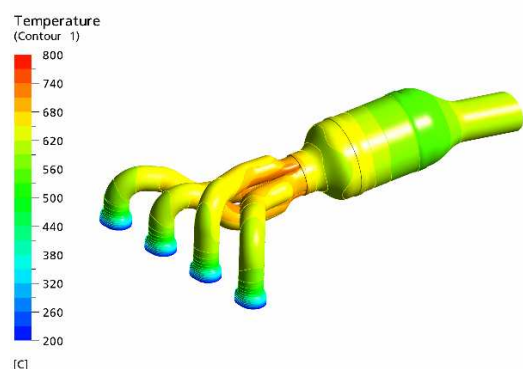


Punching machine with servo motor

Hydraulic punching machine INTESO S2 with fully automatic feed by electric servo motor and CNC control is designed for deformation-free punching of tubes and profiles of various cross section up to 4 000 mm in length. This equipment is capable of punching low quality tubes with regular or irregular pitch.

- **ANSYS Germany GmbH**

Pavilion 4, Stand 12



New software release ANSYS 13.0

ANSYS® 13.0 is the newest release of the engineering simulation technology suite designed to optimize product development processes and reducing the time and cost needed to foster product innovations. The advanced technology behind ANSYS 13.0 includes hundreds of new features that make it easier, faster and cheaper for users to bring new products to market.

- **APX Technologie Ltd.**

Pavilion 3, Stand 30



Class "X" - a novelty in machines MORI SEIKI

Class-X includes the four most common types of machine tools: turning machining centers, vertical machining centers, horizontal machining centers and multitasking machine tools. The concept of class-X is based on assumptions that the new machine is designed to provide machining parameters not worse than its predecessor, while lowering the purchase price and operating costs.

- **Bystronic Polska Ltd.**

Pavilion 5, Stand 109



An integrated system for laser cutting

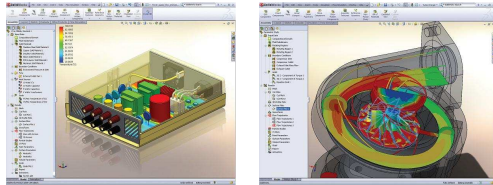
The system consists of a BySpeed Pro 3015 4.4kW laser cutting machine, integrated with ByTrans Extended automatic loading/unloading system and Xpert 31-150 pressbrake. Integration of a system allows sheet metal cutting with record speeds in the range of 1-5mm, also a significant reduction in costs associated with loading and unloading of metal sheets and bending of precision cut parts.

- **CADWorks Jaksan, Szymański Co.**
Pavilion 3A, Stand 57



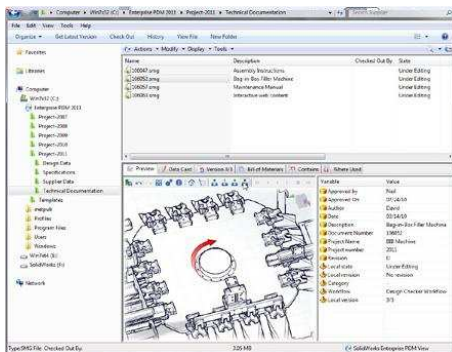
SolidWorks® Premium 2011

SolidWorks® Premium 2011 complex CAD 3D solution: New Defeature Tool automatically strip important details out of models to control how much intellectual property is exposed; New tools in the Dimension Palette enable reduce time-consuming tasks in the product detailing portion; PhotoView 360 is making simple photorealistic image and animation creation.



SolidWorks FLOW Simulation

Easily simulate liquid and gas flow within SolidWorks Flow Simulation. With two vertical solutions: Electronics Lab and HVAC Module you can now: evaluate components' thermal properties and cooling requirements (Joule heating simulation, heat pipe compact module, and PCB generator) or evaluate air and gas movement in working and living environments.



SolidWorks® EPDM 2011

Integrated SolidWorks Design Checker automates checking of designs to company standards, and integration of 3DVIA Composer Player enables the visualization of 3DVIA Composer data inside SolidWorks Enterprise PDM. Further enhancements speed installation, improve file reference management, and streamline data entry.

- **CAMdivision**
Pavilion 3A, Stand 65

Synchronous Technology

With synchronous technology, you no longer have to choose between constraint-driven or history-free modeling. You no longer have to be a programmer to reuse a model. And you no longer need to worry about using data from multiple CAD systems.

Turbomachinery

NX Turbomachinery Milling - for automatic programming complex blisks and impellers.

- **Chin Fong Machine Industrial Co., Ltd**
Pavilion 3A, Stand 54



iLS1-160 - Intelligent, Link Drive, Single Point, Servo Control Press

The high rigidity, power-saving iLS1-160 carries all new developed "i-Motion", the intelligent servo control system. Featuring free-setting, precisely positioning control of slide motion curves, iLS1 satisfies versatile forming conditions and requirement by either quickly applying built-in motion curves or freely programmable user curves.

- **Deerfos Europe Ltd.**

Pavilion 9, Stand 2



Innovatory item with ceramic grain

New product from Deerfos is innovatory item with ceramic grain. Recommended for high pressure grinding with steel of high hardness. Item code - BORA 7.

- **Dematec**

Pavilion 3, Stand 28



ENSHU GE480H

A two-pallet machining centre for mass production, which in addition savings of energy, cost and space, meets the requirements of the most demanding customers. Super-efficient centre in terms of speed, reliability and thermal stability. Rapid traverse 90m/min. in 3 axes, spindle revolutions up to 15,000 rpm, pallet dimensions 500 x 500 mm.



MURATEC - MT200

Muratec MT200 is a new turning centre with two spindles and three turrets. The turning centre can cooperate with a gantry manipulator for loading and unloading, or with a rod feeding device. MT200 is an excellent choice for machining of various, complicated details. Rapid traverse 36 m/min, 32 tools in three revolvers, spindle revolutions up to 5,000 rpm, rotary tools 4,500 rpm.



DOOSAN - LYNX 220 LMS

Fast, efficient and high-precision turning centre with two spindles and rotary tools. The machine is designed to meet the customers' requirements in terms of pace and precision. The diameter of the rod in the spindle is 65 mm, 6,000 rpm, tool turret with 24 tools and rapid traverse 36 m/min.

A new line of lathes is an extension of the highly successful Lynx series equipped with tools driven.

- **Department of Marketing and Technical Advisory - TOP Zbigniew Gawkowski**

Pavilion 3, Stand 4

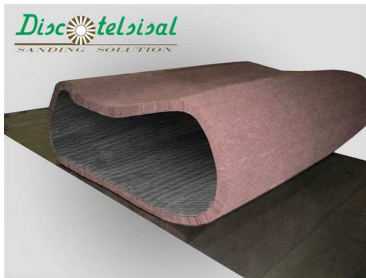


Automatic horizontal bandsaw model MEX-230PSA

Automatic horizontal bandsaw model MEX-230PSA with bar feeder and second vice PA 400x600. It has simple and clear system of programming from the control panel or remote programming with the laptop computer with the use of net system, easy setting of different sequences of very precise cuttings depending on required length of the cut of elements and possibility of bundle cutting.

- **Discotelsisal SRL**

Pavilion 9, Stand 52



NALC BELT

NALC BELT is a new patent product manufactured from Discotelsisal that permit to have a very flexible product with the finishing of an abrasive non-woven wheels. It's longer life belt with a more regular finishing. It's possible to manufacture in all the grits and in different dimensions.

- **Dolezych Ltd.**

Pavilion 9, Stand 42

DoTension

Dolezych created the new lashing strap „DoTension” = high tension force. The new lashing strap is perfect solution when goods must be hooping - high quality of webbing. Comparison to classic load straps, DoTension obtains STF 690 daN strength - that means 130% higher tension force: less amount of straps - saving time - fasten belts faster.

- **Eclipse Magnetics Ltd**

Pavilion 4, Stand 10

The Automag Skid

This is a self-contained, free-standing magnetic filtration system providing uninterrupted magnetic filtration either in-line or off-line. A self-purging magnetic filter removes magnetic and para-magnetic contamination down to submicron size, from coolants and lubricants. It helps cut costs and maintenance and improves quality in applications such as grinding, honing, milling and fine finishing.



The Battery Lifter

Combines the safety, convenience and flexibility of a permanent magnet lifter with the ease of operation of an electro-magnet. No installation, no wires - simply hook to hoist or crane. Makes lifting heavy loads a fast, easy and safe one man job.

▪ **EHT Polska Ltd.**

Pavilion 5, Stand 152



Grinder for deburring LR 30

At MACH TOOL 2011 exhibition we will present a new grinding machine of Portuguese producer NS Maquinas Industriais: deburring machine LR30. This machine works with big and small metal sheets e.g. after cutting on shear, laser or plasma cutting. Compact construction enable to place machine in every place in the factory, machine do not require a lot space.

▪ **Elesa+Ganter Polska Sp. z o.o.**

Pavilion 3, Stand 9



Universal sensor mounting system Elesa+Ganter

These are standard components designed for mounting and positioning of sensors, reflectors and similar objects. Simple elements which are true problem solvers in machine and jig constructions.

▪ **Erall**

Pavilion 3, Stand 50

CHIRON Five-axis machining centre

FZ12KS five axis - advantage in seconds

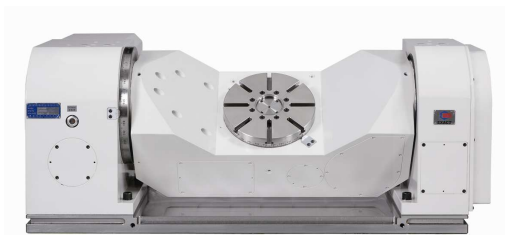
- mineralite body
- simultaneous machining in 5 axes with a straight edge
- rapid traverse 75 m/min, acceleration up to 2g, chip-to-chip - 2.4 sec
- swivel and rotary table $\pm 120^\circ$ and 360° with 1000 rpm
- high-precision spindle with rotational speed of up to 15,000 rpm
- 64 tools with rinsing up to 150 bar
- control and saving of energy consumed

EMAG VL5i - VERTICAL TURNING LATHE CENTRE

- mineralite gantry-type body
- powerful electro-spindle and straight edge scales in all axes
- stabilization of the body, revolver, spindle, control cabinet's temperature
- integrated loading of items by the pick-up spindle
- rapid traverse - 60 m/min, tool replacement - 0.3 sec
- powered tools with rinsing
- measurement of objects and correction of dimensions

▪ **Exact Machinery Co.,Ltd**

Pavilion 3A, Stand 59



Pochylny stół obrotowy CNC ERT-250

ERT-250 nadaje się do obróbki złożonych, precyzyjnych powierzchni śrubowych i narzędzi skrawających, konstrukcja jest zgodna obrabiarką i kompatybilna ze wszystkimi rodzajami układów serwosterujących.

CNC Tilting Rotary table ERT-250

ERT-250 is suitable for complicate helix surface and cutting tools precision machining, there is so design with machine -tool identity and compatible with all kinds of Servo System.

- **Fintek Industry Company Limited**

Pavilion 4, Stand 39



Euro type Hydraulic Box & Pan/Straight Brakes

Crowning compensation design of up/bottom beams. Hold-down pressure adjustment. Clearance chart. Hi - low two bending speeds. Touch control panel/screen. (opt) high speed nc back gauge. (opt) extended nc back gauge with 1250mm. (opt) special upper tooling made by required.

- **Henkel Polska Ltd.**

Pavilion 3A, Stand 43

Loctite 3090

Loctite 3090-a new two-part cyanoacrylate significantly increases the versatility of instant adhesives. Alongside all the traditional benefits, this new product polymerizes throughout the mass. It removes the need for a post-assembly activator. Larger gap sizes can be readily accommodated. The adhesive will bond together close fitting parts in 20s - and even 3mm gap is bonded in less than 90s.

- **INTE-Maszyny Ltd.**

Pavilion 4, Stand 20



Press brake RICO PRCN 30160

PRCN press brakes - highest work accuracy with innovative solutions:

- reduced distance between the hydraulic cylinders
- less deflection, more accuracy
- bending beam fixed by ball joints, swaybend system
- advanced construction allowing highest productivity PRCN press brakes
- productivity, versatility, accuracy and safety.

- **Institute of Advanced Manufacturing Technology**

Pavilion 3, Stand 49



PW03BT workshop profilometer

PW03BT workshop profilometer is a modern instrument with Bluetooth technology used for surface roughness and primary profile measurement in workshop conditions. It can be used with palmtop or laptop.

▪ **ITEK Veneziano Group**

Pavilion 4, Stand 19



INVICTA 2000MX

ITEK offers an innovating concept of an INVICTA 2000MX punching machine. The unique characteristics of the INVICTA 2000MX punching machines meet the demands of the actual and future modern plate working industry.

The INVICTA 2000MX programme is characterized by:

- * User-friendliness for loading, programming, mounting the tooling.
- * A simple machine-concept without accepting compromises for productivity and reliability.
- * An optimal price/quality relation which translates itself into a profitable investment.

▪ **Li Hsing Precision Tool Co.,Ltd**

Pavilion 9, Stand 64



High-Speed, Precision, Long Tool Life

LI HSING imports the latest handle surface machine to overcome ledge of end mills. Before coating, it can get up to lens effect, then plus Nanometer coating. It not only has high adhesion but also can bear high temperatures. New end mill products: LI HSING has innovated 0.001mm radius on edge of tools to achieve smooth perfect cutting lines. It can even extend the tool's life up to double and above.

▪ **Matec Maschinenbau GmbH**

Pavilion 3, Stand 28



Matec Universal Machining Centre - 30 HV

HV type series machines for unit and serial machining. Pendulum configuration of machining with a turntable, multiple assemblies and production of large details - matec machines cover all areas of application. Special features include very large travelling and tilting spindles, which operate in horizontal and vertical planes. 5-sided and 3D machining are the characteristics of HV series matec machines.

▪ **Maximart Corporation**

Pavilion 4, Stand 40



RAPIDO V-6i HIGH SPEED VMC

Outstanding machine specification: - 30000rpm built-in spindle, hsk-e50. - x/y/z traverse: 600/420/450mm - rapid traverse: 32m/min - work table: 750mm x 420mm - 3 axes thk linear guideway with self-lube device - arm type 20 tools atc. Available cnc /ac servo package - fanuc 0i-md - siemens 828d - heidenhain itnc 530 smartnc.

- **MDT Ltd.**
Pavilion 3, Stand 12



Horizontal machining center EXTRON LH-87
EXTRON LH-87 horizontal machining centre dedicated to precise low batch production and tool room. Horizontal spindle facilitates chips flow and optimizes work area to 860x720x625 mm. Pallet changing and automation available . 4th axis integrated into work table. Unique solution for tool rooms investing in innovations.

Vertical milling center MDT EXTRON L-610

MDT EXTRON L-610 vertical milling center with Sinumerik 840D SL (SW 2.6) and M-Dynamics package dedicated to precise tool production. Hi Tech drive technology by Siemens Solution Line, innovative technological function package, Advanced Surface intelligent surface control, ShopMill conversational mode, 4th and 5th axis available as option.

- **Miyanach Ind. Co., Ltd.**
Pavilion 3A, Stand 58



Portable Magnetic Drilling Machine

Low and high-speed options that allows the operator to make an appropriate choice for R.P.M. Two modes of drilling that allows loading in "annular cutter" or "twist drill" etc. Lowers the cutter damage rate. Aligns cutters precisely, increase cutter, motor life and less tool arbor vibration. Regulate the voltage to avoid burning.

- **MULTI Ltd.**
Pavilion 4, Stand 14



COUTH N34

COUTH N34 marking system designed for hi-temp direct part marking. Specially designed COUTH machines can stand tough condition in most demanding industrial environment. For more information, please visit our booth.

- **NCT Ipari Elektronikai Kft.**
Pavilion 3A, Stand 13

NCT 201 CNC Control

Brand new mechanical designs dialog programming WINDOWS compatible file structure 4 USB, ETHERNET, 16 GB part program memory Ethernet based communication between CNC and peripheries wide range of peripheries: 24 VDC IO, analog outputs, analog inputs, touch probes, encoders High dynamic new NCT motor series with built-in absolute encoder (endat22) 3-channel, 5-axis simultaneous control.

- **Nicom Jaksan, Szymański Co.**
Pavilion 3A, Stand 64A



Edgecam 2011 R2

Radan 2011 R2

The latest version of Edgecam 2011 R2 and Radan 2011 R2 includes a new established specifically to ensure



productivity gains in firms where the manufacturing process is based on CNC machine tools. Noteworthy is the fact that most of the news and improved versions of Edgcam 2011, Radan 2011 was introduced directly at the request of existing users. More details on www.nicom.pl.

- **PROMOTECH**

Pavilion 3, Stand 36

Manual device for chamfering to metal sheets and pipes of a new generation

- **Prevotex Md**

Pavilion 3, Stoisko 52



Chip conveyor LNS TURBO MH500

The Turbo MH500 removes all chip shapes made of different material incorporating filtration to 500µ. The hinge belt removes the chips just as a normal hinge belt conveyor but the use of filter boxes ensures that all chips greater than 500µ cannot pass into the coolant tank. The revolutionary design ensures minimal floor space while still covering a wide range of applications and filtration needs.

- **Renishaw Ltd.**

Pavilion 3, Stand 14

EQUATOR - THE VERSATILE GAUGE

The new Renishaw Equator™ is a versatile alternative to custom gauging, offering inspection of an unprecedented variety of manufactured parts. Installation of an Equator is possible in minutes, and re-configuration of the gauging system to cater for part design changes or to measure new parts is now possible in a fraction of the time taken with conventional custom gauging.

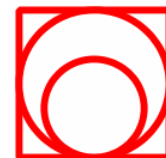
The thousands of points collected during 3D scanning with the industry standard SP25 probe results in better metrology and enables effective form measurement. Every data point can be used for comparative measurement - one Equator can perform the same function of thousands of DTIs, LVDTs or handheld instruments.

The Equator's innovative gauging technology is based on the traditional comparison of production parts to a reference master part. Re-mastering is as swift as measuring a production part and immediately compensates for any thermal effects, returning data that could have been collected in the temperature controlled quality room.

The compact Equator gauging system is out of the box, up and running, in less than 20 minutes. The gauge weighs 25kg, requires single phase power and no costly compressed air supply.

- **Research & Production Corporation "Trubostal", Ltd**

Pavilion 5, Stand 73



Manufacture of centrifugally cast tubes and fittings



Furnace rolls barrels of centrifugally cast tubes of high-temperature steels and alloys

For the high-temperature furnaces there's mastered the production of rolls of different designs with the barrels of temperature-resistant steels and alloys, made by the method of centrifugal casting there. Wide choice of heat-resistant steels & alloys, high quality of metal of barrels, qualified welding of the barrels with trunnions, high precision of machining and balancing of the finished items.

- **STARYS Stachowiak Ryszard Commercial Agency**

Pavilion 5, Stand 124

Ganz Automation

Manufacturing and technology process automation.

A device for fast, automatic transportation of details between machines, presses, etc. It is equipped with pneumatic, hydraulic manipulators, etc. Computer controlling of the automation of manufacturing and technological processes. High productivity and cost efficiency of automation by Ganz company. It is used in mass and high volume production as well as in all branches of industry.

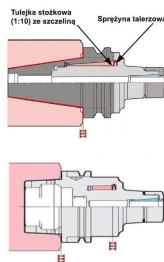
G + K Umformtechnik

Thick Metal Sheet Straightening Machine

G+K Type T - RS 2000/100 Straightening Machine, which is intended for straightening metal sheet with the thickness of up to 100 mm and width of up to 2000 mm. The temperature of straightened metal sheets can be in the range of up to 600/700°C. Maximum material strength: 680 N/mm²

- **SYSTECH Technological Tool Systems Ltd.**

Pavilion 3A, Stand 3



MAJOR DREM holder - dampening vibration effect.

Every spindle of machine tool generates the own frequency of vibration. THE MAJOR DREAM holder makes impossible the moving the vibration on the cutting edge of the tool. The profitable effect is the growth of efficiency and the accuracy of machining, decrease of the roughness of the surface. This leads to the growth of durability the tools and to considerable reduction of the noise of the working.

- **Tauring spa - Tauringroup Division**

Pavilion 9, Stand 5



ALPHA 120 PQ10

The ALPHA 120 PQ10 is characterized by a new geometry: a rolls regulation on straight slides to discharge the deflection forces on the machine body and a support that sustains the shaft at the end, supporting the triple of the weight of an overhang shaft. The PQ10 is a multi-axis positioner able to manage independently the movable elements and includes an advanced self-diagnostics system.

▪ **TRUMPF Polska Ltd.**

Pavilion 5, Stand 143



The laser flatbed machine TruLaser 5030 fiber 3000 W

TRUMPF offers you the most economical solution for highly efficient thin sheet metal processing. The efficiency of the fiber-guided TruDisk 3001 is twice that of a CO₂ beam source which means less power consumption. TruLaser 5030 fiber cuts thin stainless steel and aluminum as well as nonferrous metals such as copper and brass - producing reliable and high-quality results.



TruLaser Station 5004 for LMD and welding

With a Series 5000 TruLaser station, workpieces measuring from a few millimeters to several meters can be processed.

- Cost effective from batch size "1"
- Simple to learn and operate
- Work by hand and by program



TruPunch 3000 S11 with electric punching head

We strive to work cost-efficiently and responsibly through the sensible use of resources. Skeleton-free processing increases your sheet utilization by an average of 10% and reduces material costs accordingly. The electric punching head eliminates the need for a hydraulic unit. This saves space and also makes your machine much quieter.



TruTool TSC 100 - the stainless steel specialist

This new slat cleaner can remove stubborn stainless steel slag, mild steel slag and Al-slag. The new cleaning process of new tool is a major factor in its high quality, cleaning results and efficiency. The ability to do the cleaning process directly on the laser, even during production, helps to save costs associated with machine downtime. A pure pallet means repeatable, high quality laser cutting.

METALFORUM

▪ **Yenal Vasifli Celik Ve Tarim Aletleri San.A.S.**

Pavilion 5, Stand 93

Special steel profiles

Application examples of special steel. Automotive sector: Components of gear box, Clutch hub toothed with front shock Starter poie pieces, Break cam, Driving components for building machinery, profiles for hydraulics components guns for hunting and sport: front sledges, magazine lock, trigger mechanisms. Production: heat treatment, hot rolling. cold drawing, textile machinery, woodworking build machinery.

RESEARCH FOR INDUSTRY

- **Department of Chemistry and the Inorganic Technology Chemical, Department of the Silesian Technical University**

Pavilion 5, Stand 5

The method of termodestruction of waste polyolefins towards the production of liquid fuels

The invention concerns the termodestruction of waste polyolefins, which is one of the forms of processing through chemical recycling of waste from selected plastics. The proposed solutions are protected by patents cited in Section 3 and are related to the most preferred embodiment of this process, which involves the decomposition with technological oils, both of external origin, as well as in the presence of fractional reaction phase or process's post-reaction phase.

The authors of the present invention: Prof. dr hab. inż. Andrzej Mianowski, Piotr Kałyniak, Dr inż. Anna Tokarska, Janusz Furtan, Kazimierz Jelonek, Józef Kozaczko, Edwin Kozłowski, Andrzej Kiełtyka, Kazimierz Bodora, Dr Tomasz Siudyga, Krzysztof Rogoń, Marek Winter, Wojciech Kaczmarzyk

Preparation and use of polyethylene terephthalate binder

The invention is a method of producing an organic binder from polyethylene terephthalate waste. The process of the preparation of the polyethylene terephthalate binder with the selected organic liquids consists in bringing them to boil and maintaining at that temperature until the solid phase disappears, and the obtained product is cooled down to a temperature preferable for further use. Due to the fact that this is a patent application we will not present the details of the solution. In the most preferred embodiment, a perfect binder, suitable for the briquetting of any loose materials such as coal, including low-grade coal, such as slurries (high humidity, fragmentation ~ 0.5 mm), is obtained from waste PET products and selected organic liquids.

The authors of the present invention: Dr inż. Anna Tokarska, Prof. dr hab. inż. Andrzej Mianowski, Prof. dr hab. inż. Jacek Kijeński

Method of dissolving plastics

Method of dissolving plastics, particularly polyolefins, polystyrene, using organic liquids, which are simultaneously hydrogen donors, is characterized in that the mixture of organic liquids and plastics in the amount of at least 10% by weight is subjected to heating, accompanied by an increase in pressure resulting from the tension of the steams of mixture in phase and chemical transitions, and after obtaining the final temperature and pressure the product is cooled down to ambient or higher temperature, and then it is used for joint processing of crude oil, or for further pyrolysis processes, especially olefin pyrolysis or is stored for other purposes.

The authors of the present invention: Prof. dr hab. inż. Andrzej Mianowski, Dr Izabela Baraniec-Mazurek, Prof. dr hab. inż. Jacek Kijeński, Krzysztof Rogoń, Marek Winter, Wojciech Kaczmarzyk, Elżbieta Wojtowicz, Dr Tomasz Siudyga.

- **Foundry Research Institute**

Pavilion 5, Stand 86



Nickel-free silumins of high functional properties

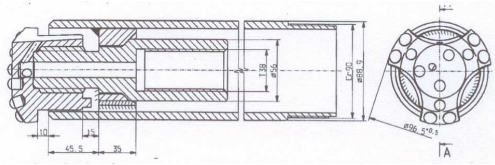
Nickel-free silumins were developed in which nickel was replaced by other alloying elements. These alloys are intended for parts of I.C. engines and components operating at ambient temperatures and at elevated or high temperatures. Nickel-free silumins are characterised by very good mechanical properties, dimensional stability and creep resistance. They are the subject of patent applications.



Innovative technology of thermal insulation of the gating and feeding systems for production of iron castings

Innovative insulation technology of gating and feeding systems enabling heat accumulation in feeder and casting, minimising temperature drop in metal feeding the casting and laminar flow. The result of the application of this technology is increased metal yield, reduced level of rejects, less of dust and carbon dioxide

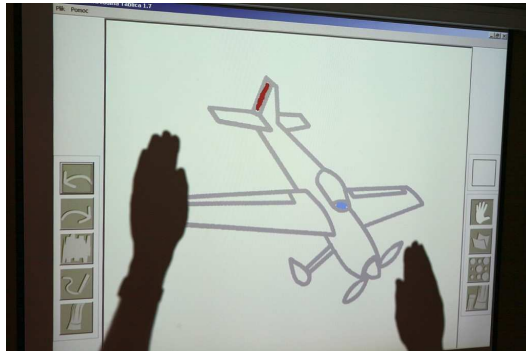
emissions, and reduced thermal energy units.



Device for drilling of boreholes

The device is designed for simultaneous drilling and lining of boreholes, especially percussion drilling or rotary-percussion drilling of holes in the bedrock. It is used in deep building, underground mining, in drilling of tunnels and cut-through holes, making slopes and other objects requiring a durable reinforcement. The simple design ensures high reliability of operation.

- **Gdansk University of Technology**
Pavilion 5, Stand 45

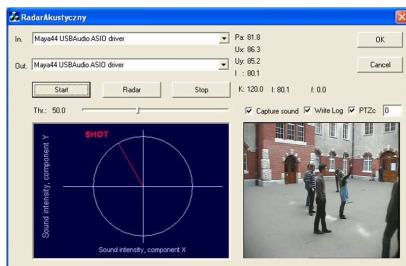


The Virtual Whiteboard

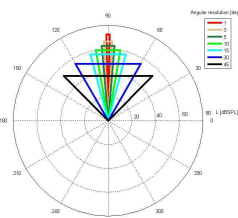
The Virtual Whiteboard is a computer system emulating school whiteboard by using a multimedia projector, a webcam and a projection screen. In comparison with classic school whiteboards there is no need for using any pens or sponges. The system tracks user hands providing possibility of writing and drawing by their motion.

Passive acoustic radar

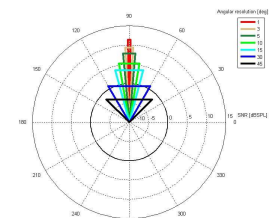
A device which enables to automatic detection, classification, localization and tracking of sound sources such as: screams, gunshots, explosions and breaking glass. The device consists of the new kind of multichannel miniature acoustic vector sensors and a group of digital signal processing algorithms. Applications: Pan Tilt Zoom cameras control, overhearing a spatial part of the scene.



The main window of the Passive Acoustic Radar (PAR)



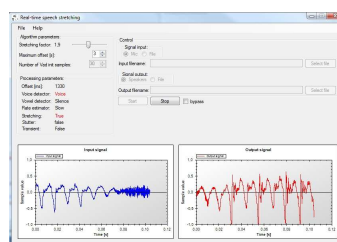
The sensitivity of the PAR was expressed by the SPL values



The accuracy of the PAR expressed by the SNR values

System supporting hearing process for people with central auditory processing disorders

Presented solution enables real-time stretching of the speech recorded by the microphone. It is achieved by the extension of the typical signal stretching algorithm with the analysis algorithms. Depending on the speech rate, speech content i.e. vowels, consonants, pauses, and stutter, signal form the microphone is removed or stretched with the non-uniform stretching factor.



Audio archiving and reconstruction system for the application in digital libraries, radio and television

The aim of the presented invention is to implement the mechanism of the detection and reduction of the most common audio signal distortions. Reconstruction algorithms were integrated with the website, where non-professional users without the special software could reconstruct their own recordings.

The Recording Database you will find some examples of all recordings along with their restored versions. All restoration processes were made using methods and tools developed by the team of Multimedia Systems Department. You can also listen to difference signals, which were restored from recordings.

Recording	Original version	Reconstructed version	Specialized version	Difference signals
Wanda (1949)				
Katrina (1968)				
Suchanba (1968)				
Chakhanba (1968)				
Demirali (1948)				
Sigurni (1948)				
Musiqat (1988)				
Wanda (1949)				
Musiqat (1988)				
Tevni anaf (1948)				
Sax (1948)				
Shey Tey (1948)				

The database contains of exemplary search samples: original recordings and the results of restoration and equalization. To get access to our services and to the search samples you have to be a registered user. If you're not registered yet, please click: [Sign](#). Registered users are also allowed to initial search recordings for correction. If the original recordings are sample historical value or has interesting characteristics in terms of technical aspects the restored version would be available to download directly after uploading. Since many recordings are protected by copyright laws not all users are allowed to download recordings from the database. However, all users have access to the sample file sharing effectiveness of registered user reconstruction workflow.

Login:
Password:

[Home Page](#) | [Home Page](#) | [Home Page](#) | [Home Page](#) | [Home Page](#)
[Home Page](#) | [Home Page](#) | [Home Page](#) | [Home Page](#) | [Home Page](#)
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Institute of Heavy Organic Synthesis "Blachownia"

Pavilion 5, Stand 37 and 86



Management of bioglycerin for chemical syntheses

The project's aim is the management of waste glycerin, created as a by-product during biodiesel production, elaboration of effective method to purify glycerin fraction. Purified glycerin can be used for production of chemical compounds with higher market value than the glycerin. Glycerin replaces the petrochemical raw-materials with renewable, increases profitability of the biodiesel production.

Institute for Sustainable Technologies - National Research Institute

Pavilion 5, Stand 38



AFM microscope for applications in advanced technologies in industry and higher education

The AFM microscope consists of three parts: measuring head, operator console designed primarily to assist the adjustment of the AFM microscope and an electronics unit placed in the assembly with a VME main. The modular design of the microscope allows for the installation of additional electronics and software units, the introduction of new operating modes to increase the range of applications.



Concrete carbonation chamber

A concrete carbonation chamber is made of glass and powder-coated aluminum. The chamber has a control system with a PLC and a touch screen. The device features a system for preventing the build-up of pressure inside the chamber and a door lock control, along with a system for maintaining CO₂ composition is applied.



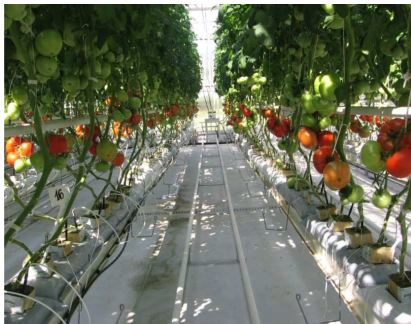
Chamber for testing the emissions of volatile organic compounds from VOC building materials

Chamber for testing the emissions of volatile VOC organic compounds from furniture, construction materials and plastic products, wood-like, insulation, paint and other products. The chambers are made of stainless steel resistant to the impact of the tested compounds. The construction of the chambers and their equipment are in accordance with DD ENV 13419-1:1999.



PL-12DC.2 laser penetrometer

A penetrometer is an automatic device, which uses advanced laser technology to measure penetration. This allows an accurate measurement by any standard, as well as by the user's program. It is possible to transfer the results to a computer. The penetrometer is used, among others for examining the consistence of petroleum products, foodstuffs and cosmetic products.



Fibrous bio-substrate for cultivation on soilless ground

Biodegradable, new substrate is suitable for soilless cultivation of vegetables under cover, built on the basis of organic kapok waste. New substrate is characterized by high water absorption and capillary rise, as well as a stable structure, which is necessary for plant root system. After the growing season the substrate is used as eco-fertilizer.



IPE-21 filtration device

The device is used for the purification of industrial lubricants in the multiple circulation system between the device and the machine's oil tank. Modern filtration materials used in the device allow for the removal of both finely dispersed solids of up to 3 microns, as well as free water, preventing the formation of emulsions and sludges.

Microwave reactor for hydrothermal synthesis of nanopowder, type MSS2

The MSS2 microwave pressure chemical reactor is designed for performing solvo-and hydrothermal microwave synthesis, in which nanopowder with the assumed grain size and morphology is obtained. The solutions used in the reactor are ahead of the global level and allow for the obtainment of ultra-pure nanopowders in production and experimental scale.

■ **Solutions for Translations & Industry**

Pavilion , Stand

STI and Four People

STI and Four People are joining forces to introduce the best standards of technical editing in Poland. Good manual is the best marketing measure for your products - qualified editors, conformity with standards and statutory demands, less complaints and clearly defined processes - these are our aims!

■ **The Silesian University of Technology**

Pavilion 5, Stand 5

Robotised station for manufacturing mining machines working units

The solution enables the automation of setting pickboxes at the side surface of mining machines working units with stereometry designed for the individual operating conditions. The stand is comprised of: a manipulator, supply and control unit, positioner and pickboxes storage bin.

SURFEX

■ **AHC Oberflaschentechnik**

Pavilion 6A, Stand 22



SELGA-COAT®

SELGA-COAT® is a process of the AHC plant in Gorzyce (Poland) for the selective coating of parts made of aluminium alloys. Precisely defined surface areas are coated. SELGA-COAT® surface treatments have proved themselves for the partial coating of vehicle parts, among others wheel hubs and bearings, valves, engine and valve pistons, components for brake systems, clutch components, pump housings.

HART-COAT®

The HART-COAT® process forms a hard and thick aluminium oxide layer onto aluminium substrates. The essential purpose of this surface treatment is to provide wear and corrosion protection for technical components. HART-COAT® layers can be applied where properties like corrosion and wear resistance, dimensional accuracy, anti-friction properties or insulation are required for aluminium substrates.

■ **PTH Erutom Ltd.**

Pavilion 6A, Stand 13



BYK-mac by BYK-Gardner GmbH

Spectrophotometer for multiangular measurement of colour on paint coats with special effects like "gills", "pepper and salt" and metallic and pearl paints.



micro - TRI - gloss by BYK-Gardner GmbH

The new **micro-TRI-gloss** for the measurement of full range of gloss at 20/60/85-degree angles combines the commonly known and appreciated ease of use and approved calibration system based on the standard in the base of the appliance with new and often unique features. Intelligent auto-diagnostics feature indicates when calibration of the instrument is really required, and checks that the calibration standard is clean. Data can be transferred to the PC via a cable or using Bluetooth® wireless technology.



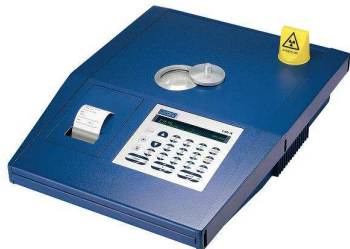
byko-test 8500 Premium thickness gauge by BYK-Gardner GmbH

The possibility of measuring the thickness of the non-conductive layer on the metal in combo mode (e.g. paint on steel, galvanized surface - the device indicates the thickness of the galvanized layer and the thickness of paint separately). It features advanced statistical functions, wireless data transfer to PC and menu in Polish.



XL2 Temperature Recording System by DATAPAQ Ltd.

Easy to use, robust and versatile system for temperature recording, it can monitor the kiln during the process on an ongoing basis. The system includes a data recorder, measurement elements - thermocouples and thermal barrier. The device can be easily programmed using the Insight Software.



Lab-X3500SCI by Oxford Instruments

is a field-proven Energy Dispersive X-Ray Fluorescence (EDXRF). Durable and robust design and automatic temperature and pressure compensation system, allows easy and quick determination of concentration of sulphur in petroleum products without using helium.

WELDING

- **ABB Ltd.**
Pavilion 6A, Stand 57



Industrial Robot IRB 2600ID

The IRB 2600ID industrial robot delivers higher output from a smaller footprint in Arc Welding, Materials Handling & Machine Tending applications. Thanks to the Integrated Dressing (ID) technology and the larger working envelope, cycle times can be reduce by up to 15% and cost of ownership reduced by 75%. There are two versions available: 15kg/1.85m and 8kg/2.0m.

▪ **Broad Industrial Group Ltd**

Pavilion 6A, Stand 98



Digital Welding Machine

Digital inverter welding machines, used CPU multi-process programs and reliable IGBT inverter systems, simple operation and heavy duty design.

▪ **Fronius**

Pavilion 6A, Stand 63



A realistic simulator study - 100% risk-free- Savings

The future of education

Many companies around the world are facing the problem of the lack of qualified welders. Using innovative technology, Fronius Virtual Welding counteracts this trend, pointing to the future in training. The system is designed for a "novice welder".

It teaches safely without exposing to risk and provides key information.

Training participants learn how to weld in real conditions - forming welds in different positions with adequate settings of welding parameters.

Teaching

The so-called "virtual teacher" draws attention to the optimum welding pace, distance to the workpiece and the right angle of the torch. The training participants are shown the current status, correct values, as well as any deviation by way of colourful information on the screen, real sound effects of welding. This allows for a direct and immediate opportunity to correct in the learning process of welding.

Economical in operation

The use of Virtual Welding brings significant savings: up to 25% savings in materials, lower training costs, because the instructor can refer to results in essence. Additionally, inexpensive software upgrade, which enables training in the latest technological standards, is available.

Fronius Virtual Welding is available in two versions: as a terminal and for mobile use.



▪ **Lut-Spaw Engineering Company**

Pavilion 6A, Stand 38

INSTALFIT PLUS

is an innovative alloy of copper, tin, phosphorus and silicon as an alternative for copper-phosphorus alloys with addition of silver. Ideal for use in refrigeration and air conditioning industry. INSTALFIT PLUS deliver:

- Excellent fluidity

- Less porosity
- Increased ductility
- Low melting temperature (637 ° C - 674 ° C)
- Savings
- Option of coated rods

LD 50 ECO torch

A torch with a built-in gas saver (economizer). The economizer in the handle allows the operator to save the time required for setting the flame and reduce the cost of gas consumption up to 40%. Available for propane-oxygen, natural gas-oxygen and acetylene-oxygen mixtures. Application: manual cutting (up to 100 mm), welding (up to 20mm), soldering.

Volatile flux INSTALFLUX 70 EKO

INSTALFLUX 70 EKO is a new, environmentally friendly, non-toxic volatile flux. Does not contain methanol. It's innovative composition makes it safer flux, both in use and in storage.

■ ORBITEC POLAND

Pavilion 6A, Stand 51



BASIC - FOR ORBITAL WELDING

Low cost system for orbital welding, only for applications with open frame OSW weld heads. Auto calculation of weld parameters (OD tube, wall thickness, weld head number) Dimensions 330x130x310mm, weight 8.4kg.

■ Vanad 2000 a. s.

Pavilion 6A, Stand 57



CNC cutting machine Vanad Arena B&R

CNC cutting machine Vanad Arena B & R is a modern device for plasma and oxygen cutting. It is equipped with a portable control panel for easy control the machine by operator. Operating system and electronics Vanad Arena were made by Bernecker + Rainer Industrie Elektronik GmbH (B & R). Operating system has several features that increase productivity and cut quality.

HAPE

■ Revisioproducte PN Oy

Pavilion 5, Stand 10



Pentirefill Spray Filling machine

Pentirefill Ecological Spray System. You can fill the same spray bottle again and again. There are no out coming gases. You can use the spray bottle in every position and function is caranted.

- **OČVeD s.r.o.**
Pavilion 5, Stand 9



Endless belt Anaconda W5

Company OČVeD s.r.o. plans to introduce a novelty, the Endless belt Anaconda W5 (W5 - stainless steel finish, chromium-nickel molybdenum steel AISI 316) used where maximum corrosion resistance is required.

WORK SAFETY FOR INDUSTRY

- **Kirschstein&Partner**
Pavilion 6



K&P games for occupational safety

Kirschstein&Partner offers different games for occupational safety. These games help to provide seminars and trainings, organize Safety days or check knowledge in an interesting and effective way. By using these games new knowledge stays in memory more easily and for a longer time. Information is provided in friendly, stress free atmosphere. More on www.kirschstein.org