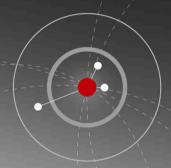
# KATALOG TECHNOLOGII I FIRM SIECI ENTERPRISE EUROPE NETWORK

# ourotool 2011



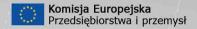


Wsparcie dla biznesu w zasięgu ręki

16-te Targi Obrabiarek, Narzędzi i Urządzeń do Obróbki Materiałów EUROTOOL 2011



















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Opracowanie i wydruk katalogu powstały w ramach projektu Enterprise Europe Network.

Komisja Europejska nie odpowiada za jakiekolwiek wykorzystanie informacji zawartych w dokumencie. Poglądy wyrażone w publikacji nie odzwierciedlają oficjalnego stanowiska Komisji Europejskiej. Usługi świadczone przez Enterprise Europe Network finansowane są ze środków Komisji Europejskiej.

Szanowni Państwo,

Centrum Transferu Technologii Politechnika Krakowska ma przyjemność zaprezentować Państwu katalog zawierający profile firm uczestniczących w Spotkaniach Brokerskich Eurotool 2011 oraz oferty i zapotrzebowania technologiczne zgłoszone przez zagraniczne ośrodki sieci Enterprise Europe Network.

Celem publikacji jest pomoc w poszukiwaniu partnerów do realizacji wspólnych przedsięwzięć o charakterze biznesowym, technologicznym i naukowo-badawczym oraz promocja działań polskich firm, które zgłosiły swój udział w spotkaniach brokerskich odbywających się podczas 16-tych Targów Obrabiarek, Narzędzi i Urządzeń do Obróbki Materiałów w Krakowie. Załączone oferty i zapytania technologiczne mogą być zarówno ofertą komercyjną dla firm, jak również stanowić inspirację dla ośrodków naukowo-badawczych specjalizujących się w tematyce dotyczącej branży obróbka skrawaniem.

Katalog powstał w ramach projektu Enterprise Europe Network, którego celem jest bezpłatna pomoc i kompleksowe usługi głównie na rzecz małych i średnich przedsiębiorstw. Europejska sieć Enterprise Europe Network to ponad 600 instytucji rozmieszczonych w różnych krajach i regionach, która ma za zadanie pomóc w pełni rozwinąć potencjał i zdolności innowacyjne przedsiębiorstw z sektora MŚP.

Jeśli jesteście Państwo zainteresowani szerszą informacją dotyczącą zamieszczonych w katalogu ofert zapraszamy do kontaktu:



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Eurotool 2011 – stoisko nr. 235

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## Firmy biorące udział w Spotkaniach Brokerskich Eurotool 2011

## 19-21 październik 2011

16-te Targi Obrabiarek, Narzędzi i Urządzeń do Obróbki Materiałów w Krakowie

stoisko nr. 235

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Firma Alpha Technology od ponad 30 lat pomaga swoim klientom realizować najambitniejsze projekty w zakresie przetwórstwa tworzyw sztucznych przetwórstwie i odlewania znalu. Prowadzimy kompleksowa realizacje procesu od konstrukcji formy do produkcji seryjnej

i dekorowania wyprasek.

Dysponujemy zaawansowanym technologicznie parkiem maszynowym obejmującym między innymi 5-osiowe frezarki numeryczne i wtryskarki o napędzie elektrycznym

Ciągle doskonalimy nasze umiejętności i park maszynowy, aby sprostać najtrudniejszym życzeniom klientów.

#### Oferujemy Państwu:

- kompleksowa obsługe procesu produkcji elementów termoplastycznych i znalu.
- konstrukcję i wykonawstwo form wtryskowych i ciśnieniowych,
- frezowanie elektrod miedzianych grafitowych.
- frezowanie elementów stalowych do 60 HRC.
- napawanie laserowe i naprawy form,
- wiercenie płyt do głebokości 1000 mm .
- pomiary z digitalizacia.
- wtrysk wyprasek technicznych o gramaturze 0,5 g 8 kg z tworzyw inżynierskich, montaż, zgrzewanie, dekorowanie wyprasek (hot stamping, tampodruk, sitodruk, malowanie).
- produkcie elementów z stopów cynku i magnezu.
- elementy napedowe i pneumatyczne firmy "Mädler" (wyłączny przedstawiciel w Polsce),
- laserowe wypalanie elementów z blachy o grubości do 25 mm, L=4000
- gięcie blach na prasach krawędziowych CNC.

Posiadamy certyfikat ISO 9001-2008

## Nasza oferta skierowana jest do

- wtryskowi i odlewni poszukujących producenta form o wysokiej dokładności wymiarowej,
- poddostawców przemysłu samochodowego realizujących produkcję technicznych detali z tworzyw termoplastycznych takich jak zbiorniki wodne, powietrza, pokrywy silnika, wentylatory, estetyczne elementy kokpitu w tym podlegające fakturowaniu i inne,
- producentów okien produkujemy okucia okienne,
- poddostawców przemysłu AGD formy na części do lodówek, elektronikę, itp.

Serdecznie zapraszamy do współpracy.

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**Firma Centrum Szkoleń BHP powstała w 2006r.** w odpowiedzi na zwiększające się zapotrzebowanie na obsługę firm w zakresie BHP i przeprowadzanie szkoleń wstępnych i okresowych w tym zakresie.

Początkowo działali na terenie całej Polski pod jedną firmą, jednak aby skupić całą należną uwagę na potrzebach klientów stworzyli dwa oddziały firmy. Od 2008 r. działaja na terenie południowej Polski jako Centrum Szkoleń BHP Michał Motyka. Są prężnie rozwijającą się firmą, która ciągle wzmacnia swoją pozycję na rynku usług BHP. Współpracują zarówno z małymi jak i z dużymi firmami zatrudniającymi od 2-200 pracowników, również zagranicznymi.

Celem firmy jest osiągnięcie maksymalnego zadowolenia klienta ze świadczonych usług. Specjalizują się w przeprowadzaniu szkoleń, doradztwie BHP i P.Poż jak i w znajomości prawa pracy. Zapewniają profesjonalne podejście do spraw i zadań stawianych przed firmą.

Atutami firmy są min. ogromna wyrozumiałość w stosunku do klienta, redukcja zbędnych kosztów dzięki dopasowaniu odpowiednich pakietów do wymagań klienta, możliwość negocjowania cen oraz możliwość zapłaty za wykonywane usługi przelewem nawet do 14 dni.

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Firma CSN-STANEL automatyka sp. z o. o. powstała w maju 2003 r. Obszarem działania firmy CSN-STANEL automatyka sp z o. o. jest projektowanie oraz budowa maszyn i urządzeń przemysłowych (montażowe, kontrolne, laboratoryjne, w tym ręczne, półautomatyczne i automatyczne). W 2010 roku firma wdrożyła wymagania systemu jakości ISO 9001:2008.

Oferujemy kompleksową obsługę klienta - od koncepcji, poprzez projekt, wykonanie, uruchomienie, aż do instalacji i wdrożenia urządzeń do realizacji szeroko postrzeganych procesów produkcyjnych (montaż, kontrola) oraz automatyki i informatyki z tym związanej. Firma nieustannie inwestuje w wyposażenie projektowe, produkcyjne i kontrolne co zapewnia wysoką jakości wytwarzania. Dysponujemy własnym, nowoczesnym parkiem obrabiarek CNC, maszyną do cięcia wodą oraz maszyną pomiarową.

Klientami firmy CSN-STANEL automatyka sp. z o.o. są duże firmy motoryzacyjne wykorzystujące nasze urządzenia na liniach montażu i kontroli różnego rodzaju podzespołów silnika, układów paliwowych, układów chłodzenia, itd.

Reprezentujemy w Polsce firmy SITELMK3 oraz TIFLEX. Oferujemy znakowarki mikroudarowe, rytujące (elektryczne i pneumatyczne), laserowe oraz znakowarki tuszowe, w kilku wersjach. Urządzenia charakteryzuje wysoka jakość wykonania, prostota obsługi oraz możliwość pracy w sieci.

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EKOMET – bezpośredni dystrybutor na Polskę urządzeń do obróbki metali renomowanych marek:

- przecinarki taśmowe PEGAS-GONDA,
- piły taśmowe EBERLE
- -wiertarki stołowe i słupowe ALZMETALL
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- agregaty plazmy CEBORA, HYPERTHERM, KJELLBERG, KALIBURN
- prasy krawędziowe ERMAKSAN
- nożyce gilotynowe ERMAKSAN
- narzędzia do pras i gilotyn ROLLERI
- urządzenia do obróbki plastycznej SAHINLER
- nożyce uniwersalne SAHINLER
- walcarki do blach, zwijarki do rur i profili SAHINLER
- sterowane CNC linie do wiercenia i ciecia IMAC
- hydrauliczne wytłaczarki do otworów i fasolek IMAC
- wykrawarki do naroży i ukosowarki IMAC
- żłobiarki, giętarki, prasy ręczne SEMET
- wiertarki słupowe i stołowe HELTOS
- tokarki konwencjonalne oraz CNC TRENS.

EKOMET – doradztwo techniczne, szkolenia personelu, uruchomienia maszyn, profesjonalny serwis gwarancyjny i pogwarancyjny.





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Działalność w branży budowlanej prowadzimy od 1997 roku. Pierwotnie pod nazwą AMBASADOR firma koncentrowała swoją ofertę w branży meblarskiej.

ynieryjne konstrukcje želbetowe

W 2003 roku podjęto działania związane z dywersyfikacją działalności, których efektem było utworzenie działu budownictwa inżynieryjnego. Następnie w 2006 roku wyodrębniono tą komórkę w postaci nowo powołanej spółki **FORMES Sp. z o.o.** .

Nasza firma specjalizuje się w wykonywaniu konstrukcji żelbetowych projektów inżynieryjnych, tym betonów w "betonów szczelnych" specialistycznych tzw. "architektonicznych". Realizuia stany surowe nastepujacych mosty, tunele. obiektów: estakadv. ściany oporowe. oczyszczalnie ścieków i zbiorniki, obiekty przemysłowe itp.

Usługi są wykonywane zarówno na dostarczonym przez nas sprzęcie, jak również na szalunkach powierzonych przez Klienta.

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Poland Germany Consult WINIARSKI wspiera firmy polskie w drodze na nowe rynki: niemiecki, unijny oraz ukrainski w zakresie eksportu i importu (b2b, b2c).

Nasz serwis wspiera procesy decyzyjne właścicieli i zarządów przedsiębiorstw, działów marketingu, eksportu i zakupów. Pomagamy w testowaniu i pozycjonowaniu nowych rynków zbytu, w wyszukiwaniu odpowiednich (!) partnerów do kooperacji, rzetelnych dostawców i dystrybutorów.

Zakres naszych usług obejmuje propozycje optymalnych lokalizacji działalności na podstawie analiz rynku, zakładanie i prowadzenie reprezentacji i ddziałów wraz z kompletną opieką prawną i podatkową, pomoc w inwestycjach związanych z zakupem i sprzedażą przedsiębiorstw oraz rekrutacji pracowników. W naszej ofercie znajdą Państwo zarówno Info-Broking jak i zarządzanie zasobami.

Dzięki naszemu wielojęzycznemu zespołowi, stałej współpracy z ekspertami i inżynierami z różnych branż oraz doświadczonymi specjalistami w zakresie marketingu miedzynarodowego oraz dzięki lokalizacji ośrodków naszej firmy w Berlinie/Niemcy, Wroclawiu i Poznaniu/Polska oraz Kjiowie/Ukraina jesteśmy w stanie dynamicznie i profesjonalnie przystąpić do realizacji Państwa zleceń, dostarczając skutecznych i sprawdzonych w praktyce rozwiązań. Na życzenie, w każdym z ww. ośrodków jesteśmy w stanie zapewnić własny adres i reprezentacyjne pomieszczenia biurowe, magazynowe wraz z pełnym serwisem biznesowym i biurowo-administracyjnym.

Firma jest już od kilku lat oficjalnym partnerem i wraz z Komisja Europejska i EuroInfoCentre Luksemburg współorganizatorem w róznych krajach międzynarodowych giełd kooperacyjnych, towarzyszących dużym europejskim imprezom targowym.

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www.hydrem.pl

Osoba kontaktowa: Jacek Szafarczyk

HYDREM s.c. powstał w roku 1991. Jest firmą prywatną zajmującą się serwisowaniem podzespołów i elementów hydrauliki siłowej oraz produkcją części zamiennych do urządzeń transportowych i sprzętu technologicznego.

Mając na uwadze stałą poprawę świadczonych usług i wzrost wiarygodności wśród w firmie HYDREM opracowano i wdrożono system zarządzania jakością i system zarządzania środowiskowego oparty o wymagania międzynarodowych norm ISO 9001: 2008 i ISO 14001: 2004.

#### OFERTA:

- Remonty i produkcja elementów hydrauliki siłowej
- Produkcja cześci maszyn przemysłowych i sprzetu technologicznego
- Oprzyrzadowania linii produkcyjnych
- Narzędzia specjalne

#### USŁUGI:

- Spawanie aluminium wraz z obróbką wykańczającą
- Kompleksowy montaż przemysłowy urządzeń hydraulicznych (wraz z projektem)
- Pełny zakres obróbki skrawaniem i obróbki cieplno-chemicznej
- CAD. CAM. toczenie cnc. frezowanie cnc. HSM

Ze względu na specyfikę działalności celem nadrzędnym firmy HYDREM jest dostarczanie swoim klientom wyrobów i usług o najwyższej jakości zapewniając jednocześnie możliwie najmniejszy wpływ na środowisko.

## **PT-H** "Izol – Bit" s.c.

Witold, Janusz Skrzyniarz

ul. Oś. Słoneczne 8/15 31-957 Kraków

Tel.: (+48 12) 413-35-03 w.121 Fax: (+48 12) 413-35-03 w.120

E-mail: omegamosty@wp.pl

Osoba kontaktowa: Inż. Janusz Skrzyniarz Przedsiębiorstwo Techniczno-Handlowe **Izol – Bit s.c.** 

Przedsiębiorstwo Techniczno-Handlowe "IZOL-BIT" S.C. Witold Skrzyniarz, Janusz Skrzyniarz działa na rynku polskim od 15 lat w segmencie robót budowlanych ze specjalizacją na roboty mostowe i hydrotechniczne.

#### Firma zajmuje się:

- naprawą powierzchni betonowych (ubytki głębokie, iniekcje, torkret itp)
- zabezpieczeniem antykorozyjnym powierzchni betonowych (aktyl, szlam)
- wzmacnianiem konstrukcji betonowych (taśmy węglowe)
- wykonaniem zabezpieczeń hydroizolacyjnych
- montażem dylatacji bitumicznych, blokowych i modułowych na obiektach mostowych

#### Przykładowe realizacie:

- autostarda A4 (Doprastav, Dragados, Mota Engil, Budimex)
- autostrada A1 (Alpine Bau)
- płn. obwodnica Jędrzejowa (Budimex)
- oczyszczalnia ścieków Staszów
- elektrownia wodna Dychów

#### LABSTER S.C.

ul. Szablowskiego 6 30-127 Kraków



Tel.: (+48 .) 12 661 79 10 Fax: (+48 .) 12 661 79 12. E-mail: info@labster.com.pl

www.labster.com.pl

Osoba kontaktowa: Piotr Turek

Firma LABSTER istnieje na rynku od 1995 roku.

Wykonujemy prace inżynierskie w dziedzinie automatyki przemysłowej.

Jesteśmy oficjalnym dystrybutorem przetworników firmy Precizika Metrology (dawniej Brown & Sharp – Precizika).

Firma produkuje odczyty cyfrowe do współpracy z przetwornikami drogi i kąta , obrotnice do reklam i fotografii obrotowej oraz specjalizowane sterowniki.

#### Oferujemy:

- przetworniki do pomiaru drogi i kąta, firmy Precizika Metrology SIKO i ATEK
- pomiarowe taśmy magnetyczne i głowiczki odczytowe
- czujniki krawędzi
- czytniki 1, 2 i 3 (4) osiowe
- końcówki pomiarowe do współrzędnościowych maszyn pomiarowych
- sterowniki do prowadzenia krawędzi taśmy
- modernizacje obrabiarek
- serwis drażarek elektroerozyjnych
- nietypowe stanowiska pomiarowe
- napędy obrotowe do reklam
- obrotnice do fotografii obrotowej

#### LOTOS Oil S.A.



Biuro w Krakowie Al. Armii Krajowej 18 30-150 Kraków

Tel.: (+48 12) 622 44 79 Fax: (+48 12) 622 44 75

E-mail: radoslaw.lenart@lotosoil.pl

www.lotos.pl

Osoba kontaktowa: Radosław Lenart

Przedmiotem działalności LOTOS Oil S.A. jest produkcja i dystrybucja środków smarnych: olejów samochodowych, przemysłowych i smarów, olejów bazowych, a także kosmetyków i chemii samochodowej.

LOTOS Oil S.A. oferuje nie tylko najwyższej jakości oleje, ale rozwija także profesjonalny serwis olejów smarowych, stanowiący integralną część oferty sprzedaży. Serwis Olejowy to usługa, która pomaga Klientom wprowadzać nowe procedury i techniki, dzięki czemu gwarantuje bezpieczną eksploatację parku maszynowego.

LOTOS Oil S.A. proponuje także nowoczesną linię produktów do obróbki metali o nazwie Emulsin. Produkty te powstały w wyniku bezpośredniej współpracy z firmami zajmującymi się różnoraką obróbką, spełniają wiec oczekiwania osób najbardziej zainteresowanych w tej materii.

#### METAL-POL s.c.

ul. 3 Maja 58 62-500 Konin

Tel.: (+4863) 242 82 02 Fax: (+4863) 246 93 49 E-mail: metalpol@konin.lm.pl

www.metalpolkonin.pl

Osoba kontaktowa: Andrzej Ogły



Firma **METAL-POL** działa na rynku polskim od ponad 13lat, stale poszerzając zakres swojej działalności poprzez elastyczne dostosowanie się do potrzeb rynkowych i poszerzanie asortymentu towarowego.

Oferujemy swoim klientom coraz to nowocześniejsze rozwiązania, zapewniając przy tym większe bezpieczeństwo podczas wykonywanych prac. Zaopatrujemy firmy oraz indywidualnych odbiorców w profesjonalne narzędzia skrawające, ścierne, pomiarowe oraz różnego rodzaju narzędzia specjalistyczne do obróbki metalu i drewna.

Oprócz konkurencyjnych cen zapewniamy Państwu szybkość w realizacji zamówień, fachowe doradztwo techniczne, dogodne warunki dostaw oraz przyjazne formy i terminy płatności.

Doświadczenie i współpraca z największymi producentami pozwoli nam obsłużyć Państwa kompleksowo i profesjonalnie.

#### Oferta:

- Narzędzia skrawające
- · Narzędzia do obróbki drewna
- Narzędzia pomiarowe
- · Maszyny i materiały spawalnicze
- Narzędzia specjalistyczne
- Osprzęt maszynowy

#### OBMET

ul. Jabłoniowa 5, Książenice 63-520 Grabów nad Prosną

Tel.: (+48 62) 730 53 13 Fax: (+48 62) 730 53 13 E-mail: obmet@op.pl

www.obmet.com.pl

Osoba kontaktowa:

Andrzej Śniadek - tel.: (+48) 601 23 95 24



Firma powstała w 1994r. Zakład zajmuje się obróbką skrawaniem, tłoczeniem na prasach mimośrodowych oraz spawaniem małych konstrukcji. Wyposażany jest głównie w maszyny do obróbki skrawaniem, w tym obrabiarki konwencjonalne jak i CNC. Silną stroną zakładu jest duże doświadczenie, które gwarantuje dobrą jakość produktów. Zakład ciągle się rozwija cały czas inwestując w rozbudowę jak i park maszynowy oraz pracując nad pozyskiwaniem nowych klientów. Atuty zakładu to przede wszystkim dobra jakość i rzetelność. Zapraszamy Państwa do nawiązania kontaktu i ewentualnej współpracy.

The company was founded in 1994. Our workplace deals with machining, pressing on eccentric presses, and welding of small structures. Our company is mainly equipped with machines for machining, including a conventional machine tools and CNC. The strong point of the plant is a great experience, which guarantees good quality products. The company is still developing all the time investing in the expansion as well as machinery and working on acquiring new customers. High quality and reliability are our virtues. We kindly invite you to contact us and consider cooperation.

Zakład jest producentem części do ciągników rolniczych (głównie T-25), hamulców i sprzęgieł elektromagnetycznych, silników elektrycznych, rusztowań, mechanizmów do foteli fortepianów i pianin. Jest to produkcja mało i średnioseryjna.

Our company produces parts for agricultural tractors (mainly T-25), electromagnetic brakes and clutches, electric motors, scaffolding, seating mechanisms for pianos and upright pianos. It is a semi-mass production.

#### PROGED s.c.

ul. Młodej Polski 16 30-131 Kraków PROGED

Tel/fax: (+48 12) 422 87 13 E-mail: biuro@proged.com.pl

www.proged.com.pl

Osoba kontaktowa: Andrzej Truty

Jesteśmy firmą powstałą w 1998 roku i od samego początku działamy w dwóch kierunkach:

- zaopatrujemy przemysł i warsztaty samochodowe w profesjonalne narzędzia
  - i urządzenia specjalistyczne;
- projektujemy, sprzedajemy i montujemy urządzenia oczyszczające powietrze - odciągi spalin, pyłów, dymów itp. - oraz ogólnej poprawy ergonomii na stanowiskach pracy.

Wieloletnie doświadczenie pozwoliło nam wybrać najlepszych światowych producentów narzędzi i urządzeń zarówno pod względem wysokiej jakości produktów jak i korzystnej ceny.

Oferowane przez nas urządzenia filtrowentylacyjne dostosowane są do rozwiązywania wszelkiego rodzaju problemów związanych z usuwaniem zanieczyszczeń powstających na stanowisku pracy.

#### **RADFORM**

ul. Różana 8 62-800 Kalisz

Tel.: kom. (+48) 509 540 612 Fax: (+48 62) 598 18 86 E-mail: biuro@radform.pl

www.radform.pl

Osoba kontaktowa:

Radoslaw Nowak - tel.: (+48) 509-540-612



Jesteśmy firmą narzędziową, która specjalizuje się w obróbce skrawaniem metali i tworzyw oraz produkcji różnorodnych narzędzi przemysłowych.

Produkujemy noże i ostrza przemysłowe do cięcia i perforacji oraz świadczymy usługi w zakresie ostrzenia różnorodnych płaszczyzn tnących.

Nasza oferta kierowana jest głównie do firm z branży:

- drzewnej,
  - cukierniczej.
- miesnei,
- gastronomicznej,
- metalowei.
- przetwórstwo rybnego.
- recyklingowej,
- tworzyw sztucznych,
- przetwórstwa gumowego.

Pod indywidualne zamówienie jesteśmy w stanie wykonać każdy rodzaj ostrza. Oferujemy polskie wyroby dobrej jakości w atrakcyjnej cenie. Nasze produkty wytwarzane są z niezawodną precyzją i dokładnością. Spełniają najwyższe normy i standardy światowe.

RADFORM - tool industry company specializing in the manufacture of various industrial tools.

The company manufactures knives and knives for many different industries (food, wood and plastic), and different machines.

The company specializes in the production of: blades for crushers, extruders knives, kebab knives, kebab cutting blades, knives, mills, presses press knives, circular knives, knives for welders, machine parts and other special tools to meet customer needs.

## SMARTTECH Sp. z o.o.

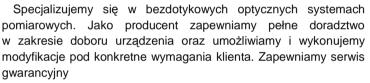
Skaner3D

UI. Racławicka 30 05-092 Łomianki

Tel.: (+48 22) 751 19 16 Fax: (+48 22) 751 52 05 E-mail: biuro@smarttech.pl

www.skaner3d.pl

Osoba kontaktowa: Anna Gębarska



**SMARTT** 

i pogwarancyjny oraz szkolenia na terenie całego kraju w zakresie:

- obsługi skanerów 3D
- obsługi oprogramowania Mesh 3D
- obsługi oprogramowania Geomagic

Realizujemy usługi skanowania 3D i modelowania 3D od 2000 roku. Posiadamy największe doświadzcenie na polskim rynku w dziedzinie pomiarów 3D. Współpracujemy z narzędziowniami, producentami kompozytów, dysponujemy także drukarką 3D.

Nasza doświadczona kadra w specjalistycznym laboratorium pomiarowym służy profesjonalnym doradztwem odnośnie wyboru techniki pomiaru 3D (skanowanie laserowe lub światła białego, a od października 2011 także innowacyjny system skanowania światłem niebieskim, przy pomocy nowego urządzenia **Scan3D BLUE**). Dysponujemy także ramieniem pomiarowym stykowym w celach weryfikacji.

# Start People Sp. z o.o. Oddział Start People Professionals w Krakowie



Plac Wolnica 13/21 31 - 060 Kraków

Tel.: (+48 12) 429 37 09 Fax: (+48 12) 428 51 46

E-mail: kmisztal@startpeople.pl

www.startpeople.pl

Osoba kontaktowa: Katarzyna Misztal

Start People to jedna z czołowych Agencji Pracy na polskim rynku. Oferujemy kompleksowe rozwiązania z obszaru Human Resources w zakresie, rekrutacji i selekcji, doradztwa personalnego oraz pracy tymczasowej.

Start People jest częścią międzynarodowej grupy USG People N.V., należącej do pierwszej czwórki największych i najbardziej renomowanych firm w branży. Akcje USG People są notowane na giełdzie Euronext w Amsterdamie, a obszar działania obejmuje kilkanaście europejskich krajów.

W Polsce działamy od 1997 roku. Obecnie posiadamy kilkadziesiąt oddziałów na terenie całego kraju.

## Stowarzyszenie Inżynierów i Techników Mechaników Polskich

Oddział w Krakowie ul. Mogilska 20/5 31-516 Kraków

Tel.: (+48 12) 422 32 84 Tel kom.: (+48) 500 254 109 Fax: (+48 12) 422 32 84

E-mail: simpkrakow@poczta.onet.pl

www.krakow.simp.pl

Osoba kontaktowa: Jan Zagórski – Prezes Zarzadu



Stowarzyszenie Inżynierów i Techników Mechaników Polskich, jest organizacją pozarządową, działającą na rzecz użyteczności społecznej i pożytku publicznego, o celach niezarobkowych, zrzeszającą inżynierów i techników mechaników wszystkich specjalności oraz zawodów pokrewnych.

Stowarzyszenie SIMP oddział w Krakowie we współpracy z Urzędem Miasta Krakowa prowadzi działalność wspomagająca rozwój gospodarczy, w tym rozwój przedsiębiorczości opierającą się na promocji innowacyjności obejmującej działania zmierzające do upowszechnienia samej idei innowacyjności i przybliżenia jej zagadnień podmiotom gospodarczym.

W ramach Stowarzyszczenia SIMP swoją działalność prowadzą:

- Ośrodek Rzeczoznawstwa i Postępu Technicznego SIMP ZORPOT współpracujący na stałe ze specjalistami i biegłymi z wielu dziedzin np. eksploatacji i budowy maszyn, transportu, elektroenergetyki, elektroniki, budownictwa, bankowości, prawa, ekonomii i zarządzania biznesem.
- Ośrodek Doskonalenia Kadr SIMP ZODOK prowadzący doskonalenie kadr inżynieryjno-technicznych od 1971 roku w zakresie podnoszenia kwalifikacji kadr inżynieryjnotechnicznych i innych pracowników oraz popularyzacji zagadnień technicznych.

Krakowski Odział SIMP posiada Certyfikat Zarządzania Jakością wg. norm ISO 9001:2009

Stowarzyszenie Inżynierów i Techników Mechaników Polskich jest członkiem Federacji Stowarzyszeń Naukowo Technicznych Naczelnej Organizacji Technicznej FSN NOT.

## WSK Kraków Sp. z o.o.

ul. Wrocławska 53 30-011 Kraków

Tel.: (+48 12) 633 14 00 Fax: (+48 12) 633 14 00

E-mail: sekretariat@wsk.com.pl

www.wsk.com.pl

Osoba kontaktowa: Rafał Doniec - Dyrektor Handlu i Rozwoju

Prowadzimy działalność na rynku polskim i rynkach zagranicznych od 60 lat w branży lotniczej, motoryzacyjnej, maszynowej, chłodzenia i ogrzewania. Produkujemy:

Układy chłodzenia do śmigłowców (wentylatory i chłodnice oleju silnika i przekładni głównej)

KRAKÓW SP. 7 O.O.

- Podzespoły i części do silników lotniczych (korpusy silnika i reduktora, układy zapłonowe, układy zasilania i chłodzenia)
- Układy chłodzenia silników spalinowych (chłodnice wody, oleju i powietrza do samochodów, maszyn budowlanych, lokomotyw i generatorów, zespoły chłodnic do maszyn budowlanych i kopalnianych, pompy wody obiegowei do układów chłodzenia pojazdów.)
- Pomy ciepła do instalacji ogrzewania i klimatyzacji budynków, kompletne instalacje ogrzewania i klimatyzacji z wykorzystaniem pomp ciepła.
- Zespoły chłodzenia gazu ziemnego do stacji tankowania pojazdów
- Próbników wtryskiwaczy silników wysokoprężnych

Ponadto oferujemy: obróbkę mechaniczną części, procesy spawania, lutowania, tłoczenia oraz usługi badawczo – projektowe w reprezentowanych branżach

Działamy w oparciu o system jakości spełniający wymagania norm ISO 9001, AQAP 2110 oraz dyrektyw ATEX, PED.

Poszukujemy dostawców materiałów (stal, stopy aluminium, magnezu i miedzi), części i podzespołów oraz kooperantów w zakresie rozwoju, badan i produkcji, zarówno w Polsce jak i za granicą.

# Zakład Oprzyrządowania Technologicznego "Narzędziownia WSK" Sp. z o. o.

ul. Częstochowska 140 62-800 Kalisz

Tel.: (+48 62) 768 54 00 Fax: (+48 62) 504 64 86 E-mail: zot@zot.pl



la.toz.www

Osoba kontaktowa:

Roman Jezierski - tel: (+48 62) 768 54 15

Zakład Oprzyrządowania Technologicznego "Narzędziownia WSK" Sp. z o.o., w skrócie ZOT "Narzędziownia WSK" Sp. z o.o. powstał 01-03-2000 r. na bazie wydziału narzędziowni WSK "PZL - Kalisz" S.A. Firma przejeła środki produkcji, pracowników oraz 50 - letnią tradycje i doświadczenie nabyte przy produkcji oprzyrządowania dla przemysłu lotniczego.

ZAKŁAD OPRZYRZĄDOWANIA TECHNOLOGICZNEGO SP.Z O.O., abbreviated to ZOT "Narzędziownia WSK" Sp. z o.o. came into existence in the 01-03-2000 r. on the basis of the Tool-house section WSK "PZL - Kalisz" S.A.

#### MOŻLIWOŚCI FIRMY

ZOT "Narzędziownia WSK sp. z o. o. dysponuje następującymi technologiami:

- ogólna obróbka skrawaniem na obrabiarkach CNC
- technologia obróbki cieplnej i cieplno-chemicznej stali konstrukcyjnej
- technologia obróbki cieplnej stali narzędziowej (maksymalna długość hartownych narzedzi 1000 mm)
- technologia elektrodrążenia wgłębnego i drutowego (drążarki FANUC)
- technologia szlifowania koordynacyjnego (szlifierka HAUSER).
- specjalne technologie szlifierskie / wykonywanie narzędzi kształtowych zataczanych, krzywek, gwintowników przeciągaczy, itp.

Posiadamy własne biuro konstrukcyjne. Wykonujemy projekty i rysunki wykonawcze: wykrojników, tłoczników, przeciągaczy, gwintowników, narzędzi specjalnych, narzędzi do kół zębatych, przyrządów tokarskich, frezarskich, wiertarskich, wytaczarskich, ślusarskich, hartowniczych.

#### Capabilities of Company

ZOT"Narzędziownia WSK" Sp. z o.o. offers the following technologies:

- general machining on CNC
- technology of heat treatment and thermo-chemical treatment of structural steel
- heat treatment technology of tool steel and powder steel (maximum length of hardened tools 1000 mm)
- technology of wire and dimpled electric hollowing (spark machines FANUC)
- coordinated grinding technology (Hauser grinder).
- special grinding technology / manufacturing of shape backed off tools, cams, screwtaps, pull broaches, etc.

# Oferty technologiczne zgłoszone przez zagraniczne ośrodki EEN

Unikalne know-how dotyczące spawania, frezowania, obróbki metalu, konstrukcji stalowych i maszynowych.

Unique know-how in welding, machining, sheet metal processing, steel and machine construction.

(Ref: 11 SE 67CG 3MNP)

An SME from Northern Sweden specialized in the fields of cutting methods, welding, machining, sheet metal processing, steel and machine construction, provides manufacturing and overall solutions for products within these technology areas. This SME has unique know-how in welding and machining. It is offering its know-how/technology as product development company, engineering company, subcontractor with a market in industrial segments like steel, mining, energy or transport.

#### Description:

An SME from Northern Sweden specialized in the fields of cutting methods, welding, machining, sheet metal processing, steel and machine construction, provides manufacturing and overall solutions for products within these technology areas. The Swedish SME has unique know-how in welding and machining which is applied in construction and manufacturing of overall solutions. The Swedish SME is looking for partners as Product development company, Engineering Company, Company using subcontractors with a market in Industrial segments like steel, mining, energy or transport industry. The SME is focused on providing manufacturing of smaller series of products. The SME is certified for ISO 9001 and ISO 14001 as well as the Nordic Utility Prequalification System. The SME has an impressive list of references from mining, transport and industry sector.

#### Innovations and advantages of the offer

The Swedish SME has unique know how in welding and machining which is applied in construction and manufacturing of overall solutions. The SME is certified for ISO 9001 and ISO 14001 as well as the Nordic Utility Prequalification System and has an impressive list of reference assignments. The SME provides manufacturing of smaller series.

Current and Potential Domain of Application

#### Oprogramowanie optymalizujące rozwiązania pakownicze.

Optimization software for packing solutions.

(Ref: 11 FR 38m7 3MMO)

A French company provides optimization solutions in logistics dedicated to packing for sectors such as manufacturing, distribution and transportation. It adapts this module to differents solutions that solves issues such as: single and multi reference-pallet loading, optimal loading plans for trucks and containers.

This SME is looking for partners for licensing agreements.

#### Description:

A French company provides optimization solutions in logistics dedicated to packing.

The solution developed is organized into a set of business packing components (modules) featuring capabilities that cover the complete process of packing including different functionalities:creating and editing scenarios, solving optimisation packing problems, visualisation of packing results, production ofreporting. The solution is enriched with several API (XML, SOA) easing the interface with ERP and WMS packages on the market.

The solution is the optimisation component which serves as a basis for the different variants of optimisation engines developed in the work package:

- Version pallet loading single reference: design of optimal plans for loading products into cartons, boxes or pallets. The optimised plan is a single reference-pallet, all items are identical, side up restriction, on a rectangular pallet (a carton in pallet may have up to six possible orientations), rotation restrictions (some 90° rotations are not allowed), separator thickness (top, middle and bottom layer pads), height overlay constraint. The form of items are either boxes or cylinders.
- Version multiple references standard: This module is powered by a 3D solver which consists of packing boxes of various sizes into available pallets (large boxes) in a way which optimises the total number of pallets. This requirement is the core of many problems which arise in distributions and logistics. A typical application is the preparation of orders in warehouses where one has to cope with many directives and constraints. The objective is always to minimise the total number of pallets: planning of several orders, capabilities to handle several types of pallets subject to orientation, fragility, stackability, weight/volume and constraints.
- Solution for Truck / Container : This module proposes an optimal loading plan for each vehicle of the fleet company. The solver is tuned to handle specific requirements encountered in the optimisation of vehicle loading plans. Vehicle constraints: maximum weight and volume constraint, block constraint: pallets are grouped into blocks for different deliveries, priority: order of handling deliveries or grouping orders, delivery orders: this constraint determines the order in which clients are visited, pallets: fragility, non stackability constraints, parameterization of allowed orientations.

This SME is looking for partners for licensing agreements.

#### Innovations and advantages of the offer

- Packing solvers: reduction of the cost by 5 to 20%; fewer pallets needed, fewer vehicles / containers. This is a significant achievement coming from three sources: more compact packing, and less time spend by packing experts and less waste from damaged items returned by the customers.
- The packing designer of parts (new products in cartons, cartons in pallets) will reduce the manpower from several days to hours and will shorten the design phase by a large factor. All modules are standalone applications provided with interfaces (Excel and flat files, XML files, Web Services) easing their integration in ERP/WMS solutions.

#### Nowoczesne technologie do tworzenia cześci składowych urzadzeń.

Modern technologies in construction component parts of machinery.

(Ref: 11 PL 63AY 3MNB)

A Polish company from the automotive industry offers modern methods of design and manufacturing of components and machinery parts processing lines for the automotive industry. Design and manufacturing technologies offered by the company provide high accuracy and quality.

Technologies offered by the company are available for demonstration / use. The company is seeking technical cooperation or commercial agreement with technical advice.

#### Description:

A Polish company from the automotive industry offers modern methods of design and manufacturing of components and machinery parts processing lines for the automotive industry. Design and manufacturing technologies offered by the company provide high accuracy and quality. The company wants to expand its product range with a stainless steel. Technology offered by the company provides high accuracy and quality, collaboration with CAD / CAM software and other systems that control the machining process. Technology provides high accuracy in precision machining, smooth edges and surfaces.

The company is seeking technical cooperation or commercial agreement with technical advice.

#### Innovations and advantages of the offer

Technology offered by the company provides:

- high precision (accuracy ± 0.005 mm),
- able to exercise micro-holes,
- very small forces, causing no deformation of the machined parts,
- implement to the existing systems (CAD/CAM).

#### Hydrauliczna prasa krawędziowa HOL.

Hydraulic press brake HOL.

(Ref: 11 SK 69CV 3MMA)

Slovak engineering SME developed hydraulic press brake designed for economical production of bent parts in pieces, series and in mass production with multiple bending. It's innovative product with modern design, optimal size and improved technical features. Press brakes are made with electronic or computer control. Easy use and good price guarantee quick return of investment. Company is looking for partner for integration of device into manufacturing process and/or new applications.

#### Description:

Developed hydraulic press brake is designed for bending of sheet metal with thickness 0.4 to 6.0 mm or stripes. It is possible to equip the machine with additional slats or with devices for bending of several parts at once or for the purpose of forming, piercing and cut —piercing of plate. Ideal for start-ups companies or SMEs from engineering branch which are bending simple and/or smaller products. Press brakes are made with electronic or computer control. Equipment meets safety category 4 according to Slovak technical norms.

With new press brake is possible to bent parts in pieces, series and in mass production with multiple bending more economical due to optimal size and improved technical features of the machine. The single – part production is used for plate/sheet bending parameter debugging and for atypical requirements for the bending technology. The serial production mode is used at implemented repeated production of bent plate with one set of bend parameters being set up., like lower and upper position of the ram and the plate rear stop. The mode of serial production with multiple bending is applied for implemented repeated production of bend plates, however with various sets of bend parameter.

The company has its own development department with high graduated staff and long-term experiences in research and development of engineering machines.

#### Innovations and advantages of the offer

Base of the machine is 3 to 4 points adjustment:

- set of top position of the ram
- set of the bottom position of the ram
- set of rear stop
- calibration of the various functions

- set of serial mode or pieces production
- memory for 100 products
- possibility to bounce back fence in the process of bending

Optimal size and improved technical features of the machine (in comparison with older type) guarantee economical production of bent parts. It is possible to equip the machine with additional slats or with devices for bending of several parts at once or for the purpose of forming, piercing and cut –piercing of plate.

Press brakes are made with electronic or computer control. The control unit provides adjustment of necessary data and settings of back fence according to set parameters. In the programming machine it is possible to choose between single and multiple bending.

Simple operation, easy maintenance, effectiveness of bending at a low price. Stable construction of high-quality solid steel.

## Ekspertyza oraz know-how dotyczące produkcji nieinwazyjnych urządzeń medycznych.

Expertise and know-know on the production of non-invasive medical equipments. (Ref: 11 FR 38n0 3M9N )

A French company has developed expertise and know-how in the conception of non-invasive medical equipements such as endoscopes and biopsy devices.

They are specialised in full-development of easy-to-handle heavy machines and devices, and have particular expertise in the field of microelectronics, elastomers' thermoforming, and design.

They also develop electronic banking facilities, such as E-Money. The company is looking for technical cooperation, manufacturing and commercial agreements.

#### Description:

The development and manufacture of non-invasive medical equipment such as endoscopes and biopsy devices require a special expertise since multiple competences are needed: engineering, microelectronics, mechatronics, elastomers thermoforming, optics...

The French company is able to gather all these competences and business sectors in a single plant, offering engineering and development services for complex non-invasive medicine equipments.

The company offers full development from prototype to serial production.

Thanks to a long-term cooperation with a blue-chip international company from the healthcare sector, the French company can optimize the size/properties/services offered by a machine and realize cost-savings.

#### Innovations and advantages of the offer

The French company offers a range of manufacturing equipments and services:

- A machining sector made up of 6 digitally controlled centres (Vertical and horizontal) with capacities of up to 1000 x 500 x 480.
- A turning machine equipped with 6 "CN" lathes and independent machining and sheet-metal workshops for prototypes.
- An assembly, test and trial department, as well as an electronic laboratory equipped for assessment tests and adjustments

#### Others advantages of the offer:

- Interdiciplinary team with more than 15 years experience in medical technologies, precision engineering and mechatronics
- Smaller, more exact and easy-to-handle devices thanks to a cooperation with an experienced design partner
- Commitment to strictly applying the quality tools given by the partner to comply with audits

## Zmodernizowany i ulepszony model systemu dźwigni zmiany biegów dla motorów wyścigowych.

Modernized and improved model of the gear shifting system for the racing motorbikes. (Ref: 11 PL 63BB 3LBL)

A company from Western Poland offers modern gear shifting system for racing motorbikes. Weight of the system is much lighter than the products of competition which is a great advantage. The product is of better functionality, stability and durability (when compared to competitive products). The company is looking for various types of co-operation – joint further development of the technology, manufacturing agreement or Commercial agreement with Technical Support are possible.

#### Description:

A company from Western Poland offers modern gear shifting system for racing motorbikes. Thanks to the application of the company's project, the gear shifting system (company's final product) is much lighter than other systems available on the market (about 30-40%). The system enables faster gear shifting and is simply more convenient for the users (motorbike riders). Moreover, lighter system as well as faster gear shifting means faster acceleration which is of great importance for motorbikes during race and for the race riders themselves. The company's solution (gear shifting system) was successfully used by the World Champion in 24-hour Motorbike Racing Tour in 2009, Team Yamaha Austria.

The company is looking for various types of co-operation – joint further development of the technology, manufacturing agreement (Transfer of knowledge in new raw materials and New way to use an existing production line) or Commercial agreement with Technical Support.

#### Innovations and advantages of the offer

Main advantages over competitive products are:

- Weight about 1 kg (the average weight of competitive systems is 1,6-1,8 kg ) which is about 40% less than competition
- Application of highly resistant aluminum, AL7075 type
- Product with better functionality, stability and durability (when compared to competitive products)
- Longer lifespan of the product (when compared to competition)
- Possible continuation of ride after collision with other motorbike

#### Urzadzenia do zgrzewania metalu montowane na prasach.

Metal forging devices to be mounted on presses.

(Ref: 11 PL 63AV 3MJJ)

Polish research institute developed unique device which allows one to make big forging operations with small compact-design mashines. The divice is self-clamping and can be mounted on standard presses. The institute is open for technical cooperation and commercial agreements with technical assistance as well as creating join venture and raising financial resources.



#### Description:

The self-clamping devices type TR (forging method and devices elaborated by Tadeusz Rut) with their compact design create vast possibilities of manufacturing products, mostly ones of bar type materials, by the methods of metal forming. The forging devices of the new family are characterized by:

- compact design enabling the devices to be mounted on presses with small clearance between the ram and the table,
- small mass,
- · many impressions,

• possibility of using simple easily exchangeable tool inserts.

The devices can be mounted on eccentric and crank presses with capacities of 630-2500 kN. In combination with the presses they can replace expensive specialist forging machines. Three basic types of the forging devices are distinguished:

- TRL devices are universal ones for making shoulders at any place of a bar.
- TRE devices are ones for upsetting only an end of a bar,
- TRD devices are ones for simultaneous upsetting of both bar ends with the bar length limited by the dimensions of the tool plate.

#### Innovations and advantages of the offer

The new technology and devices reduce the product manufacturing costs and ensure high product quality. Advantages of the TR forging devices:

- compact design, adapted to small press clearances,
- the ratio of the horizontal force generated by the device to the press force depending on the device working angle,
- possibility of forming larger forgings on smaller presses,
- simple design of tools, relatively low tool cost and easy exchange,
- high forging execution accuracy,
- simple operation,
- simple service.

### Innowacyjna wyoblarka z obrotowym uchwytem oraz CNC.

Innovative spinning machine with rotating tool holder and CNC. (Ref: 11 PL 63AV 3MHC )

Polish metal forming institute designed a rotary forming mashine. The machine is used for manufacturing, for instance, complicated elements of ventilating and air conditioning systems of steel and aluminium alloys. The machine allows the reduction of production labour demand, material consumption and manufacturing costs. The mashine and its inventions won many prestigious awards. The institute is open for technical cooperation and commercial agreements with technical assistance.



#### Description:

The spinning machine is intended for rotary forming of axisymmetrical parts out of sheet metal disks with maximum diameter 940 mm by the method of spinning. The machine is used for manufacturing, for instance, complicated elements of ventilating and air conditioning systems of steel and aluminium alloys. The technological process performed on the machine consists in rotary forming of material fixed on the templet by means of a spinning roll. In the spinning process, the shape of the product corresponds to that of the templet. The machine is intended for forming elements out of sheet metal disks with maximum diameter of 940 mm.

The invention applied in the machine, entitled "Method of drawing of shaped metal sheet element and a unit for drawing shaped elements of metal sheet", has been granted a Gold Medal of an international innovation show.

The spinning machine, together with the technology, have been granted a Gold Medal of international fair in the category of "Transfer of scientific investigation results to the economic practice "during the fair.

This machine was awarded with the most prestigious polish promotion emblem.

#### Innovations and advantages of the offer

The machine allows for production of high quality axisymmetrical parts with high productivity depending on the kind of product.

The advantages of the products:

- good dimensional accuracy,
- high surface quality.

The machine allows for the reduction of:

- · production labour demand,
- material consumption,
- manufacturing costs.

The machine meets the highest safety requirements.

#### Piła łańcuchowa do operacji przycinania.

### Chainsaw modification for pruning operations.

(Ref: 11 IE 51S6 3MFX)

An Irish forester has designed a chainsaw modification/attachment that greatly improves the accuracy and speed with which pruning operations can be carried out during forest management. The modification includes a safety feature which allows the operator to use the chainsaw above shoulder level. This feature prevents kickback of the chainsaw. The development has been patent protected and the developer is seeking a license agreement with a company who manufacture chainsaw equipment or components.

#### Description:

An important element of forest management involves the thinning out of stems (trees) and pruning of the clear fell crop. Inspection paths need to be cut out in order for the timber to be valued and assessed properly.

These operations essentially involve the removal of the lower branches of the trees. With these operations it is key to remove the unwanted branches while protecting the stem or bark of the tree. At the base of each branch that grows from the stem is a collar, within the collar are the healing properties of the tree. When the branch is removed and the collar is not damaged the stem can repair itself as quickly as possible thus protecting itself from harmful fungus and disease. If the collar is removed the tree will take a long time to repair and will also be exposed to fungus and disease such as canker and growth will affected.

In everyday forestry situations, chainsaws are used extensively to carry out these operations and due to practical handling and access issues often even very experienced operators may cut too close to the trunk on occasions.

The chainsaw modification offered here ensures that the branch is cut at the optimum location every time. (i.e just outside the collar) This allows for speed, accuracy and ultimately healthier more valuable commercial timber and increased yield.

The developer is seeking an industrial partner to manufacture and market the device under a license or suitable partnership agreement.

#### Innovations and advantages of the offer

- The developer believes there is no device like his attachment / modification, currently on the market.
- Currently these branch cutting operations rely on the skill of the operator to avoid damage to the tree. The development on offer would allow both professional foresters and less experienced chainsaw operators to consistently remove branches at the optimum position.
- This modification can also be adapted to extendable pole-saws, allowing the user to prune the higher branches in the correct position above the reach of a chainsaw.

The main advantages of this development are viewed as:

- Ease of use, once fitted to the chainsaw this allows for repeated accurate operation each time.
- Reduced damage to the timber due to poor branch removal techniques (reduced

scarring and improved healing)

- Improvement in timber yield
- Time savings
- Cost savings
- Improved timber quality
- Enhanced safety to operator
- Suitable to wide customer base including forest contractors, forest owners, gardeners, tree surgeons and generally those involved in the maintenance of conifers and broad-leaf trees.

## Oszczędność kosztów i czasu przy pomocy specjalnej metody recyklingu emulsji i smarów.

Saving costs and time by special recycling method of drilling emulsions and lubricants. (Ref: 11 DE  $094l\ 3LR3$ )

A German SME has developed a technology for on-site recycling of drilling emulsions and lubricants from metal processing. The separation of lubricants, emulsions, chips and metal sludge, respectively, is achieved by using a mobile, low-weight separator equipped with skimmers and pumps. Circulation rates of typically between 20 and 200 dm³ per hour are achieved.

The company seeks for licenses and commercial agreements.

#### Description:

The company: An East German company was founded in 1945 and transferred to private ownership again in after the political change in 1990; the company has been specialising in the field of environmental technology since the mid-nineties. The company has its own design department, and is certified according to the DIN EN ISO 9001 standard. The firm is partner from project planning, design and manufacturing to final assembly.



The technology, offered: Metal processing needs lubrication. Drilling emulsions and lubricants are continuously fed through appropriate tubing to the tool, and recirculated

internally for a certain period. During this recirculation process, oil and metal sludge accumulate in the liquids, making them no longer suitable for lubrication, thus giving rise to serious damage of the tools. The liquids have to be replaced from the circulation and pipes, and metal sludge has to be removed from the internal tank. According to the newly developed technology

skimmers are used to take off the most polluted fraction of the liquids, i.e. the scum from the surface containing most of the organic pollutants as well as fine metal particles. This fraction is circulated through a mobile, low-weight external device that allows for the separation, by several physical principles, of both metal and organic waste from the liquids prior to recirculation. The

lifetime of the emulsions and lubricants increases by at least 50%, thus saving time for complete removal of the used liquids from the internal tank and saving costs for the expensive emulsions and lubricants. Furthermore, owing to the density differences between waste oil, drilling emulsions, and metal chips and sludge, respectively, the metal waste is almost free of organic contaminants. This again will save costs for disposal and facilitates the fulfilment of legal

requirements for environment, health, and safety.

#### Innovations and advantages of the offer

The additional circulation of the most contaminated portion of the lubricants and drilling emulsions through a low-weight, mobile separator is a surprisingly efficient means for extension of the maintenance interval of the built-in lubrication of a machine tool.

- Saves time for liquid replacement from the internal tank, i.e., stand-by time

of the machine tool, by extension of the liquids' lifetime.

- Saves costs for purchasing both lubricants and drilling emulsions (approximately 2.50 € per dm³) as well as for waste disposal.
- De-centralised separation of liquids to be re-circulated from pollutants.

Innowacyjne urządzenie do wykrawania materiałów takich jak aluminum, pvc, drewno, itp.

Innovative trimming tool for aluminium, pvc, wood etc.

(Ref: 11 DK 20B3 3MBS)

Danish developing and manufacturing company has developed a tool for trimming and shaving aluminium, sandwich materials, brass, plexiglass, fiberglass, rubber, PVC and other plastics, styrofoam and copper.

The tool is perfect for preparation of aluminium for welding and for removing welding joints. Won't heat up the material being worked on. The company is looking for commercial agreements and is open to further development according to special needs.

#### Description:

Danish developing and manufacturing company has developed a tool for trimming and shaving aluminium, sandwich materials, brass, plexiglass, fiberglass, rubber, PVC and other plastics, styrofoam and copper.



The technology combines the knowledge of tools used for cutting, the company's experience from developing cutting tools for bricks etc. and the accessibility of traditional grinding. It is basically a simple technology though much development has been put into it.

The tool can be used with a simple hand-held grinding machine and is perfect for preparation of aluminium for welding, shaping and removing material. Grinding of aluminium normally results in self ignitable dust problem, this is not an issue since the material is cut - leaving small chips.

The technology is very good for trimming of heat sensitive materials, by cutting the material not grinding, and thereby avoiding friction heat.

Furthermore the tool has found much attraction within the defence industry for cutting in sandwich materials.

#### Innovations and advantages of the offer

No heat affection of material. No dust problems. Good for Health, safety and environment.

Przecinarka taśmowa do indywidualnych potrzeb.

Bandsaw engineering for specific needs.

(Ref: 11 TR 99PB 3MAR)

A Turkish SME specialized in saw machines develops machines for specific needs enabling replacement and maintenance services for lifetime. The innovation of the company is that they have stock for replacements and can provide replacements and maintenance for all the machines they ever produced, which is not the case in other companies. The company looks for commercial agreement with technical assistance for tailor-made metal cutting machinery.

#### Description:

A bandsaw is a power tool which uses a blade consisting of a continuous band of metal with teeth along one edge to cut various workpieces. Bandsaws are used for woodworking, metalworking, or for cutting a variety of other materials, and are particularly useful for cutting irregular or curved shapes, but can also be used to produce straight cuts. The radius of a

curve that can be cut on a particular saw is determined by the width of the band and its lateral flexibility.

The Turkish company has been involved in metal cutting business since 1976 and has introduced many products as a result of their own research and design in the market. The company is still researching for new designs and products for the market.

The company is offering their expertise and know-how and looking for partnerships for tailor-made products. The company can provide special designed, special application sawing solutions for metal cutting with its own know-how and designs. The company Also ready to manufacture the designs for other manufacturers with their brand name or can produce machining and fabricating parts as OEM.

#### Innovations and advantages of the offer

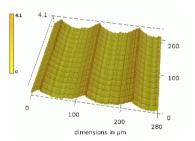
The innovation of the company is that they have stock for replacements and can provide replacements and maintenance for all the machines they ever produced, which is not the case in other companies. Another advantage of the company is that they can manufacture products according to the needs of their costumer, which means an interaction between the company and the costumer and know-how transfer, since the client has to introduce their technical needs and the manufacturer shall understand the needs correctly to produce the needed machinery. Additionally low cost productions, to be close to European Market with distance and time zone and 35 years experience of manufacturing are other advantages.

Energooszczędne cięcie precyzyjne do wysokiej jakości powierzchni trudnoobrabialnych materiałów.

Energy-efficient precision cutting for high-quality surfaces in difficult to machine materials.

(Ref: 11 DE 094I 3LXQ)

A German research group has developed and optimised cutting processes for final machining. One key aspect is the advancement of surface integrity in cutting of difficult to machine materials like metal matrix composites (MMC). Furthermore, energy and resource efficiency of process chains of the metal-working industry can be improved. Contacts are sought with industry for further development as well as application of the new technologies in the partner's sought currently used processes.



#### **Description:**

The global increase of the demand for energy and the concurrent decrease of fossil fuels along with raising emissions require a significant enhancement of the energy efficiency. This can be realised by an implementation of energy efficient products, for example reliable light weight constructions. These products often consist of difficult to machine materials like composites. Cutting processes have been developed in order to generate high-quality surfaces in machining of these heterogeneous materials. Another approach aims at a considerable reduction of the energy demand in cutting processes. The focus of this offer is on the tool and process design for generating energy efficient cutting processes.

#### Innovations and advantages of the offer

- design and modification of tools for cutting processes

benefit: specific influence and advancement of cutting processes in terms of surface integrity, accuracy and energy consumption

- development of cutting processes (ultrasonic vibration assisted turning, turn-milling) for difficult to machine materials

benefit: generation of predefined (roughness, microstructure) and high-quality surfaces in heterogeneous materials such as MMCs

- development of energy and resource efficient cutting processes and process chains (dry processing, hard machining, hybrid processes)

benefit: resource and cost saving manufacturing

# Ekspertyza i innowacja w materii trawienia, elektrycznego i plastycznego pokrywania małych części dla sektorów high-tech.

Expertise and innovation in etching, electroforming and mechanical forming of small parts for high-tech sectors.

(Ref: 11 GB 43O3 3M81)

A UK company has developed new manufacturing processes for production of technically challenging components in numerous high-tech sectors. The company has pioneered developments in photo-etching, electroforming and mechanical forming leading to low risk, fast, flexible solutions. Using new technologies the company offers solutions for technically challenging component designs in a range of metals, dimensions and batch sizes. The company seeks partners for technical cooperation.

#### Description:

A UK company offers design and manufacturing of metal components. The company specializes in production technologies providing economic, low risk, fast and flexible solutions, minimizing up-front cost exposure of its customers through the use of digital tooling while providing the fastest 'time to market'.

In recent years the company has invested heavily in innovation and has pioneered developments in photo etching (also known as chemical etching, photo chemical etching, acid etching and chemical milling), electroforming and mechanical forming.

Using new technological processes the company provides solutions to customers in automotive, communications, aerospace, electronics, medical, military and other 'high-tech' engineering industries.

As well as offering expertise in photo etching the company has developed 3 new processes:

#### Laser Evolved Etching:

Laser Evolved Etching Process is a new and novel process route for manufacturing highly accurate micro components. The process, based on conventional photo etching, enables finer features and high complexity, to exceptionally tight tolerances measured in microns.

#### Laser Evolved Electroforming:

Conventional Photo Electroforming is an advanced method of creating components by electrodeposition (electroplating). By introducing Advanced Laser Direct Imaging into the process route. Precision Micro engineers have lifted accuracy and repeatability to new levels.

#### Electrical Discharge Machining:

Wire EDM (Electrical Discharge Machining) is an exceptional process that uses electric current and fine wire to cut and shape metals, metal alloys and other conductive materials. It leaves a smooth surface that usually requires no further finishing or polishing.

The company wishes to offer its new processes and industry expertise to partners in Europe that require specialist know-how in the development and manufacture of increasingly technically challenging components. Key sectors of interest are Energy, Medical, Automotive, Electronics, Aerospace and Defence and Precision engineering.

#### Innovations and advantages of the offer

- Minute and highly complex etched shapes are possible to tolerances in the 1/100mm range
- No expensive hard tooling means low cost set-up with no significant cost penalty for amending and optimising designs.
- Samples can be provided quickly while the same technology can produce economical volume quantities, minimising 'critical development paths' and reduce 'time to market'.

 Components are stress and burr free while temper and magnetic properties remain unchanged

# Profesjonalne precyzyjne obrabianie i frezowanie, obróbka termiczna, obróbka powierzchniowa i specjalna metali żelaznych i nieżelaznych.

Expertise in precision mechanical turning and milling, heat, surface and special treatments of ferrous and non-ferrous materials.

(Ref: 11 IT 55X2 3M2V)

An Italian SME has developed significant experience and competence in precision mechanical turning, milling and surface treatments technology. It offers its capacity and expertise to partners seeking cooperation for prototyping and in custom limited or large production runs, for a commercial agreement with technical assistance or possibly other type of cooperation.

#### Description:

The company is able to offer highly skilled custom production both in series and in limited quantities from the partner's technical drawings. The quality and technical precision of processes, a vast range of related services and treatments on materials and a timely delivery are the main competitive advantages. The company can provide manufacturing of raw materials (ferrous and non ferrous, plastics) or semifinished products. They are able to offer a range of heat and exterior treatments (galvanizing, anodizing, nickel plating, sandblasting, tempering, electron beam welding, plasma HVOF coating, vacuum brazing). The company holds an ISO 9001-2008 certification.

#### Innovations and advantages of the offer

The Italian team offers high quality and respect for delivery deadlines, for prototyping or production. They offer their capacity and experience for cooperation with partners seeking precision and quality, on time.

The quality and technical precision of processes, a vast range of related services and treatments on materials and a timely delivery are the main competitive advantages.

#### Jednoczęściowy proces wtrysku tworzyw sztucznych.

Single Piece Injection Moulding Process.

(Ref: 11 GB 43O3 3KTV)

A UK based SME has developed a new patented technology which negates the need for secondary operation of plastics products such as Ultrasonic Welding, Laser Welding, Screw Fixing or any other form of Fastening/Sealing. The process allows for the moulding of two components in the same tool, loading any material into one of the components, joining the two components together and hermetically sealing them in a single process. The developer is seeking partners for technical cooperation.

#### Description:

A UK SME has developed a unique and innovative injection moulding process enabling the moulding and welding of two parts within the mould tool and if required encapsulating a component, such as electronics.

#### This process:

- Uses a standard injection moulding machine with modification to process software.
- Provides a complete hermetic seal.
- Eliminates the need for a secondary welding operation

The advantage of this process means there is little change required to a standard moulding machine, as mentioned above it only requires a modification to the process software of the machine. Everything else happens inside the mould tool.

Compared to other moulding techniques this moulding process reduces:

Time - Whole moulding and assembly process completed in one step

Cost - Eliminates assembly cost

Energy – Fewer processes = Less energy

Space – Manufacturing footprint

Part count – No need for seals or fixings.

The UK client is looking for technical co-operation with an EU company who specialises in manufacturing and moulding processes in the automotive industry to further develop the tool to help expand the potential domain and market/s.

#### Innovations and advantages of the offer

Whole moulding and assembly process completed in one step Eliminates assembly cost
Fewer processes = Less energy
Manufacturing footprint
No need for seals or fixings.

#### Innowacyjny uchwyt do szybkiej zmiany wiertła.

#### Innovative guick-change drill chuck.

(Ref: 11 DE 1378 3LOX)

A German company has developed a new and innovative quick-change drill chuck for power tools. The quick-change drill chuck is high-quality, very flexible, efficient and cost-effective. The drill chuck has been designed for the application areas stone, wood, metal and plastics. The technology is patented. The company is looking for partners both for the exploitation of the patent under joint venture, license and commercial agreements wityh technical assistance.



#### Description:

The company realised an insertable quick-change drill chuck for all machine types (e.g. hammer drills, drill machines, impact drills and cordless screwdrivers) so that various operations can be done with only one machine. This leads to cost savings when purchasing machines and tools.

A newly developed tool shank with two centering sections is now applicable for all types of tools. The new centering demands no further requirements as regards accuracy. Thus you can use rolled or pultruded feed material at for the manufacturing process.

In contrast to conventional drill chucks the tool change at the new quick-change drill chuck is possible using only one hand. That implicates a reduction of the non-productive time. At the new quick-change drill chuck the turning moment and the shearing force are directly transmitted by the machine shaft. Hence the most parts of the drill chuck can be produced out of plastics. That leads to a significant reduction of weight and manufacturing costs.

#### Innovations and advantages of the offer

- better accuracy, quality and economic efficiency
- time savings up to 60 percent at establishing a screw joint
- significantly easier handling
- only one machine for hammering, drilling and screwing
- flexible tool usage
- less weight and not top-heavy
- lower risk of injury

#### Technologia tworzenia narzędzi do obróbki metali z nanostrukturalną krawędzią tnącą.

Technology for making metal-working tools with nanostructured cutting edges.

(Ref: 11 RU 86FG 3LTZ)

A Russian university from Saratov region developed a low-cost environmentally friendly technology for production of new generation metal-working tools with nanostructured cutting edge. The technology enhances the initial wear resistance of metal-working tools by 3-4 times; it is applicable for both the production of tool and during the process of its application.

The university is looking for partners for joint research and testing of new applications.

#### Description:

The proposed technology contributes to solving the technological problems of making cutting tools with enhanced durability and strength (including small-sized tools).

The technology uses low-temperature plasma of low-pressure combined discharge. The discharge is formed on the treated surface of an odd-shaped tool.

The technology allows to process drills, taps with 0.6-12.0 mm diameter and up to 140 mm lengths, removable cutting hard-face blades, grooving cutters and similar tools produced of tool steel and hard alloys, including the tools with wear-resistant coatings deposited on their surface.

The tool processing time varies from 1.5 to 15 minutes.

The technology was implemented using the following equipment: processing camera, microwave source, microwave power supply generator, voltage potential supply block of the tool, gas puffing system, vacuum system.

The combined discharge is formed near the surface of a cutting tool at the pressure of ~300 Pa at low levels of microwave power in an electrostatic field.

A thin (micron) layer and carbides are strongly heated and melted during the impact of the combined discharge plasma over the cutting surface of the tool. Termination of the impact of the plasma leads to a sharp cooling of the surface and causes the formation of carbide nanostructured "jacket". The total thickness of the modified layer is ~40 microns.

#### Innovations and advantages of the offer

The innovation of the offer is the method for producing low-temperature plasma via the combined discharge and its application for treating odd-shaped cutting tools. The advantages are:

- 3-4 times enhanced initial wear resistance of the metal-working tool (including small-sized tools) made of tool steel and hard alloy, including the tools with wear-resistant coatings deposited on their surface:
- 2-6 times reduced roughness of the cutting edge surface;
- 2.5 times increased number of resharpenings without changing the dimensional accuracy;
- metal-working with modified tools is executed at supply speed increased by 15%.
- 11-15% increased productivity of the metal working.

Nowy system dla odlewania kokilowego aluminium, mosiądzu i stopów cynku pod dużym ciśnieniem.





(Ref: 1 Industr zamak automa Tonnes



Brand new system for high pressure die casting of aluminium, brass and zamak.

(Ref: 11 ES 28F9 3LLU)

Industrial company of die casting for aluminium, brass and zamak, has developed an innovative service that trough its automated cells system, are available to inject-up 1600 Tonnes of these materials. The system, based on hardware and a designing software process, allows the customer to get any kind of pieces and parts trough vibration, blasting, electrophoresis, etc. With the product line ready for the market, the company is looking for technical cooperation and manufacturing agreements.

#### Description:

Industrial Spanish company of die casting for aluminium, brass and zamak, has developed an innovative service that through its automated cells system, are available to inject-up 1600 Tonnes of these materials.

The system, based on hardware and a last generation designing software process, allows the customer to get any kind of pieces and parts through vibration, blasting, electrophoresis, among other industrial process.

The product line, makes use of an own induction furnaces (where the heat is applied by induction heating of metal), and a advanced / numerical software engineering; that lets the company and its clients to gain any kind of parts and pieces through a global solution.

#### Summarizing, the innovative system offers:

- 1. Virtual casting study and development: From the beginning of the proposal until the end of the casting project, assuring the best and cost efficiency result trough its own advanced software. So the client can request their own model or a best proposed one, accordingly with its business needs.
- 2. Total engineering support: Proposal generation, simplification of parts of thickness reduction, cost reduction, reducing the time to market for the clients.
- 3. Quality Assurance: The system holds an X-ray inspection, digital spectrometer, and a robust 3-D device for exhaustive inspection process, certified and according to ISO / TS 16949 and ISO 9001. Letting a total quality of the parts and pieces manufactured.
- 4. From the standard to a specific request: As the system and service is based on an integrated hardware and software process, the company holds a design technical office equipped with and own developed design programs based on 2D and 3D CAD / CAM, where the project of each pieces requested by the clients, would be pre-assessed and pre-developed, prior to the final casting process.

#### Innovations and advantages of the offer

The system and its product line has been completed with an own developed induction furnace, for the melting aluminium process.

This innovation lets advantages such as generate a better homogeneous material, a completely free of impurities pieces and, a drastic reduction of the porosity associated with every piece of aluminium casted.

#### Specjalny projekt i technologia produkcji węży i złączek.

Special Design and Production Technology for Fittings and Hoses.

(Ref: 11 TR 99PB 3LE3)

A Turkish company manufactures innovative, specially designed, highly durable, impermeable fittings and rubber, teflon, stainless steel and high pressure hoses for automotive, ship building and earth moving machinery industries. The company has customized design and production systems and capabilities. Starting from the requested properties, appropriate hose and fittings are developed and produced. Company is interested in manufacturing agreements.

#### Description:

Fittings are used in pipe and plumbing systems to connect straight pipe or tubing sections, to adapt to different sizes or shapes, and to regulate fluid flow, for example. Fittings, especially uncommon types, can be expensive, and require time, materials, and tools to install, so they are a non-trivial part of piping and plumbing systems. Valves are technically fittings, but are usually discussed separately.

A hose is a hollow tube designed to carry fluids from one location to another. Hoses are also sometimes called pipes (the word pipe usually refers to a rigid tube, whereas a hose is usually a flexible one), or more generally tubing. The shape of a hose is usually cylindrical (having a circular cross section).

Hoses can be used in water or other liquid environments or to convey air or other gases. Hoses are used to carry fluids through air or fluid environments, and they are typically used with clamps, spigots, flanges, and nozzles to control fluid flow.

A Turkish company manufactures innovative, specially designed fittings and rubber, teflon, stainless steel and high pressure hoses for automotive, ship building and earth moving machinery industries. Company is interested in manufacturing agreements.

#### Innovations and advantages of the offer

High quality,
Impermeability,
Customized design and production systems and capabilities,
ISO 9001 and ISO 16949 Certificates,
AQAP, TYPE Approval Certificates,
Germanischer Lloyd Certificate,
Wide variety of products,
Fast delivery,
50 years experience.

#### Technologia produkcji części z blachy metalowej dla przemysłu samochodowego.

Sheet Metal Parts Manufacturing Technology for Automotive Industry.

(Ref: 11 TR 99PB 3LE6)

A Turkish company that is experienced in sheet metal parts manufacturing for the automotive industry, designs and manufactures tailor-made sheet metal parts by eccentric and hydraulic processes in accordance with special needs of several industries. The company by means of the developed mold production system, produces sheet metal parts faster and more precisely. The company is looking for a manufacturing agreement.

#### Description:

Sheet metal is simply metal formed into thin and flat pieces. It is one of the fundamental forms used in metalworking, and can be cut and bent into a variety of different shapes. Countless everyday objects are constructed of the material. Thicknesses can vary significantly, although extremely thin thicknesses are considered foil or leaf, and pieces thicker than 6 mm (0.25 in) are considered plate.

Sheet metal has applications in car bodies, airplane wings, medical tables, roofs for buildings and many other



things. Sheet metal of iron and other materials with high magnetic permeability, also known as laminated steel cores, has applications in transformers and electric machines. Historically, an important use of sheet metal was in plate armor worn by cavalry, and sheet metal continues to have many decorative uses, including in horse tack.

A Turkish company that is experienced in mass production of tailor made sheet metal parts in accordance with special needs of several industries is looking for a manufacturing agreement.

#### Innovations and advantages of the offer

- Special molding system,
- Faster and more precise production,
- High quality,
- Tailor-made designs,
- Special product control systems,
- Reasonable prices.

#### Technologia przeciągania hydraulicznego dopasowana do potrzeb.

Tailor-made Hydraulic Broaching Technology.

(Ref: 11 TR 99PB 3L9S)

A Turkish company manufactures specially designed broaching tools and hydraulic broaching machines according to the requested properties and optimum uses for several sectors. Company is looking for a manufacturing agreement or a commercial agreement with technical assistance.

#### Description:

Broaching is a machining process that uses a toothed tool, called a broach, to remove material. There are two main types of broaching: linear and rotary. In linear broaching, which is the more common process, the broach is run linearly against a surface of the workpiece to effect the cut. Linear broaches are used in a broaching machine, which is also sometimes shortened to broach. In rotary broaching, the broach is rotated and pressed into the workpiece to cut an axis symmetric shape. A rotary broach is used in a lathe or screw machine. In both



processes the cut is performed in one pass of the broach, which makes it very efficient.

Broaching machines are relatively simple as they only have to move the broach in a linear motion at a predetermined speed and provide a means for handling the broach automatically. Most machines are hydraulic, but a few specialty machines are mechanically driven.

A Turkish company having 20 years experience in hydraulic machinery production, manufactures specially designed broaching tools and hydraulic broaching machines according to the requested properties and optimum uses for several sectors. Company is looking for a manufacturing agreement or a commercial agreement with technical assistance.

#### Innovations and advantages of the offer

Electronic speed control, electronic pressure control, three pieces processing at the same time, interlacing with the upper holder, maximum tensile force: 12000 kg., precision adjustable, maximum stroke: 1200 mm in height, precision adjustable, broach towing speed: 1-5 m / min, precision adjustable, back spindle speed: 1-10 m / min, the maximum diameter of the broach: Ø.80 mm, compliance with standards: DIN 1418 / CE, electronic control, easy to use, a wide range of accessories, tailor made production, high quality, reasonable price, 20 years experience in broaching machinery production.

Narzędzia inżynieryjne (nóż tokarski i czujnik położenia) dla tokarek normalnej klasy, które pozwalają na wykańczanie obróbki oraz wysoką precyzję podczas produkcji.

The engineering tools (cutter and position sensor) for lathes of normal accuracy grade that allows finishing mechanical treatment and high-precision size control during the manufacturing process.

(Ref: 11 RU 86FG 3L6X)

A Russian SME from Tomsk developed engineering tools (cutter and position sensor on the basis of a nondestructive control device: remote indicator of active defects, further RIAD) for lathes of normal accuracy grade that allows finishing mechanical treatment and high-precision size control during the manufacturing process. Partners are sought for further joint development of metalworking devices and size control equipment, adaptation to customer's requirements, commercial engineering agreements.

#### Description:

Current methods of size control during the lathe processing (caliper, micrometer, optical and contact position sensors) allow size controlling after the component has been processed by

the cutter, they offer no ability to realize the size control during the manufacturing process. These indirect control methods result in rejects.

For example, a numerical control machine sets a component process feeding of 3 microns, but, in fact, the processing device moves at ~1 micron, because of the movement loss in the mechanical system and elastic deformation.

A SME from Tomsk offers a new method of size control during the lathe processing, which, for the first time, will provide the finishing mechanical treatment and high-precision size control during the manufacturing process. The company has also developed engineering tools to implement the offered method, in order to provide a high-precision finishing process: universal cutter for lathes of normal accuracy grade, and the position sensor (for NC machines) on the basis of a nondestructive control device - RIAD. The cutter can elastically contact with the component while it's not being processed. At the certain moment of cutter stepover, the fine chip is generated, what is registered by the sensor at ultrasonic frequencies. The position sensor provides control of the penetration depth of the cutting tool in a processed component with accuracy more than 0,1 microns (there is a technical possibility to increase the accuracy to the next level) at the minimum feeding of 3 microns. The novelty is in the precise control of the phase of elastic stress transition to a plastic deformation at the contact point of the cutter and the processed component.

The developed tools are based on the linear dependence of the depth of treatment by the cutting tool and the level of signal power registered by the RIAD device in the range from 24 to 48 dB above noise level. The useful signal strength received by the RIAD device at the moment of cutter processing is high enough to be registered with no use of special handlers (oscillograph, millivoltmeter etc.). This simplifies the device's circuitry and reduces its cost.

The offered solution includes two cutters (a cutter for dimensional control, a cutter for metal working), position sensor for NC machines and the RIAD device with a periphery according to the customer's specification. Working surfaces of the cutters can be repeatedly restored and adjusted by means of standard techniques of dimensional control.

#### Innovations and advantages of the offer

The innovation of the offered technical solution lies in the possibility of direct and on-line control of component's dimensions at the stage of finishing treatment, thus the accuracy of component processing at universal lathes can be increased by several times.

The position sensor provides control over the penetration depth of the cutting tool into the processed component on lathes with numerical control with accuracy more than 0,1 microns at the minimum feeding of 3 microns.

The proposed solution allows also controlling the process under condition of temperature change and change of cutting tip size.

The simple circuitry of the RIAD device allows avoiding the use of special handlers (oscillograph, millivoltmeter etc.).

## Adaptacyjny system działający w czasie rzeczywistym do analizy i kontroli obróbki zgrubnei.

Adaptive real-time system for analysis and control of rough turning.

(Ref: 11 FI 30I1 3KK1)

A Finnish University has developed an analysis and control system for CNC (computer and numerical calculation) rough turning. The system measures real time signals from the turning process and eliminates fault-cutting conditions during cutting if needed. The adaptive system optimizes quality, efficiency and safety of rough turning by controlling the cutting speed and/or feed rate automatically. The university is looking for industrial partners for further development and commercialization.

#### Description:

The developed adaptive rough turning system measures real time signals from the turning cutting process, and eliminates fault-cutting conditions during cutting by adapting the cutting speed and/or feed rate if needed. The eliminated fault-cutting conditions are:

- Continuous chip

- Unstable cutting
- Underused cutting power
- Unwanted vibration in cutting

The principle of system consists of four phases as described below and in the picture.

- 1) First the system measures cutting conditions. The measured parameters are: horizontal and vertical acceleration of cutting tool, acoustic emission, audio (voice), power and machine vision (tool wear).
- 2) When the paramteres are measured, the system identifies cutting conditions, the strength of the possible problems identified (fault-cutting conditions) and problem priorities.
- 3) The third section is optimizing, where the system solves the fault-cutting conditions by determining the parameters that needs to be adjusted.
- 4) In the last control section the system will adapt the cutting speed or/and feed towards to the optimal situation.

  Analysis and control is continuous, real-time and adaptive process.

#### Innovations and advantages of the offer

The adaptive roughing system optimizes the quality, efficiency and safety of rough turning by controlling the cutting speed and/or feed rate automatically unlike in traditional rough turning process, where professionally skilled operator is always needed. Frankly, the adaptive system is specifically designed for unmanned production (FMS). Currently there is not that kind of adaptive system on the market.

#### Elastyczny system do linii montażowych wykorzystujący sprężone powietrze.

Flexible Blast System for Assembly Lines.

(Ref: 11 DE 1380 3KTA)

A large German research institute has developed a "traveling compressed-air trolley" for assembly lines, which is applicable especially in the domains of car industry, investment construction, mechanical engineering as well as in automation and IT. With this technology it is possible to connect any number of extraction cars for various tools at the same time and without any loss in power and ergonomic operation. The institute is seeking either a license agreement or a technical cooperation.

#### Description:

Many steps in assembly processes are performed by tools run on compressed air. For this purpose, systems feeding compressed air to these tools must ensure continuous supply over large working spaces. One important prerequisite is the need not to impede by long hoses the functioning of tools at the assembly line, and avoid interruptions when changing to the next supply section.

Systems with one stationary channel acting as a compressed-air store along the assembly line are able to meet these preconditions: flexible compressed air — "traveling compressed-air trolley" for assembly lines. Extraction cars moving like trolleys alongside the compressed-air channel allow the hose to be kept short up to the terminal unit. However, neither low-cost compressed-air channels nor sufficiently powerful sealing and valve systems are commercially available for such installations.

A German research centre has developed a compressed-air supply system which overcomes existing problems and can be implemented at low cost:

The extraction car incorporates two drums from which the consumer hose is supplied compressed air. The drums are enclosed by a continuous chain crawling along the channel as the car is being moved. The compressed-air channel and the drums are equipped with bores closed with elastomer sealing strips. The chain links are made up of valve units connecting the channel and the drums through the bores and, in this way, passing the compressed air.

Pressure is maintained continuously as a result of the meshed, cog-like operation of the sealing and valve system involving channel, chain, and drum. One special feature is the channel, which can be extended in a modular fashion. The compressed-air supply system can travel along driven assembly lines. In this way, not only tools but also pneumatic fixtures and alignment systems together with the workpiece can be carried along continuously.

#### Innovations and advantages of the offer

- no challenge by long hoses at the assembly line,
- no interruptions when changing to the next supply section,
- it is possible in this installation to connect any number of extraction cars for various tools at the same time and without any loss in power and ergonomic operation.

#### Zrobotyzowana aplikacja do cięcia wodą.

Robotic Waterjet Cutting Application.

(Ref: 11 TR 99PD 3KEV)

A Turkish SME experienced in robotic solutions has developed a robotic waterjet cutting application. This technology enables high precision cutting resulting in high productive output combined with high product quality in addition to its high economical input. The company is interested in licensing opportunities and commercial agreements with technical assistance with potential partners from automotive industry.



#### Description:

The Turkish engineering company focused on research and development activities is experienced in providing robotic solutions to its customers. Its product portfolio consists of robots, control units, positioners, gantry, rotating base and tracks and software.

Waterjet cutting is gaining popularity as a means for cutting a wide variety of materials. Ease of programming and the jet's ability to cut almost all materials and any thickness make it suitable for all shape cutting applications except extremely hard materials.

The company has developed a new process for waterjet cutting applications. Robotic waterjet for cutting appliances provides more advantages than two axis CNC's. On CNC tables, the condition of flatness is being looked for this situation blocks the cutting of parts in different forms. However, this condition is not required for robotic systems. Because of the robot's angular cutting and its flexibility for working area the condition flatness is not being looked for easy production and the possibility of flexible production.

By using this system, it is possible to cut anything from the softest to the hardest material through the use of pure or mixed water.

Since waterjet cutting is a technology of using water with high pressure to cut any base, it is used in almost all industry sectors. The company is looking for partners especially from automotive industry for licensing opportunities. Additionally, company is open to commercial agreements with technical assistance with potential partners.

#### Innovations and advantages of the offer

One advantage of using underwater cutting is that it provides controllable sand flow and measurable sand consumption. Through waterjet cutting, special sound insulation is achieved and flexible production is attained. With the advantage of using robotic system for waterjet cutting, quality of final products is increased and problems/deficiencies in the process are reduced. Moreover, flexible design of fixture provides the fact that different types of products could be cut on the system. In terms of economical perspective, usage of such system results in low investment costs.

#### Wiertło do drewna

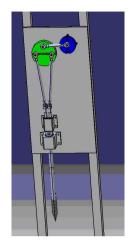
ESA: Wood Wasp Drill (Ref: 11 NL 1D1D 3K76)

The wood wasp and its capability to drill into wood has raised much interest within the space community. Therefore, a device imitating the wasp's ovipositor drilling technique was invented by a leading UK University, with promising advantages such as very low power needs and increased drilling speed. The university is interested in exploiting this discovery within suitable applications such as mining where power limitation demands new approaches to drilling, preferably using licensing agreements.

#### Description:

Drilling principle:

The dual reciprocating drilling is based on two interlocked drill bits that can slide against each other. It begins with one drill bit moving into the drilling target and getting engaged with the target. The reaction force or resistance induced by the target to that drill bit will help to push the other drill bit further into the target. A repetition of this process will allow advancement of the drill into the target material without any external axial force.



#### Prototypes and testbed:

The existing prototypes have employed a cam mechanism to realize the dual reciprocating motion. A commercial on the shelf DC brush motor is used to drive the mechanism. Except the drill bit, which is made of steel, the drill is made of aluminium. The testbed facility is set up to allow automated operation and control of the drill including data acquisition and analysis. The test results indicate that the wasp drill can be as much as 10 times lighter than its rotary counterpart and drill several times faster than the percussive drill using the same power.

#### Innovations and advantages of the offer

Completely novel technique allowing for improved efficieny, drilling and low-cost engineering design, compared to conventional approaches.

Nowa metoda do łatwego diagnozowania błędów manipultarów lub narzędzi specialnych.

New method to easily locate errors at manipulators or special tools.

(Ref: 11 DE 1380 3KET)

A German SME active in the field of PLC controlled automation engineering is looking for a partner for further development of pneumatic cylinders having an LED visualization to indicate error messages.

The new visualization enables a three-dimensional view of the error and errors at manipulators or special tools in the production process can be identified and located more quickly. The SME looks for a manufacturer of pneumatic cylinders interested in making this technology ready for the market.

#### Description:

The new visualization method of errors occurring at manipulators or special tools is based on a pneumatic cylinder or an electrically controlled cylinder that is equipped with LEDs. In case of an error these LEDs light up and thus it can be easily located where the error has actually occurred.

The error message is formed in a PLC and sent to the pneumatic cylinder.

The LEDs are integrated directly in the cylinder and addressed with 24V DC.

They must be visible from all sides of the manipulator in order to assure that they are not covered by other components.

This method allows a local allocation to the defective part and an employee can easily recognize, where the defective part has actually been installed. He can thus react very quickly and initiate repair work immediately. For clearly arranged units it is not even necessary to install a monitor for fault indication.

#### Innovations and advantages of the offer

Up to now error messages are indicated on a monitor and it is difficult to locate the defective part. The new visualisation method now allows a three-dimensional view of the error. The service technician standing in front of a unit can easily locate the defective equipment as he gets flashing signals directly at the defective part in the manipulator. He can thus initiate repair work immediately.

It is possible to indicate the following faults directly:

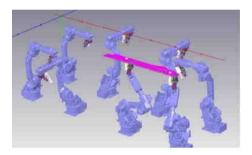
- defective initiators
- blocked cylinders or work pieces
- pneumatic cylinders that are incorrectly controlled
- cycles that are taking too long

#### Zrobotyzowany system do ciecia laserowego.

#### Robotic Laser Cutting System.

(Ref: 11 TR 99PD 3KEO)

A Turkish SME experienced in robotic solutions has developed a robotic system for processing and machining of any component through laser, plasma, milling etc. This patented technology enables flexible production and increased capacity additionally to reducing initial investment and reinvestment amounts. The company is interested in licensing opportunities and commercial agreements with technical assistance.



#### Description:

The Turkish SME, being an engineering company, is focused on research and development activities. It is experienced in providing robotic solutions to its customers and its product portfolio consists of robots, control units, positioners, gantry, rotating base and tracks and software.

The company has developed a new robotic system that can be used in machining and processing of any component/part. This patented system being not classical fixture application is related to flexible robotic system, which is cutting, welding, machining etc. by using robots that can work together as synchronized or positioning individually programmed according to different work part's reference points.

Any work part is processed by at least one operation robot that moves on the servo motors moving mechanism and has a work tool at the tip. According to operation robot positions, this work part is positioned by minimum two transferring and positioning robots that hold and transfer work part by using holder. All different work parts are defined to the program once; and processing adjustment is made automatically when the work parts change.

The company is looking for partners from machine manufacturing & metal forming industries, automotive and ship building industries for licensing opportunities. Additionally, company is open to commercial agreements with technical assistance with potential partners.

#### Innovations and advantages of the offer

This patented robotic technology provides flexible production through improving fixing system that has high action capacity and flexibility. This flexible fixing system also enable increased capacity and space saving since it eliminates classical fixtures for each different work piece. Moreover, with the usage of this patented system, limitations regarding the size of the work piece that is going to be processed are removed; therefore, any size related to work piece can be machined and processed.

Additionally, in terms of economical advantages, with this system initial investment costs are lower and elimination of classical fixtures results in reduced reinvestment costs.

#### Specjalne konstrukcje mechaniczne i prototypy.

#### Special mechanical constructions and prototypes.

(Ref: 11 IT 52T2 3KBD)

An Italian company with forty years of experience in the precision mechanics field offers a specialized production of mechanical equipment, prototypes in the design and functional area, special machinery, construction precision, progressive dies for sheet metal, based on innovative tools such as cad-cam and 3, 5 axis workings, complete group assembly.

The company provides technical support in prototyping sample and maintenance of special machines. The company seeks technical co-operation.

#### Description:

An Italian company with forty years of experience in the precision mechanics field offers a specialized production of mechanical equipment, prototypes in the design and functional area, special machinery, construction precision, progressive dies for sheet metal (turning, milling and grinding in general), based on innovative tools such as cad-cam and 3, 5 axis workings, complete group assembly.

The company's products are precise, reliable and safe. They are built to customer order and useable for a variety of industries: automotive, aeronautics, space, medical, railway, energy and alternative energy, robotics, transport and nanotechnologies.

These prototypes are usually parts produced starting from solid blocks of materials. Those blocks are carved with traditional or controlled machinery, according to the complexity of the manufacturing.

The company works on the new machining centre 5-axis Sigma Flexi 7P 5AX and controlled plunge spark-erosion manufacturing, to complete more complex forms.

The company provides technical support in prototyping sample and provides maintenance of special machines.

The company is a partner of leading companies in the industry for the development implementation and testing of industrial machinery, mechanical components and special custom engineering. They are looking for technical co-operation with partners such as University, medium and big sized companies from EU Member States.

#### Innovations and advantages of the offer

The company can help in feasibility study and product analysis in collaboration with research institutions, working with: milling work centers on 3 and 5 axis with the aid of CAD-CAM, controlled plunge spark-erosion, turning, milling and grinding of loose.

During prototyping and sampling activity, the company is able to promptly meet the needs of customers, providing proposals for product industrialization and offering its experience and advices.

#### Innowacyjna technologia kołnierzowania rur.

#### Innovative technology for pipe collaring.

(Ref: 10 DK 20B3 3K5J)

Technology for collaring of pipes - an alternative to welding of fittings onto pipe systems. The technique is especially usefull for companies working with pipe systems as subcontractor,

heating or water plants etc. The Danish company is able to make collarings from Ø6mm to Ø510mm in tubes up to Ø1000mm, which is unique. The company is offering manufacturing agreement with technical cooperation towards specific requirements and adoption to specific needs.

#### Description:

The technology simply collars the tube/pipe, meaning it is possible to pull a branch where it is nessesary, eliminating many welding operations, which saves production time and leaves a more hygenic pipe system design.

#### Range:

Branches from ø6mm to ø500mm on pipes up to ø1000mm, wall thickness up to 10mm.

#### Materials:

Any type of copper, brass, aluminium, steel or stainless steel pipe.

#### Approvals:

Lloyds Register of shipping in London, Germanicher lloyd and Bureau Veritas in Oslo.

#### Innovations and advantages of the offer

A simple process, eliminating process steps, allowing complicated products with several connections without the use of fittings.

#### Advantages:

- Save money on fittings
- Save money via less welding time
- Save money via less cutting
- Save money via less control of welding quality(NDT)
- Save money on simplified production
- More hygienic pipe systems

#### Technologia giecia do produkcii matryc.

Bending Technology for Packaging Cutting Mold Production.

(Ref: 10 TR 99PB 3K4J)

A Turkish company has developed an innovative bending machine requiring less human force compared to conventional machines that can be used in manufacturing package cutting moulds. Company seeks industrial partners producing package moulds for signing a commercial agreement with technical assistance.

#### Description:

A Turkish company developed a bending machine to be used in manufacturing of package cutting moulds. Machine requires less human force when compared to conventional bending machines. Bending is performed via the leg that allows performing faster and harder strokes. Using the machine, parts with height between 8-40 mm and thickness between 0.5-1.05 mm can be bended. Bending operation is carried out in a sensitive way through specially designed slides. Besides, bending at the desired degree can be performed through correct posing by means of 500 mm digital caliper.

#### Innovations and advantages of the offer

By means of a special coating, even the bevel of the cutter to be bended contact with the plate, any scratching or corrosion does not occur and the bevel part of the part being bended is not deformed.



#### Urzadzenie wielofunkcyjne

#### Multifunctional device.

(Ref: 10 RO 75DV 3IUK)

A romanian company has developed a novel multifunctional device that can be used for multiple uses as cutting, hitting, digging, fire fighting actions and agricultural activities. According to invention, the device presents the following advantages: large number of functionalities so it can be used in many domains, comes with a detachable handle and adaptable to each operation, high fiability. The inventor is looking for licence agreement, technical cooperation and commercial agreement.

#### Description:

The invention removes the disadvantages of known solutions in that on an axe like blade, the bottom part it has a hole and it is sharp and on the top part has two arms left-right and a link element, it is assembled by rivetting the link element with a hammer like knocking head. With this device, can perform a wide range of safe operations, depending on the type of operation performed.

#### Innovations and advantages of the offer

The invention presents the following advantages: large number of functionalities so it can be used in many domains, comes with a detachable handle and adaptable to each operation, small and easy handling capabilities, high fiability.

The novelty is that this device presents a high resistance and is able to perform more operations than the old devices which were performing a limited range of operations and had a low resistance when using the ax and hammer.

#### Urządzenie do automatycznego rozcinania.

#### **Automatic Splitting Device.**

(Ref: 10 RO 75DU 3JYK)

A Romanian company has invented an automatic splitting device which allows operation of division in the processing of different types of items subject to toothing process, drilling or inner and outer grooving execution (for trees and axle-boxes), no matter of size. The company is looking for technical cooperation, manufacturing agreement (subcontracting & co-contracting) or commercial agreement with technical assistance.

#### Description:

Division can be done with precision of 5, 10 or 20 micron. The device is able to train the crown, stopping being done automatically when a step was executed and can be used on all teeth processing machines which don't have an automatic division head.

Deviation is digitally displayed. The tapering is removed during the milling process.

Knifes advance is made by an actuator. Submission and knife withdrawal is automatically synchronized with the moving of the machine's table.

Transducer coupling and decoupling of the template is done automatically.



#### Innovations and advantages of the offer

- Productivity can be doubled by using two knives simultaneously placed at 180°
- Device is able to send information remotely

# Optymalizacja cięcia profili aluminiowych lub każdego innego materiału o profilu liniowym.

Cutting Optimizer of Aluminium Profiles or Any Other Material With Linear Profile. (Ref: 10 RO 75DU 3JX8 )

A Romanian company has invented an cutting optimizer which solves one of the classic problems of optimization of cutting aluminum profiles, logs or any other material with linear profile. The company is looking for technical cooperation, manufacturing agreement (subcontracting & co-contracting) or commercial agreement with technical assistance.



#### Description:

Cutting optimizer can be used for optimization of cutting aluminum profiles, logs or any other material with linear profile. Dimensions and quantity of cut segments can be programmed directly on the front panel. Optimization calculation is carried out within 150ms. Optimization of cutting is done with a loss of 1% of the length of material to be cut.

#### Innovations and advantages of the offer

- Increased productivity
- Dynamically performs production statistics
- Minimal loss

# Technologiczne poszukiwane zgłoszone przez zagraniczne ośrodki EEN

Eurostars: Automatyzacja linii produkcyjnej.

PS - Eurostars: Automatisation of a production line.

(Ref: 11 FR 37M3 3MT4)

A French company has developed & patented an innovative artificial insemination technique for pig breeding. They are now willing to industrialize their production with an automatic production line, and are therefore searching several industrial partners to develop special machineries for that purpose, with Eurostars funding.

#### Description:

A company, located in Northern France, has successfuly developed, patented and launched into the market an innovative artificial insemination technique for pig breeding. That product is composed of several parts: one vial containing the semen, an adaptor and one catheter.

They have already developed a first production line with manual steps, being able to produce 1.5 million pieces per year. Their product is an achievement of several years of development: despite its higher production costs, comparing to its competitors, the product possesses many advantages (easiness for using, longer conservation of the semen, more than 80% saving time, total emptying into the female genital, total recyclable product).

They are willing to increase significantly their production, from 1.5 up to 3 millions pieces of products per year, leading naturally to lower production costs thanks to higher volumes and no manual process. Therefore, they want to use their own automatic production line; the project being to set up that customized machinery according to their technical specifications.

The steps of the process are:

- Positioning of the SBES elastomer
- Filling of the wax into the scored stopper
- Positioning the scored stopper
- Wraping into packaging
- Handling in carton

They are willing to be leader of the consortium, and submit an Eurostars proposal for the next call in March 2012.

#### Technical Specifications / Specific technical requirements of the request

Eurostars programme

Deadline: First of March 2012

2 years project

Global budget estimate: from 200 000 Euros to 300 000 Euros

The French company is an innovation-oriented SME, willing to lead the project with their technical specifications.

The partners sought and their expected tasks:

- An industrial injector to inject the pieces of the product in one time.

They are willing to create a double-injection (simultaneous injection of both hard and flexible parts) of the same mould. Injecting at the same time the catheter in an automatic way, instead of extrudating it through a manual step.

- Industry specialized in special machinery creation (with engineering department, electrical engineering department).

Create the complete production line, the french company using that customized machine internally for its own purpose.

# Łożysko, materiał i technologia smarowania przy wysokich obciążeniach i wysokich predkościach obrotowych.

Bearing, material and lubrication technology for high load, high speed rotating application.

(Ref: 11 GB 41n7 3MS0 )

The UK division of a world leading machinery manufacturer seeks partners who can supply a bearing technology for a high load, high speed rotating application. The lubricant type and delivery method is critical to the application so a solution for this is also required. Advanced materials with high strength to weight ratios and good thermal conductivity will also be advantageous in the application. Offers of technical consultancy will be considered if suitable technology is not already available.

#### Description:

The UK company is developing industrial machinery with a high load, high speed rotating application and is looking for:

- 1. Advanced bearing, materials and lubrication technologies that will allow the application to fulfill the specification
- 2. Technical consultancy to enable the development and application of suitable products/technologies
- 3. Simulation of the solution to reduce the need for prototypes

#### Technical Specifications / Specific technical requirements of the request

The assembly is required to rotate at a speed of up to 6000 rpm with a continuous load of approx 10000 Newtons and a cyclic shock load.

The assembly will be subjected to an aggressive washdown regime.

# Nowe technologie produkcji narzędzi ze stali nierdzewnej dla przemysłu spożywczego. New technologies in the production of stainless steel tools for the food industry. (Ref: 11 PL 63AY 3MGH)

A Polish company is specialized in manufacturing tools for food industry. The company has developed an exclusive and extended range of standard and special products and hand tools. The company wants to expand its product range with a stainless steel and is looking for cooperation with steel companies with knowledge of forging and hardening of stainless steel. The sought technology should be available for demonstraction/using. The company is seeking technical cooperation or commercial agreement.

#### Description:

A Polish company is specialized in designing and manufacturing of traditional hand tools. The products are used in food industry.

The company has developed an exclusive and extended range of standard and special products, for example: different types of industrial knives used in the various branches of the industry. The company makes knives according to a technical documentation, a draft or pattern according to the documentation provided.

The company wants to expand its product range with a stainless steel. The company is looking for innovative technology and cooperation with companies for the stainless steel tooling industry.

#### Technical Specifications / Specific technical requirements of the request

The company is looking for innovative technology for the treatment of stainless steel.

The production process should include: cutting, hardening and grinding.

Further technical data:

- The final product should have a hardness of min. 50 Rockwell.
- The final product must be completely free from corrosion.
- Shall meet the requirements of companies from the food industry.

#### Poszukiwana technologia wiercenia i wyrzynania stali na linii produkcyjnej.

Technology sought for steel drilling and sawing line machinery.

(Ref: 11 TR 99PB 3MD9)

A Turkish SME in metal cutting sector is looking structural steel drilling and sawing line machine technology. The company wants to transfer know-how as well as building technical and/or R&D partnership or joint venture. The technology should preferably be fully developed.

#### Description:

The Turkish company has experience in band saw machinery design and manufacturing for more than 30 years. The company has standard products and also they can design and manufacture machines according to their customers' needs.

The company wants to widen their product range with structural steel drilling and sawing line machines and they are looking for experienced partners with know how and technology.

#### Technical Specifications / Specific technical requirements of the request

The potential partner must be experienced in steel drilling machines sector or must have good designing experience.

The technology sought must be the latest technology in the sector. The feedings of the spindles and controls must be with servo motors. Both 3 spindle and single spindle models are under interest. The width of the profiles can be over 1000 mm. The machine must be controlled fully by CNC.

# Poszukiwany partner do wspólnego przedsięwzięcia w produkowaniu maszyn do cięcia metalu

w Turcji.

Partners sought for joint venture in metal cutting machinery manufacturing in Turkey. (Ref: 11 TR 99PB 3MAS )

A Turkish SME in metal cutting machinery sector looks for international reliable partners in similar sector to build joint venture for metal cutting machinery production in Turkey. The partner sought should preferably be institutional and bigger than the Turkish company.

#### Description:

The company has been one of the biggest bandsaw manufacturers in Turkey being involved in metal cutting business since 1976. The company has introduced many products as a result of their own research and design in the market and is still researching for new designs and products for the market.

The Turkish SME is a family business, now managed by the second generation, wanting to grow and institutionalize. The company would like to build joint venture with a technologically more developed institutional company in similar business willing to invest in Turkey together with the Turkish SME.

#### Technical Specifications / Specific technical requirements of the request

The Turkish company is in need of know-how and technology of more developed, experienced and institutional company by means of getting institutionalised as well as benefitting from the know-how and technology of the partner and consequently manufacturing new products.

The potential partner must be technologically developed in metal cutting industry, should be institutional and preferably bigger than the Turkish SME.

# Poszukiwane nowe matryce do seryjnej produkcji części z różnych materiałów dla sektorów high-tech.

# Looking for new moulds for serial production of parts from different materials for high technology sectors.

(Ref: 11 TR 99PB 3LT4)

A Turkish SME experienced in mould design and serial production by using different materials wants to use its premises for higher technology sectors. The company is looking for moulds for high technology production and willing to get production licenses or subcontracting and is also interested in sales of shares if necessary. The mould and technology sought should preferably be already in the market.

#### Description:

Moulding is the process of manufacturing by shaping pliable raw material using a rigid frame or model called a pattern.

A mould is a hollowed-out block that is filled with a liquid like plastic, glass, metal, or ceramic raw materials. The liquid hardens or sets inside the mold, adopting its shape.

The Turkish SME is experienced in mould production and serial production from different materials by using their own moulds.

The company is involved with designing and production of shoe heels currently, however they would like to use their 5D CNC milling and turning machinery for higher technology like machinery, aviation, automotive, medical industry. The company can use moulds of the potantial partner for serial production in their premises.

#### Technical Specifications / Specific technical requirements of the request

The Turkish company has 5D CNC turning and milling machinery which can be used for production of high technology precise parts.

Company has also opportunities to produce moulds and serial production by using any kind of materials. The partner is expected to have a technology and moulds in need of serial production facilities.

#### Technologia produkcji cienkich płyt kamiennych.

#### Technology for production of a thin stone film.

(Ref: 11 DE 18A5 3L0H)

A German company uses natural stone and artificial stone for a large variety of applications. The company is searching for a thin stone film for new applications. The challenge is the production of a film made of natural stone, which is placed on a corresponding carrier (e.g. a fine-meshed net). The film thickness should be at approx. 1mm. The aim of the company is an acquisition of a licence.

#### Description:

A German SME is looking for a method for producing a thin stone film made of natural stone. But natural stone has one problem - its weight. Instead of massive stones, thin films made of stone should be used. These films should be obtained from plates, which are processed on the corresponding CNC-controlled machines on the required thickness of about 1mm. In order to guarantee stability, the films should be placed on carriers (e.g. nets or other fine-meshed

materials) and should be permanently connected with them. Residues of materials (grinding residue) should have a reasonable use. These 'natural-stone films' should be used on wall claddings and ceiling linings, furniture coverings as well as on store construction, shipbuilding and elevator construction. By using of thin plates as basic material, natural ressources can be treatend with care.

#### Technical Specifications / Specific technical requirements of the request

- production of thin stone film approx. 1mm thickness attached to corresponding carriers to replace solid natural stone plates
- new possibilities for the application and processing of natural stone,
- new possibilities of design.
- economical use of natural ressourcs and minimization of the component weight, new application fields.

#### Ekspertyza i/lub noże o zwiekszonej żywotności do ciecja polietylenów.

Expertise and/or knives with a long standing time for the cutting of free shrinking films. (Ref: 11 NL 60AH 3LVS )

A Dutch SME is specialized in the development and production of packaging machines. The company is looking for expertise to develop a new special cutting system with an improved tool life of the knives for the fast cutting of free shrinking polyethyleen tereftalaat films. The company is interested in expertise regarding the material choice, the coating and the industrial design of the knives and corresponding technology. The requested technology should preferably be highly or fully developed.

#### Description:

A Dutch SME is active in the business of the development and production of packaging machines. An important subsystem of the machine is the cutting system for the fast cutting of free shrinking films. For a special type of a packaging machine the improvement of the standing time (tool life) of the knives is under investigation.

The origin of the problem is the wear of the knives due the material properties of the material of the film. The film is made out Polyethyleen Tereftalaat (PET).

For getting a solution following aspects are important:

- There are many possible materials, coatings and industrial designs for the knives.
- In the world of the recycling of PET it is expected that there must be a lot of experience related to the possible choices for the materials, the coatings and the industrial designs.
- Also it is expected that a lot of knowledge and expertise can be found at developers and producers of knives.

To accelerate the development of the cutting system the company is looking for partners that have expertise about:

- The recycling of PET.
- The materials, coatings, industrial design and standing time (tool life) of the knives that recycle PET.
- The development and production of knives for the fast cutting of free shrinking films.

#### Technical Specifications / Specific technical requirements of the request

Technology that could be very useful is the technology used for the recycling of PET. It is expected that recyclers of PET have a lot of knowledge and expertise regarding the choice of the material, the coating and the design of the knives.

But also it is expected that developers and/or producers of knives have relevant knowledge and expertise.

Poszukiwana technologia, metoda lub wykonastwo dotyczące powtryskowej plastycznej deformacji uzyskanego produktu.

Looking for technologies, methods, or executions involving post injection molding. plastic deformation.

. (Ref: 11 BE 0213 3LJJ )

A Brussels-based multinational looks for technologies, methods, or executions involving post injection moulding plastic deformation. The company would like to solve a series of problems linked to the moulding constraints and assembly of moulded parts constraints. The company is therefore looking for different kinds of cooperation.

#### Description:

The company's current plastic part product development is limited by moulding constraints and assembly of moulded parts constraints. And the company's current internal knowledge of plastic deformation is limited. The company has a high interest in having the ability to modify plastic parts after the injection moulding process. The modification could be either an offline procedure or used online in conjunction with current assembly process and equipment. Plastic modification post injection moulding could be comprised of surface modification, bending, stretching, indenting, increasing diameters, flaring, etc.

The multinational looks for technologies, methods, or executions able to solve the following problems:

- Enable designs of plastic parts which are not cost effective mouldable
- Enable designs of plastic parts which are currently not feasible
- Enable cost and time effective changes in design of plastic parts
- Reduce cost of plastic parts in the long term
- Enable late stage product differentiation

#### Technical Specifications / Specific technical requirements of the request

The requested technologies or methods should meet the following:

- Constraints:
  - Large dimensional changes relative to part size
  - Needs to be applied to small diameter parts (<20 mm)</li>
  - Needs to be applied to thin walled parts (0.1 1.0 mm)
  - Needs to be applied to cylindrical / semi cylindrical plastic parts
  - Low dwell times (< 1-2 seconds)

The following will be considered as success criteria:

Solution should meet the following requirements:

- Large dimensional changes possible
- High degree of repeatability
- High quality feeling (no sharp edges, etc.)
- Low dwell times (< 1-2 seconds)

Patent protection is not required. Partner capabilities:

Transfer of knowledge to the multinational, consultancy, or provide equipment capable of executing required tasks.

Produkcja wysokiej jakości modułowego systemu fermentacji beztlenowej.

High quality production of modular anaerobic digestion system.

(Ref: 11 GB 40n6 3L66)

A company based in the South-East of England has developed a modular anaerobic digestion system, which is easier and cheaper to install than current competitors. While the modules are currently produced in the US, the company is interested to transfer production to the EU, to save on costs and embodied energy. They are looking for partners who can produce the

modules to the current standard, either using blow-moulding of polyethylene or developing new materials and/or processes for it.

#### Description:

A company based in the South-East of England has developed a modular and mobile anaerobic digestion (AD) system, with substantially reduced threshold to installation compared to currently available competitors. The system is economic from small scales, starting at 9 kg waste/day, yet can easily be scaled up to 500 kg/day. As the system is classified as a temporary structure, installation requires no planning permission, thus reducing its bureaucratic impact.

Currently, the modules of the system are produced in the USA and shipped to the company. To further decrease costs and embodied energy, the company is looking for partners in Europe that can develop more efficient ways of producing the modules.

#### Technical Specifications / Specific technical requirements of the request

Currently, the modules are made of high-molecular weight polyethylene (PE), giving them a high strength. The company is looking for partners that can offer production of the components at £50/sq. inch, while retaining the high quality of the product.

While continued use of blow-moulding of PE is the simplest solution, the company is open to suggestions from manufacturers, both in terms of materials and processes used. If necessary, the company is willing to adapt the design to other materials and/or production processes.

#### Poszukiwany proces cięcia do produkcji włókna akrylowego.

Seeking a cutting process to be used in acrylic fiber production. (Ref: 11 TR 99PD 3KUP )

A Turkish SME, experienced in robotics systems and solutions, is looking for a cutting process, which will be used for cutting acrylic fibres that are squeezed between rollers during fibre production. The company is interested in commercial agreement with technical assistance and licensing opportunities with companies having expertise in cutting technologies and that has already developed a cutting process that can be used for this purpose.

#### Description:

In production process of acrylic fibres, fibres pass over several rollers. Sometimes these fibres curl over the rollers, which results in production stops. Then, fibres over steel rollers are cut manually by utility knife to re-start the production. The process might end with employees being injured with knife cuts.

In order to obtain a safer process, a robotic system or another process that will solve this problem is sought. The developed process should not damage rollers' surface during cutting of acrylic fibres.

In this respect, the Turkish company is looking for a cutting process already developed to sign commercial agreements with technical assistance. It is also open to licensing opportunities related to such technologies.

#### Technical Specifications / Specific technical requirements of the request

The required cutting process should be compatible with the process requirement of acrylic fibres, which are:

- Density: 1,17 g/cm3
- Shear stres: 30 cN/tex (0.5 Gpa)
- Elasticity modulus: 600 800 cN/tex (10 14 Gpa).
- Melt point : over 310℃ fibers' structure started to fail

#### Sprzęt do polerowania zewnętrznych powierzchni cylindrycznych.

Equipment for superfinishing machining of external cylindrical surfaces.

(Ref: 11 RU 86FG 3KE6)

A Russian industrial company from Samara needs a technology for superfinishing machining of details with external cylindrical surfaces. The requested technology must provide N3-N4 surface finish class, surface roughness Ra=0.1-0.2 mkm and not demand full replacement of production equipment. The company is ready to conclusion of production, commercial agreements and technical cooperation.

#### Description:

A production company from Samara needs a technology for superfinishing machining of details with external cylindrical surfaces. Nowadays, the company uses honing, but it does not provide for a ful set of quality parameters.

The sought technology must allow machining of cylindrical shaft journals with the diameter from 5 to 200 mm and not less than 750 mm long. Detail surface roughness before the machining is Ra 0.6 - 1.5 mkm. The requested technology must provide N3-N4 surface finish class, surface roughness Ra=0.1-0.2 mkm and avoid full replacement of production equipment. Besides, the surface of manufactured details must have a high durability.

#### Technical Specifications / Specific technical requirements of the request

Surfaces to be machined: cylindrical shaft journals with diameter from 5 to 200 mm.

Length of machining: not less than 750 mm.

Roughness Ra: 0.1...0.2 mkm. Surface finish class: N3-N4.

High durability of the details' surface.

#### Technolgie do kucia na gorąco i obróbki mosiądzu.

Hot Forging and Machining Technologies for Brass.

(Ref: 11 TR 99PB 3KBT)

A Turkish company specialized in brass hot forging and precision machining technologies, manufactures a wide range of fittings on demand. The company is seeking partners that have an industrial background and experience in brass processing who the company can improve conventional brass hot forging processes with. The company is interested in joint further development and/or signing a joint venture agreement.

#### Description:

The manufacturing of machine elements by hot or cold plastic deformation is one of the oldest metalworking operations. The forging term is related to a family of processes in which the deformation of the product is carried out by compression.

Compared to the traditional and competitor processes of metalworking such as the foundry and machining, hot forging confers to the parts manufactured high

mechanical properties thanks to the material hardening during deformation and the lack of porosity.

In spite of the emergence of new means of manufacturing, the traditional forging process remains advantageous and needs continuous developments especially in precision forging.

A Turkish company that is manufacturing inserts, seperable joints, valves and manifolds from brass using hot forging and precision technologies is looking for partners who are interested in improving the conventional hot forging processes.

#### Technical Specifications / Specific technical requirements of the request

Hot forging and precision machining technologies with novel properties and high efficiency.

# Technologia kompozytów polimerowo-drzewnych polegająca na łączeniu odzyskiwanego plastiku i drewna.

Woodplastic composite technology for combined use of recycled plastic and wood. (Ref: 10 RB 1B1N 3K3Q)

A small Serbian manufacturing company seeks for technology to produce objects from recycled plastic and wood waste (sawdust). Combined technology (wood-plastic) primarlly will be used for production of healthier floors. Partners should have fully developed technology and production process. Partners should be also willing to transfer its expertise and knowhow. The company needs to develop new processes and technologies and it's willing to make joint exploatation with partners.

#### Description:

Broadening existing range of products: introducing new technology for product which are made from recycled material (making wood-plastic products). Better material quality, rent ability of production process and diversification through blending and combining different types of plastic materials and finely minced components: wood – sawdust. Introducing new products (cheaper and healthier) on the Serbian market. Besides detailed technology process description, equipment and software description are necessary too. Investment in technology no more than 100 000 euros. The company is looking for partners with proven and applicable technology, with developed production and willingness to produce it further through manufacturing agreement and/or joint venture on a new market.

#### Technical Specifications / Specific technical requirements of the request

Technology of preparing plastic; Technology of plastic exstrusion, injection moulding and compression molding. Technology will be used for production of everyday products (floors, toys, Household products, etc.); for production of products without any special requirements (for medical and food industry, chemical industry).

#### Nowoczesne urządzenie ostrzące do pił.

Modern sharpener device for saw technology.

(Ref: 10 PL 64BH 3K4W)

A company from south-east Poland is looking for sharpener device for circular saw blades technology. Company's main activity is machining of steel elements. Commercial agreement with technical assistance is sought.

#### Description:

The company is looking for new solution for cost-cutting and to accelerate production process. Till now process of sharpening is taken to outside company which takes especially time. Blades are used in company on the daily basis. Idea is to find technology/device to do sharpening without time loss and money. Best solution would fully automatic device managed by computer that also would ensure highest quality.

#### Technical Specifications / Specific technical requirements of the request

Device should be able to:

- sharper blades with diameter from 80 mm to 700 mm;
- give high quality;
- quiet work;
- easy to operate/fully automatic
- quality controlled by computer

#### Wysoko wydajne maszyny CNC.

High performance Computer Numerical Controlled (CNC) machines.

(Ref: 10 IT 53U9 3JYE)

An Italian company, producing models and dies for foundry, is looking for new 5-axis CNC machines ensuring high performances in terms of accuracy and speed.

The company is interested in commercial agreements.

#### Description:

An Italian company, realizing models and dies for foundry, is looking for advanced CNC machines ensuring to meet the requests of clients for more and more reduced costs, while keeping the accuracy of the product.

The interest of the company is particularly focused on machining of wood, resin and aluminum alloys.

#### Technical Specifications / Specific technical requirements of the request

The 5-axis CNC machines sought should allow to work with a die of 3000x2000x1500 cubic mm at 4000 mm/sec speed.

#### Technologia do poprawy działania maszyn CNC.

Technology to improve Computer Numerical Controlled (CNC) machine performances. (Ref: 10 IT 53U9 3JYC)

An Italian company, realizing models and dies for foundry, is interested in the improvement of the performances of the CNC machines used at present in its production process, particularly for machining of wood, resin and aluminum alloys. The company is looking for technologies increasing speed without affecting the accuracy. It is interested in commercial agreements.

#### Description:

An Italian company, producing models and dies for foundry, using CAD-CAM systems and CNC machines, needs to improve the performances of the latter, especially when applied to machining of wood, resin and aluminum alloys. This is a way to meet the request of cost reduction coming from clients.

Then, it is looking for technologies to be applied to its CNC machines ensuring the increase of speed, without affecting accuracy.

#### Technical Specifications / Specific technical requirements of the request

The technologies sought should ensure:

- Speed > 400 mm/sec

- Processing field: 3000x2000x1500 cubic mm

#### Frezarka do polistyrenu ekstrudowanego.

#### Milling Machine for Extruded Polystyrene.

(Ref: 10 RO 75DU 3JVJ)

A Romanian company is looking an milling machine for extruded polystyrene. This machine will be used for production of large decorative and signage elements. The technology can either be at the laboratory stage or fully developed.

#### Description:

The company is specialized in developing integrated systems of decorating shopping centers. They develop original concepts, translate them into specific design solutions and then produce them. At this moment they have a small milling machine for extruded polystyrene but they want to increase their range making large decorative and signage elements.

The technology should have a big portal for milling big sized objects from soft material like extruded polystyrene. The milling machine can have a large use range for milling many type of materials.

#### Technical Specifications / Specific technical requirements of the request

The technology should have a big portal and should work with independently controllable over 3 axes for 3D objects, rotation, lathe and should have very high precision cutting quality.

### System obróbki mosiądzu – kucie mosiądzu na gorąco oraz technologie precyzyjnej obróbki.

Brass Processing Systems-brass hot forging and precision machining technologies. (Ref: 10 IL 80ER 3JSK )

An Israeli manufacturer specializes in the brass hot forging and precision machining technologies, which has developed and manufactures a wide range of ball valves, special valves and accessories on demand is searching a partner company to develop and manufacture their systems. The company is seeking partners in Europe which have an industrial process and experience in ball valves brass processing.

#### Description:

An Israeli company, a leader in manufacturing from brass the following: ball valves, special valves and accessories on demand by using brass hot forging and precision technologies.

The main materials are copper alloys, brass and DZR brass approved for use with drinking water. These allow full control of water, gas, petrol and oil flow.

The greatest advantage with these production methods is that parts are made from one piece of metal with no seams or weak points. Consequently they have outstanding strength and stability, providing reliable service for years.

The company is looking for partners who are interesting to manufacture those brass products and have an ability to assist and further developing its products.

#### Technical Specifications / Specific technical requirements of the request

Expertise in DZR brass hot forging and precision machining technologies including copper alloys.

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Oferta sieci adresowana jest do przedsiębiorców i obejmuje przede wszystkim:

- udzielanie informacji i doradztwo w zakresie możliwości finansowania działalności gospodarczej oraz prawa Unii Europejskiej,
- pomoc w wyszukiwaniu partnerów zagranicznych (m.in. poprzez bazy danych zawierające oferty współpracy technologicznej i biznesowej),
- pomoc we wdrażaniu innowacji i rozwoju badań prowadzonych przez przedsiębiorstwa oraz pozyskiwaniu funduszy na prowadzenie działalności badawczej (w tym uczestnictwo w 7. Programie Ramowym).

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