

Search history

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Search 2: FT=(Robot (gas 1w detection) caterpillar) (Results 0)
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Search 4: FT=((gas 1w detection)) (Results 13094)
Search 5: FT=((gas 1w sensor)) (Results 32378)
Search 6: FT=(robot or device or machine) (Results 1000000)
Search 7: 4 and 6 (Results 8556)
Search 8: 7 and caterpillar (Results 0)
Search 9: 4 and 5 (Results 3398)
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Search 11: 9 and transmitter (Results 83)
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Search 13: gas and 12 (Results 14)

Title: PROCESS FOR MACHINING A WORKPIECE IN A PROCESSING STATION WITH A **ROBOT**

Abstract: The workpiece (1) is conveyed by a multi-axled industrial **robot** to a processing machine (5) using a pick-up appliance (4). During processing the workpiece is held in position using pairs (6,7) of pins and holes between the workpiece and or the pick-up appliance and a positioning appliance (8) in relation to the processing machine. The workpiece is fixed against the positioning appliance. The workpiece is processed with a number of processing units (13,13') with spindles (14,14') whose forward thrust is adjustable. The workpiece is moved from a processing position with one row of pins and holes (6-12") to the next.

Classifications:

International (IPC 8-9): B23Q16/00 B23Q35/02

B25J19/00 (Advanced/Invention);

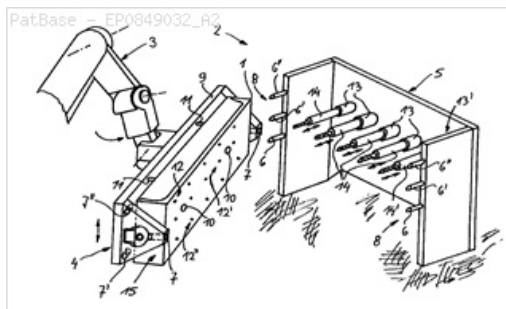
B23Q16/00 B23Q35/00 B25J19/00 (Core/Invention)

International (IPC 1-7): B23Q16/0 B23Q16/00 B23Q16/00

B23Q35/02 B23Q35/02 B23Q35/2 B23Q7/04 B25J19/00

CPC: B25J15/0095 B23Q35/02 B23Q16/001 B25J19/00

European: B23Q16/00C B23Q35/02 B25J19/00



Family:

Publication number	Publication date	Application number	Application date
DE19652465 A1	19980618	DE19961052465	19961217
DE59704598 D1	20011018	DE19975004598	19971121
EP0849032 A2	19980624	EP19970120407	19971121
EP0849032 A3	19980701	EP19970120407	19971121
EP0849032 B1	20010912	EP19970120407	19971121
ES2163703 T3	20020201	ES19970120407T	19971121

Priority:

DE19961052465 19961217 DE19975004598 19971121

Probable Assignee: BAYERISCHE MOTOREN WERKE AG

Assignee(s): (std): BAYERISCHE MOTOREN WERKE AG

Assignee(s): BAYERISCHE MOTOREN WERKE AG 80809 MUENCHEN DE ; BAYERISCHE MOTOREN WERKE AKTIENGESELLSCHAFT ; BAYERISCHE MOTOREN WERKE 80809 MUENCHEN DE AG

Inventor(s): (std): GROSS JOHANN ; HENSE PAUL ; STEINBICHLER RAINER

Inventor(s): STEINBICHLER RAINER 85716 UNTERSCHLEISHEIM DE ; HENSE PAUL 85764 OBERSCHLEISHEIM DE ; GROSS JOHANN 81475 MUENCHEN DE

Designated states: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

Title: VACUUM SUCTION HEAD, AND VACUUM SUCTION DEVICE AND TABLE USING THE SAME

Abstract: Source: US2007200377A A vacuum suction head of the present invention can be applied to a large-sized liquid crystal display panel and can reliably suck an object to be sucked even if the object has undulation or flexure. The suction head has a shaft, which holds a suction pad, and **gas** is charged into and discharged from the suction pad through a suction hole. A casing holds the shaft through first and second springs so as to be movable in the axial direction. Since the suction pad is elastically supported by the springs, the suction pad can reliably suck the object to be sucked having undulation or flexure. The vacuum suction head can be used for a vacuum suction device and a working table.

Classifications:

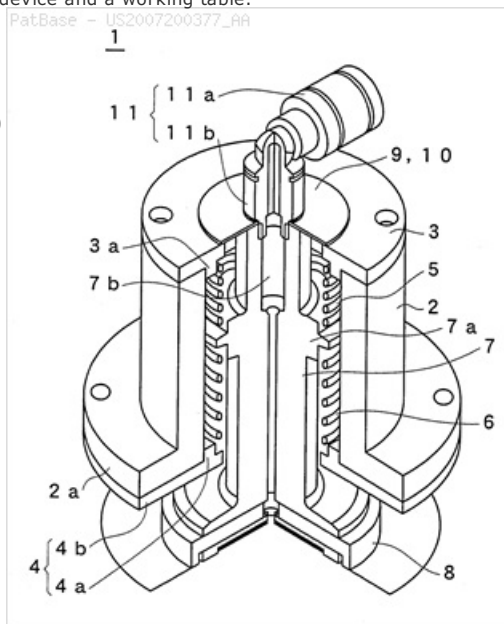
International (IPC 8-9): B25B11/00 B25J15/06 B25J19/00 B25J5/06 B65G47/91 B65G49/06 H01L21/677 H01L21/683 (Advanced/Invention); B25B11/00 B25J15/06 B25J19/00 H01L21/67 (Core/Invention)

International (IPC 1-7): B25J19/0 B25J5/06 B65G47/91

CPC: H01L21/6838 B25B11/005 B25B11/007 B25J15/0616 B25J19/00 B25J15/06

European: B25B11/00C B25B11/00C1 B25J15/06V H01L21/683V

US: 294/188 294/188P 294/64.1 294/65



Family:

Publication number	Publication date	Application number	Application date
AT420751 E	20090115	AT20040818977T	20041119
CN100445049 C	20081224	CN200480034242	20041119
CN1882425 A	20061220	CN200480034242	20041119
DE602004019132 D1	20090305	DE200460019132T	20041119
EP1685930 A1	20060802	EP20040818977	20041119
EP1685930 A4	20071010	EP20040818977	20041119
EP1685930 B1	20090114	EP20040818977	20041119
JP2005049287 A1	20080306	JP20050515658	20041119
JP4724562 B2	20110713	JP20050515658	20041119
KR101142346 B1	20120518	KR20067010805	20041119
KR20060126485 A	20061207	KR20067010805	20041119
TW200529997 A	20050916	TW20040135826	20041122
TWI346034 B	20110801	TW20040135826	20041122
US2007200377 AA	20070830	US20040595901	20041119
US7665783 BB	20100223	US20040595901	20041119
WO05049287 A1	20050602	WO2004JP17255	20041119

Priority:

JP20030392157 20031121 JP20050515658 20041119 WO2004JP17255 20041119

Probable Assignee: MITSUBOSHI DIAMOND INDUSTRIAL CO LTD

Assignee(s): (std): MITSUBOSHI DIAMOND IND CO LTD ; MITSUBOSHI DIAMOND IND CO LTDL ; NISHIO YOSHITAKA

Assignee(s): MITSUBOSHI DIAMOND IND CO ; MITSUBOSHI DIAMOND INDUSTRIAL CO ; MITSUBOSHI DIAMOND INDUSTRIAL CO LTD

Inventor(s): (std): NISHIO YOSHITAKA ; YOSHITAKA NISHIO

Agent(s): TBK-PATENT; MCGLEW AND TUTTLE PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: ANIMATRONIC AND PORTABLE DEVICE

Abstract: Source: US2006121823A The invention provides an animatronic and portable device comprising an animatronic enclosure and a circuit board. The animatronic enclosure includes a plurality of animatronic parts equipped with limb units that are driven by actuator unit and transmission unit. The circuit board comprises a main control unit, a memory unit and actuator units. Programs and data are stored in the memory unit and employed by the main control unit for controlling the rotation angles, speed, acceleration, direction of the limb units and showing animatronic motion, displaying image, playing music.

Classifications:

International (ipc 8-9): A63H13/00 A63H3/28 B25J19/00 B25J9/16 H04M1/00 H04M1/02 H04M1/11 H04M1/21

H05K7/00 (Advanced/Invention);

B25J19/00 B25J9/16 H04M1/11 (Advanced/Non-invention);

A63H13/00 A63H3/00 B25J19/00 B25J9/16 H04M1/00 H04M1/02

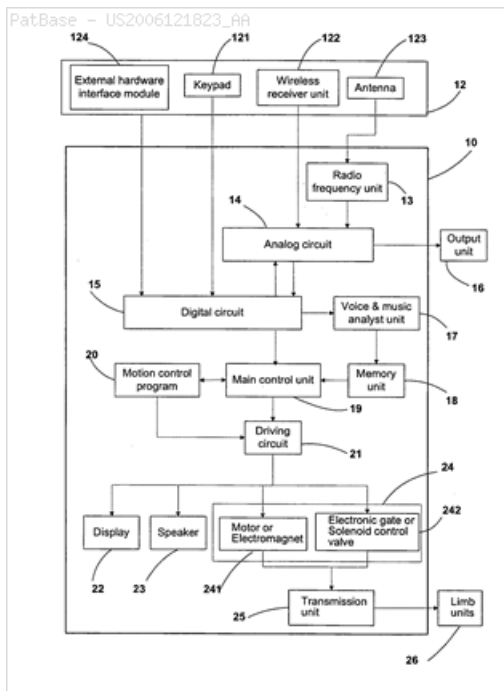
H04M1/11 H04M1/21 H05K7/00 (Core/Invention)

International (ipc 1-7): H05K7/00

CPC: A63H13/00 H04M1/0279 B25J9/16 B25J19/00 H04M1/11

European: A63H13/00 H04M1/02A16

US: 446/298

**Family:**

Publication number	Publication date	Application number	Application date
JP2006166437 A2	20060622	JP20050343335	20051129
KR20060063673 A	20060612	KR20050114662	20051129
TWM282465 Y	20051201	TW20040219607U	20041203
US2006121823 AA	20060608	US20050287425	20051128

Priority:

TW20040219607U 20041203

Probable Assignee: CHANG HO YU

Assignee(s): (std): CHANG HO YU

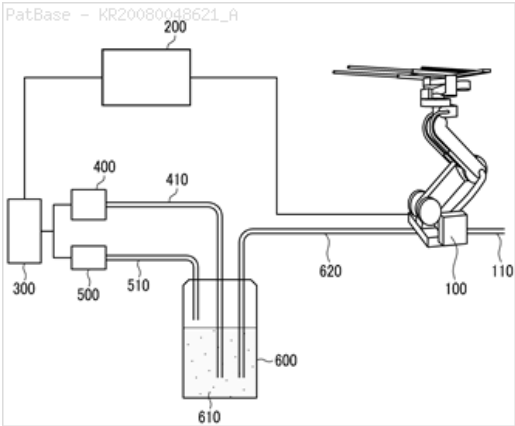
Inventor(s): (std): CHANG HO YU

Agent(s): KIMURA TAKAHISA; BACON AND THOMAS PLLC

Title: AUTOMATIC LUBRICATING OIL SUPPLYING METHOD FOR TRANSFER **ROBOT** AND APPARATUS THEREOF

Abstract: Source: KR20080048621A An automatic oil lubricating method for a transfer **robot** and a device thereof are provided to prevent an unexpected failure of the transfer **robot** by lubricating oil according to a measurement of an operating electric current of the transfer **robot**. An automatic oil lubricating device for a transfer **robot** comprises the followings: a transfer **robot**(100) transferring a board; an abnormality detecting unit(200) measuring an operating electric current of the transfer **robot**; a lubrication control unit(300) controlling supply of lubrication oil by receiving a signal of the abnormality detecting unit; an oil supplying tank(600) supplying the lubrication oil to the transfer **robot**; a lubrication oil tank(400) supplying the lubrication oil to the oil supplying tank; and a **gas** tank(500) supplying **gas** to the oil supplying tank. The lubrication oil is supplied from the lubrication oil tank to the transfer **robot** using **gas** pressure supplied from the **gas** tank.

Classifications:
International (IPC 8-9): B25J1/00 B25J19/00 (Advanced/Invention);
B25J1/00 B25J19/00 (Advanced/Non-invention);
B25J1/00 B25J19/00 (Core/Invention)
CPC: B25J19/00 B25J1/00



Family:

Publication number	Publication date	Application number	Application date
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Priority:

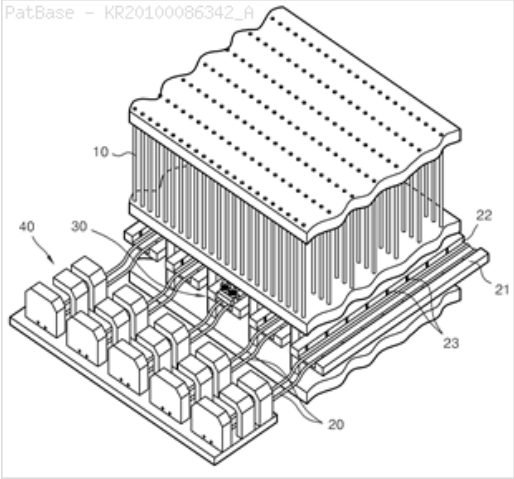
KR20060118800 20061129

Probable Assignee: SAMSUNG ELECTRONICS CO LTD
Assignee(s): (std): SAMSUNG ELECTRONICS CO LTD
Assignee(s): SAMSUNG ELECTRONICS CO
Inventor(s): (std): KIM JONG SOO ; KIM YONG SAM ; KIM YOUNG IL ; LIM YOUNG CHEUL

Title: TEMPERATURE MEASURING APPARATUS OF COMBUSTIONCHAMBER IN A COKE OVEN

Abstract: Source: KR20100086342A PURPOSE: A temperature measuring apparatus of the combustion chamber in a coke oven is provided to accurately measure the temperature of a combustion chamber automatically at a desired time through the rich gas pipe connected to the combustion chamber. CONSTITUTION: A temperature measuring apparatus of the combustion chamber in a coke oven comprises a rail(20), a temperature measuring robot(30) and a robot holding part(40). The rail is installed on downstream of a rich gas pipe(10) along the arrangement direction of the rich gas pipe. The temperature measuring robot moves along the rail. The temperature measuring robot comprises a temperature measuring sensor measuring the temperature of a combustion chamber through a plurality of rich gas pipes. The robot holding part is installed around the rail deviated from the rich gas pipe. The robot holding part washes and holds the temperature measuring robot. The temperature measuring sensor comprises an infrared thermometer.

Classifications:
International (IPC 8-9): B25J19/00 B25J5/00 G01K1/00 G01K13/02 (Advanced/Invention); B25J19/00 B25J5/00 G01K1/00 G01K13/02 (Advanced/Non-invention); B25J19/00 B25J5/00 G01K1/00 G01K13/00 (Core/Invention)
CPC: G01K1/146 B25J19/00 G01K13/02 G01K2013/024



Family:

Publication number	Publication date	Application number	Application date
KR100978138 B1	20100825	KR20090005653	20090122
KR20100086342 A	20100730	KR20090005653	20090122

Priority:

KR20090005653 20090122

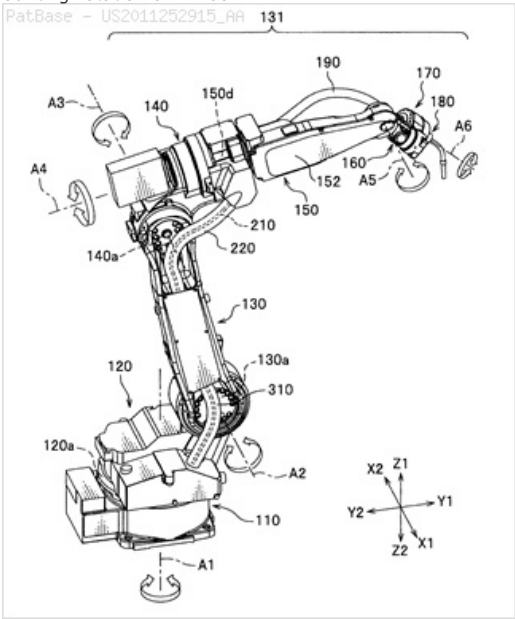
Probable Assignee:	FUSANG CO LTD
Assignee(s): (std):	FUSANG CO LTD
Assignee(s):	FUSANG CO
Inventor(s): (std):	LEE SANG RYUEL

Title: INDUSTRIAL **ROBOT**

Abstract: Source: US2011252915A The present invention is characterized by arranging a flow path 200 for supplying driving **gas** to a tool mounting portion 170 from a **robot** base 110 to the tool mounting portion 170 through the interiors of a rotation frame 120, a tube 220, a shoulder 140, a swing arm 150 and a tool mounting rotation arm 160.

Classifications:

International (ipc 8-9): B25J17/00 B25J18/04 B25J19/00
B25J9/06 (Advanced/Invention)
CPC: Y10T74/20311 B25J19/0029 B25J9/06 B25J19/00
European: B25J19/00E2
US: 74/490.02 74/490.020P 901/15 901/41 901/41S 901/8



Family:

Publication number	Publication date	Application number	Application date
CN102218743 A	201111019	CN201110096518	20110413
CN102218743 B	20141119	CN201110096518	20110413
JP2011218524 A2	20111104	JP20100093152	20100414
JP5450223 B2	20140326	JP20100093152	20100414
KR101285971 B1	20130712	KR20110034356	20110413
KR20110115095 A	20111020	KR20110034356	20110413
US2011252915 AA	20111020	US20110074527	20110329
US8631720 BB	20140121	US20110074527	20110329

Priority:

JP20100093152 20100414

Probable Assignee: DAIHEN CORP

Assignee(s): (std): KOBE STEEL LTD ; YOON SUNGJAE ; NAKAGIRI HIROSHI ; KONDO MAKOTO ; MINATO TATSUJI ; DAIHEN CORP

Assignee(s): KOBE SEIKO SHO KK

Inventor(s): (std): KONDO MAKOTO ; MINATO TATSUJI ; NAKAGIRI HIROSHI ; YOON SUNGJAE ; YOON SUNG JAE ; TATSUJI MINATO ; SUNGJAE YOON ; MAKOTO KONDO ; KONDO AKIRA ; I SEISAI ; HIROSHI NAKAGIRI

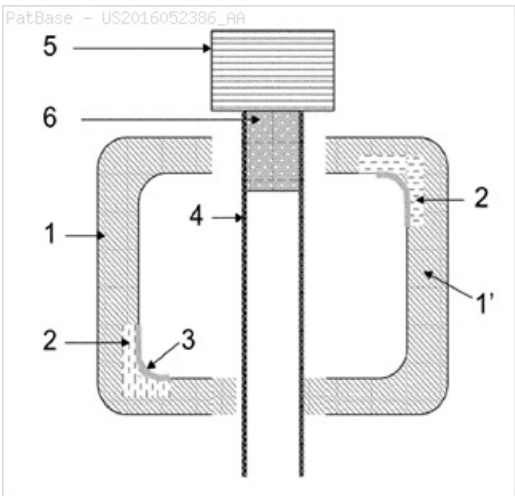
Agent(s): ISONO MICHIZO; OBLON SPIVAK MCCLELLAND MAIER AND NEUSTADT LLP

Title: METHOD FOR MANUFACTURING A FUEL TANK OR FILLING PIPE AND USE THEREOF IN A HYBRID VEHICLE

Abstract: Source: US2016052386A A method for manufacturing a fuel tank or filling pipe including a wall made of thermoplastics material and a fibrous reinforcement over at least part of the surface thereof, the method including: heating the fibrous reinforcement to bring the fibrous reinforcement into an at least partially molten state; introducing the heated fibrous reinforcement, and the wall in at least partially molten state, into a mold; and welding the fibrous reinforcement to the wall using pressure of a **gas** which inflates the wall and presses the heated fibrous reinforcement firmly against the wall in the molten state.

Classifications:

International (IPC 8-9): B25J15/06 B25J19/00 B29C33/12 B29C49/00 B29C49/04 B29C49/18 B29C49/20 B29C49/48 B29C51/02 B29C51/10 B29C51/12 B29C51/30 B60K15/03 B60K15/04 F16L9/133 (Advanced/Invention)
CPC: B29C2049/2073 B60K15/03177 B29C49/0047 F16L9/133 B25J15/0616 B25J19/00 B29K2023/065 B29C2049/0057 B29K2105/089 B29K2105/256 B29L2031/7172 B60K2015/03032 B60K2015/03493 B29C49/04 B29C49/20 B29C2049/2017 B29C2049/2065 B29C2049/2095
US: 138/142 220/562 264/516 294/185 425/526



Family:

Publication number	Publication date	Application number	Application date
CN105377528 A	20160302	CN201480019386	20140328
EP2978583 A1	20160203	EP20140713483	20140328
FR3003792 A1	201411003	FR20130052941	20130329
FR3003792 B1	20150626	FR20130052941	20130329
JP2016519623 T2	20160707	JP20160504708T	20140328
KR20160042400 A	20160419	KR20157030830	20140328
US2016052386 AA	20160225	US20140781143	20140328
WO14154900 A1	201411002	WO2014EP56375	20140328

Priority:

FR20130052941 20130329 WO2014EP56375 20140328

Probable Assignee: PLASTIC OMNIUM ADVANCED INNOVATION AND RESEARCH

Assignee(s): (std): BOUCAUX ERIC ; CRIEL BJORN ; DE KEYZER PIERRE ; INERGY AUTOMOTIVE SYSTEMS RES ; PLASTIC OMNIUM ADVANCED INNOVATION AND RES

Assignee(s): INERGY AUTOMOTIVE SYSTEMS RESEARCH SOCIETE ANONYME ; PLASTIC OMNIUM ADVANCED INNOVATION AND RESEARCH

Inventor(s): (std): BOUCAUX ERIC ; CRIEL BJORN ; DE KEYZE PIERRE ; DE KEYZER PIERRE

Inventor(s): ERIC BOUCAUX ; PIERRE DE KEYZE ; BJORN CRIEL

Agent(s): REMY VINCENT NOEL PAUL; LLR; CABINET LHERMET LA BIGNE AND REMY; REMY VINCENT

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: **ROBOT**

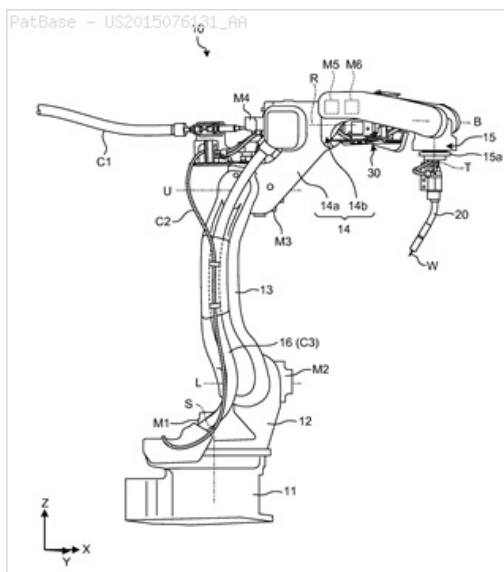
Abstract: Source: US2015076131A A **robot** according to an embodiment includes a flange, a wrist arm, a forearm, a feeder, and a power cable. The flange configured so that a welding torch is attached thereto and configured to rotate about a T axis. The wrist arm configured to rotate about a B axis substantially perpendicular to the T axis and configured to support the flange. The forearm configured to support the wrist arm. The feeder attached to a position between a base end and a tip end of the forearm and configured to feed a welding wire. The power cable is a supply route of electricity to the welding torch and is provided separately from a feeding route of the welding wire.

Classifications:

International (IPC 8-9): B23K37/02 B23K9/00 B23K9/12 B23K9/133 B23K9/29 B25J17/02 B25J18/00 B25J19/00 (Advanced/Invention)

CPC: B23K9/295 Y10S901/42 Y10S901/27 Y10S901/39 Y10S901/14 B23K37/0282 Y10S901/28 B23K9/133 B25J17/0283 B25J19/00 B25J19/0025

US: 219/137.63 228/41 901/14 901/27 901/28 901/39 901/42



Family:

Publication number	Publication date	Application number	Application date
CN104439627 A	20150325	CN201410478426	20140918
CN104440942 A	20150325	CN201410462264	20140911
CN104440942 B	20160406	CN201410462264	20140911
DE602014001052 D1	20160421	DE201460001052T	20140919
DE602014001053 D1	20160421	DE201460001053T	20140919
EP2851163 A1	20150325	EP20140185509	20140919
EP2851163 B1	20160309	EP20140185509	20140919
EP2851164 A1	20150325	EP20140185573	20140919
EP2851164 B1	20160309	EP20140185573	20140919
JP2015058459 A2	20150330	JP20130194668	20130919
JP2015085380 A2	20150507	JP20130228586	20131101
JP5895914 B2	20160330	JP20130194668	20130919
JP5920314 B2	20160518	JP20130228586	20131101
US2015076131 AA	20150319	US20140490654	20140918
US2015076213 AA	20150319	US20140490652	20140918
US9643277 BB	20170509	US20140490654	20140918

Priority:

EP20140185509 20140919 EP20140185573 20140919 JP20130194668 20130919
JP20130228586 20131101

Probable Assignee: YASKAWA DENKI SEISAKUSHO KK

Assignee(s): (std): YASKAWA DENKI KK ; YASKAWA ELECTRIC CORP ; YASKAWA DENKI SEISAKUSHO KK

Assignee(s): YASKAWA DENKI KITAKYUSHU SHI KK

Inventor(s): (std): ATSUSHI TERADA ; KAZUHIRO YASUTOMI ; TERADA ATSUSHI ; YASUTOMI KAZUHIRO ; TERADA ATSUHI

Inventor(s): TERADA ATSUHI KITAKYUSHU SHI ; YASUTOMI KAZUHIRO KITAKYUSHU SHI

Agent(s): GRUENECKER PATENT U RECHTSANWALTE PARTG MBB; GRUENECKER PATENT U RECHTSANWALTE PARTG MBB; SAKAI HIROAKI; MORI AND WARD LLP

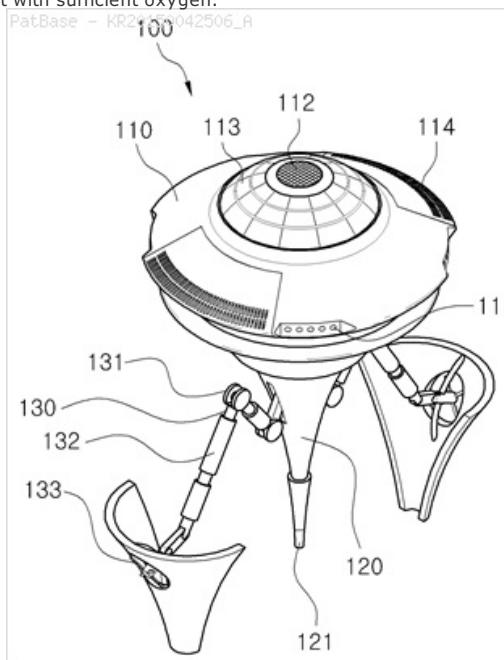
Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Title: MICRO NANO OXYGEN SPRAY **ROBOT**

Abstract: Source: KR20150042506A The present invention relates to a micronano oxygen spraying **robot** which comprises: a head unit where multiple LED units are formed along the outer circumference, an inlet unit for inflow of water is formed in the upper part, a solar cell is formed on the circumference of the inlet unit in order to obtain thermal energy of the sun for providing electric power, and a vent is formed in order to be open or closed; a main body unit which is coupled to the lower part of the head unit, and where a GPS unit is formed in order to transmit and receive position signals; leg units which are coupled to both sides of the outer circumference of the main body unit, are extended by having multiple joints and rotary members, and have a propeller at the end; and a control unit which controls the head unit, the main body unit, and the leg unit. An oxygen generating unit is formed inside the head unit and the main body unit in order to generate micronano oxygen using a liquid and **gas** flowing in through the vent. An exhaust is formed in the lower part of the head unit in order to discharge the oxygen generated from the oxygen generating unit. Therefore, the micronano oxygen spraying **robot** can prevent a red tide phenomenon which contaminates the marine ecosystem by including the oxygen generating unit that generates micronano oxygen in order to form an marine environment with sufficient oxygen.

Classifications:**International (IPC 8-9):** B25J11/00 B25J19/00

B25J7/00 (Advanced/Invention)

CPC: B25J7/00 B25J11/00 B25J19/00 C02F1/74**Family:**

Publication number	Publication date	Application number	Application date
KR101539855 B1	20150728	KR20130121237	20131011
KR20150042506 A	20150421	KR20130121237	20131011

Priority:

KR20130121237 20131011

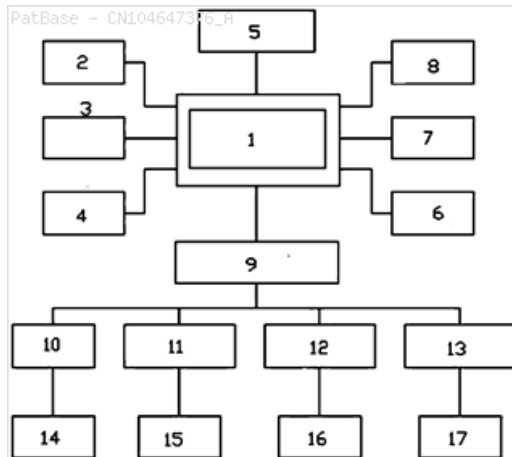
Probable Assignee: HANBAT NATIONAL UNIV IND ACADEMIC COOPERATION FOUNDATION**Assignee(s):** (std): HANBAT NATIONAL UNIV IND ACADEMIC COOPERATION FOUNDATION**Assignee(s):** HANBAT NATIONAL UNIVERSITY INDUSTRY ACADEMIC COOPERATION FOUNDATION**Inventor(s):** KIM JANG SEOK ; KIM WOO YOUL

Title: CONTROL SYSTEM OF SMALL DOMESTIC ROBOT

Abstract: Source: CN104647376A Disclosed is a control system of a small domestic robot. The control system comprises a cpu controller, wherein the cpu controller is connected with subunits. The subunits comprise a display unit, a camera shooting system, a sensor set, a connecting port, a positioning module, a voice module, an alarm module and a driving unit. The driving unit comprises a driving motor, a robot body rotation mechanism, an arm movement mechanism, a palm movement mechanism, wheels, a robot body, arms and palms. The sensor set comprises a temperature and humidity sensor, a gas detection sensor, an infrared sensor and an illumination sensor. The control system can achieve automatic operation of the robot body, the arms and the palms of the robot, meets the requirement of the robot for monitoring the indoor environment, and fulfills the function of voice conversations between a user and a machine. A cpu controls subsystems to move, the requirement of the robot for monitoring the indoor environment can be met, and the function of the voice conversations between the user and the machine is fulfilled. The control system has the advantages of being simple, convenient to operate and high in practicability.

Classifications:**International (IPC 8-9):** B25J19/00 B25J19/02

B25J9/16 (Advanced/Invention)

CPC: B25J9/0003 B25J9/1602 B25J19/00 B25J19/02**Family:**

Publication number	Publication date	Application number	Application date
CN104647376 A	20150527	CN201310604386	20131121

Priority:

CN201310604386 20131121

Probable Assignee: XI AN DAYU PHOTOELECTRIC TECH**Assignee(s):** (std): XI AN DAYU PHOTOELECTRIC TECH**Assignee(s):** XI AN DAYU PHOTOELECTRIC TECHNOLOGY CO ; WEST AN DAYU OPTOELECTRONICS TECHNOLOGY CO LTD**Inventor(s):** (std): PU WEIXIN ; ZHANG CHAO

Title: INDUSTRIAL **ROBOT**

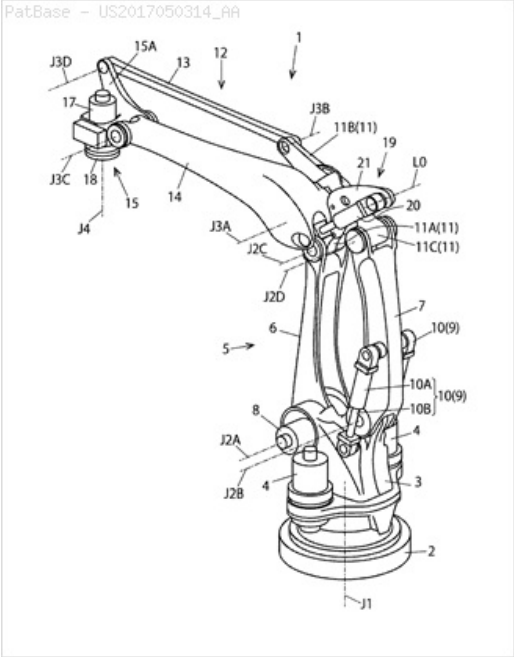
Abstract: Source: US2017050314A A **robot** includes a lower arm mechanism having a first parallel link structure, an upper arm mechanism having a second parallel link structure, a base portion forming a lower side part of the first parallel link structure, a wrist portion forming a distal side part of the second parallel link structure, an intermediate connection portion forming an upper side part of the first parallel link structure and a proximal side part of the second parallel link structure, and an upper arm biasing unit for applying a biasing force against a rotating operation in a direction that the wrist portion descends to an upper arm configuring a lower side part of the second parallel link structure. According to the **robot**, the range of the portable mass of an object can be expanded without enlarging an arm drive motor and declining an arm operation speed.

Classifications:

International (IPC 8-9): B25J17/02 B25J18/00 B25J19/00 B25J9/04 B25J9/06 B25J9/10 (Advanced/Invention)

CPC: B25J19/00 B25J9/106 B25J18/00 B25J19/0075 B25J19/0091 B25J9/042 B25J19/0016 B25J19/002 B25J9/1687 B25J9/06 Y10S901/48

US: 74/490.05



Family:

Publication number	Publication date	Application number	Application date
CN106255575 A	20161221	CN201580023394	20150331
EP3138670 A1	20170308	EP20150786446	20150331
JP2015208814 A2	20151124	JP20140092297	20140428
KR20160148636 A	20161226	KR20167032916	20150331
TW201600274 A	20160101	TW20150112928	20150422
US2017050314 AA	20170223	US20150307438	20150331
WO15166757 A1	20151105	WO2015JP60092	20150331

Priority:

JP20140092297 20140428 WO2015JP60092 20150331

Probable Assignee: KAWASAKI HEAVY IND LTD

Assignee(s): (std): KAWASAKI HEAVY IND LTD

Assignee(s): KAWASAKI JUKOGYO KK

Inventor(s): (std): TANABE MASATAKA ; YOSHIDA TETSUYA

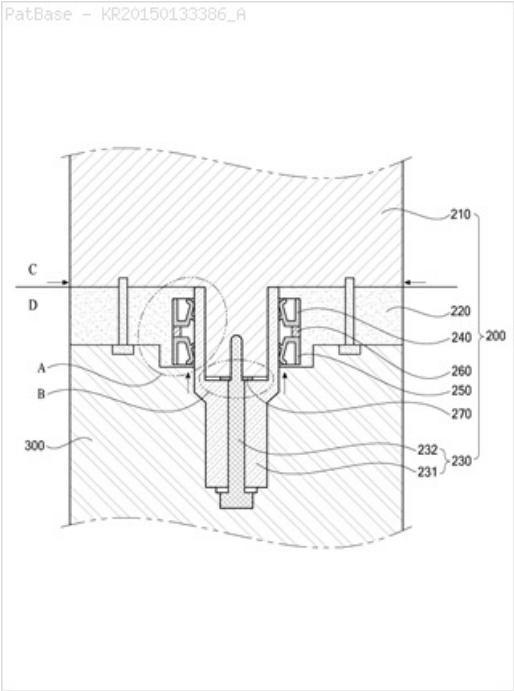
Agent(s): MUELLER BORE AND PARTNER PATENTANWALTE PARTG MBB; NAZUKA SATOSHI ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: APPARATUS FOR DRIVING PAINTING ROBOT AND PAINTING ROBOT INCLUDING THE SAME

Abstract: Source: KR20150133386A The present invention relates to a driving apparatus for a painting robot including: a driving part which is installed to be located in an explosion proof area maintained at a first pressure in the painting robot; a support part which is installed in the painting robot to be located between a non-explosion proof area maintained at a second pressure lower than the first pressure and the explosion proof area, and supports the driving part; a rotation part whose one side is connected to a decelerator installed in the non-explosion area and the other side is connected to the driving part installed in the explosion proof area; a first blocking part which is installed between the support part and the rotation part in order to block a gas existing in the explosion proof area from moving to the non-explosion proof area; and a second blocking part which is installed between the support part and the rotation part in order to block a lubricant to lubricate the decelerator from moving to the explosion proof area, and the painting robot including the same. According to the present invention, the driving apparatus can save costs required for the replacement and maintenance as the decelerator is prevented from being damaged or broken by blocking the gas existing in the explosion proof area from leaking to the non-explosion proof area.

Classifications:
International (IPC 8-9): B05B12/00 B25J19/00 (Advanced/Invention)
CPC: B25J19/00 B05B12/00



Family:

Publication number	Publication date	Application number	Application date
KR20150133386 A	20151130	KR20140059953	20140519

Priority:
KR20140059953 20140519

Probable Assignee: HYUN DAI HEAVY IND CO LTD
Assignee(s): (std): HYUN DAI HEAVY IND CO LTD ; HYUNDAI HEAVY IND CO LTD
Assignee(s): HYUNDAI HEAVY INDUSTRIES CO LTD ; HYUNDAI HEAVY IND CO
Inventor(s): (std): CHOI HEE BYOUNG ; LEE SANG HUN

Title: ACTUATOR DEVICE, HUMANOID **ROBOT** AND POWER ASSIST DEVICE

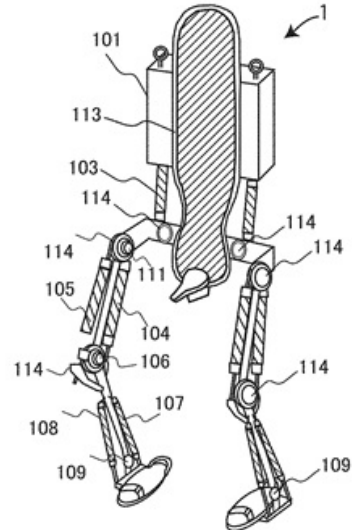
Abstract: Source: US2017198728A [Object] To provide a compact, high-output actuator device allowing force control. [Solution] An actuator device **1000** includes an electromagnetic coil member **110** provided over a prescribed width on an outer circumference of a cylinder **100**, and a movable element **200** slidable as a piston in the cylinder **100**. The movable element **200** has a magnetic member **202**, and is moved relatively by excitation of the electromagnetic coil member **110**. Fluid is supplied to first and second chambers **106a** and **106b** such that when the movable element **200** is to be moved relatively, the movable element **200** is driven in the same direction.

Classifications:

International (IPC 8-9): A61F2/70 A61F2/74 A61H3/00 B25J11/00 B25J19/00 B25J5/00 B25J9/00 F15B15/08 F15B15/12 F15B15/14 F15B15/20 F15B21/08 H02K33/00 H02K33/16 H02K41/03 H02K41/035 H02K7/18 H02K7/20 (Advanced/Invention)

CPC: B25J19/00 H02K7/20 H02K33/16 H02K41/03 F15B15/088 B25J9/0006 A61F2/70 F15B15/20 F15B15/125 H02K41/031 H02K41/0352 A61H3/00 F15B2015/206 B25J11/00 F15B15/14 F15B21/08

PatBase - US2017198728_AA



Family:

Publication number	Publication date	Application number	Application date
CN106416026 A	20170215	CN201580027855	20150527
EP3151399 A1	20170405	EP20150799733	20150527
JP2016006345 A2	20160114	JP20140266466	20141226
JP2016191467 A2	20161110	JP20160138811	20160713
JP6035590 B2	20161130	JP20140266466	20141226
JP6163646 B2	20170719	JP20160138811	20160713
US2017198728 AA	20170713	US20150313791	20150527
WO15182634 A1	20151203	WO2015JP65173	20150527

Priority:

JP20140109213 20140527 JP20140266466 20141226 WO2015JP65173 20150527
JP20160138811 20160713

Probable Assignee: UNIV OSAKA

Assignee(s): (std): ADVANCED TELECOMMUNICATIONS RES INST INT ; UNIV OSAKA ; ADVANCED TELECOMMUNICATION RES INST INT ; ATR ADVANCED TELECOMM RES INST

Assignee(s): ADVANCED TELECOMMUNICATIONS RESEARCH INST INTERNATIONAL ; ADVANCED TELECOMMUNICATION RESEARCH INST INT ; ADVANCED TELECOMMUNICATION RESEARCH INSTITUTE INTERNATIONAL ; ADVANCED TELECOMMUNICATIONS RESEARCH INST INT ; OSAKA UNIV

Inventor(s): (std): ISHIGURO HIROSHI ; MORIMOTO JUN ; NAKATA YOSHIHIRO ; NODA TOMOYUKI

Agent(s): MUELLER HOFFMANN AND PARTNER; SAKAI MASAYUKI; SHIMIZU SATOSHI

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: COOLING DEVICE FOR PAINTING ROBOT AND PAINTING ROBOT INCLUDING THE SAME

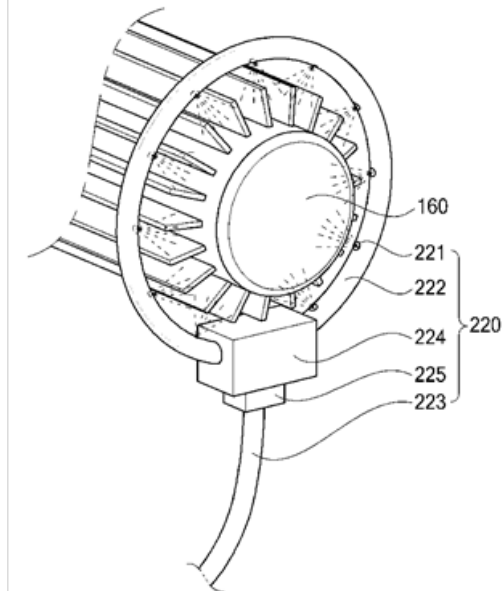
Abstract: Source: KR20160001771A The present invention includes a supply part which supplies an explosion-proof gas into a painting robot to maintain a higher pressure inside the painting robot than a pressure outside, and an explosion-proof line which supplies the explosion-proof gas supplied from the supply part into the painting robot. The explosion-proof line includes an injection hole for injecting the explosion-proof gas toward the driving part in order to cool the driving part which provides a driving force for driving the painting robot. According to the present invention, the lifespan of the driving part is extended. Therefore, costs for replacement and maintenance processes can be reduced by preventing the driving part of providing a driving force for performing a painting process from being damaged or broken due to overheat.

Classifications:

International (IPC 8-9): B05B12/00 B05B15/00
B25J19/00 (Advanced/Invention)

CPC: B05B12/00 B05B15/00 B25J19/00

PatBase - KR20160001771_A



Family:

Publication number	Publication date	Application number	Application date
KR20160001771 A	20160107	KR20140078892	20140626

Priority:

KR20140078892 20140626

Probable Assignee: HYUN DAI HEAVY IND CO LTD

Assignee(s): (std): HYUN DAI HEAVY IND CO LTD ; HYUNDAI HEAVY IND CO LTD

Assignee(s): HYUNDAI HEAVY INDUSTRIES CO LTD ; HYUNDAI HEAVY IND CO

Inventor(s): (std): CHOI HEE BYOUNG ; LEE SANG HUN