



Example of optical sorting units in a plant for the exploitation of plastics (polymers: ABS, PS, PA, PBT, PC, PE, PP, PET, PVC, PMMA, PUR, POM, mixed plastics PC+ABS, PPE+SB, PVC+ABS, ABS+TBBPA, flame retarded plastics ABS plus TBBPA ep, PS+TBBPA, PS+TBBPEep, electronic plates, metals). Productions from 0,5 to 8 t/h, modular machines which can be manufactured according to materials to be treated.

用于塑料回收利用光学分选机的示例 (塑料: 丙烯-丁二烯-苯乙烯 ABS、聚苯乙烯PS、聚酰胺/尼龙 PA、聚碳酸酯PBT、聚乙烯PC、聚丙烯PE、聚对苯二甲酸丁二酯PP、聚氯乙烯PET、聚氨酯PVC、聚甲基丙烯酸甲酯PMMA、硬质聚氨酯泡沫 PUR与聚脲树脂, 而混合型塑料有: PC+ABS, 聚苯醚PPE+苯乙烯-丁二烯共聚物SB, PVC+ABS、ABS + TBBPA四溴双酚A、阻燃塑料有: ABS+TBBPEep环氧树脂四溴双酚A、TBBPA + PS, PS + TBBPEep、电路板以及金属)。颗粒产品为0.5到8 t/h, 可应所处理的材料之需求对机床进行组合。



Very high speed of elaboration in the order of millions of recognizing per second, possibility of analyzing materials of dimensions from few millimeters upwards.

在相应要求之下能够以极快的速度依次识别数以万计的材料, 并可对仅数毫米或以上的材料进行分析。



**OPTICAL SORTING MACHINE
FOR SELECTION
AND EXPLOITATION
OF POST-CONSUME MATERIALS
AND QUALITY CONTROL**

对消费后
回收的材料进行识别、
回收利用以及对其质量控制的
光学分选机

- NEW-SSR2P
- SSR2P-N
- SSR2P-V
- SSR2B-PS
- SSR2-PM
- MDL

Identification through
NIR/SPECTROGRAPHIC
systems of:
different polymers, materials from
the building industry, asbestos, black plastics,
quality control, metal selection

通过近红外光谱/短波红外线系统
进行识别
高分子材料、建筑材料
、石棉、黑色塑料以及金属的质量控制与
分拣

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NEW-SSR2P

optical sorting machine with latest technological development equipped with BMCR4 belt
配有BMCR4传送带的最新升级版分选机

In a plant, it is possible to easily replace the manual multiple selection belt, positioning the machine on the same level as the belt, reusing the same stocking containers. It's possible to select 3 or more materials in a single passage with one machine.

可替代人工分拣传送带，并能够同时进行多个材料的分拣。在该装置的同一平面上安装有负载传送带的仪器，使其能够重复使用相同的贮藏箱。单步运行时可同时分拣3个或者更多的材料。在一台机器上便可完成。



Material dimensions: dimension above 30 mm.

选材尺寸：30毫米或以上

Selectable materials:

Plastics recycling
Plastics: PET, PE, PP, PS, PVC, PA
Liquid bottles: PE bottle, PE foil
Impurities: Paper, card board, wood, liquid packing board (TETRA), textiles
Mixed fractions: PET bottles with PE, PP or PVC label (important for Bottle-to-Bottle recycling)
Optional: HD-PE / LD-PE, PET / PET-G

Paper recycling
Input material: Waste paper from household or commercial waste collections
Paper (Deinking): Office paper, magazines, newspapers, catalogues
Paper (no Deinking): Cardboard, folding box
Optional: Identification of shrinkwrapped brochures, reducing Deinking lost
Plastics: PET, PE, PP, PS, PVC

选材:

塑料的回收
塑料:聚苯乙烯PET、聚丙烯PE、聚对苯二甲酸丁二酯PP、聚苯乙烯PS、聚氨酯PVC、聚酰胺/尼龙 PA
液体的塑料包装瓶:聚乙烯瓶、聚乙烯薄膜
杂质:纸张、纸板、木材、利乐包装、织物
混合物:贴有聚乙烯、聚丙烯或聚氯乙烯标签的聚酯瓶(在对瓶子回收时尤其重要)
选项:高密度聚乙烯 HDPE/低密度聚乙烯LDPE、聚氯乙烯PET/G-聚氯乙烯PET

废纸的回收

输入材料家用或工业所回收的废纸
脱墨废纸办公用纸、杂志、报纸、目录册
非脱墨废纸纸板、可折叠的纸箱
选项:识别折皱的小册子,从而减少脱墨废纸的遗漏
塑料:聚苯乙烯PET、聚丙烯PE、聚对苯二甲酸丁二酯PP、聚苯乙烯PS、聚氨酯PVC

SSR2B-PS

optical vertical sorting machine for black plastics
专用于黑色塑料的垂直分选机

The optical vertical sorting machine can select 2 or maximum 3 materials (2-3 exits maximum depending on the application) possibility of sorting black polymers, plynocoupled. It's possible to mount different ejection devices from 6 mm and upwards (standard, other solutions upon request).

垂直分选机可进行两个或最多三个材料的分拣。(根据应用程序其输出口最多也为两到三个材料,可分拣黑色聚合物并识别多层聚合物)。可装配6毫米以上的不同弹射系统(标准型或其它不同要求的系统)。



Materials dimensions: dimensions from 2 mm to 20 mm (the most adapt for granulates and other fine materials)

选材尺寸: 尺寸为2毫米至20毫米(最适合于颗粒剂和其他细粒材料)。

Selectable materials:

PET flakes
Plastics: PS, PA, PC, PE, PP, PET, PVC, PMMA
Mixed fractions: PET+PVC
Impurities Gaskets from silicone
Electronic Waste WEEE
Plastics: ABS, PS, PA, PBT, PC, PE, PP, PET, PVC, PMMA, PUR, POM
Mixed plastics (Blends): PC+ABS, PPE+SB, PVC+ABS
Flame retardants: ABS+TBBPA, ABS+TBBPAep, PS+TBBPA, PS+TBBPEep
Impurities: Paper, cardboard, wood

选材:

废聚酯碎片
塑料:聚苯乙烯PS、聚酰胺/尼龙 PA、聚乙烯PC、聚丙烯PE、聚对苯二甲酸丁二酯PP、聚氯乙烯PET、聚氨酯PVC、聚甲基丙烯酸甲酯PMMA
混合物:聚氯乙烯PET+聚氨酯PVC
硅胶密封条杂质

RAEE电子垃圾

塑料:丙烯-丁二烯-苯乙烯 ABS、聚苯乙烯PS、聚酰胺/尼龙 PA、聚碳酸酯PBT、聚乙烯PC、聚丙烯PE、聚对苯二甲酸丁二酯PP、聚氯乙烯PET、聚氨酯PVC、聚甲基丙烯酸甲酯PMMA、硬质聚氨酯泡沫 PUR与聚脲酯树脂 POM
混合塑料(混合物) PC+ABS, 聚苯醚PPE+苯乙烯-丁二烯共聚物SB, PVC+ABS
阻燃剂: ABS + TBBPA四溴双酚、ABS+TBBPEep环氧树脂四溴双酚 A、PS+TBBPA、PS + TBBPEep
杂质:纸张、纸板或木头

SSR2P-N

optical sorting machine with standard horizontal belt
标准型水平传动带分选机

This optical sorting machine is the best standard solution on the market, can select 2 to a maximum of 3 materials (2-3 exits maximum, depending on the application, possibility of polymer selection, colour sorting optional). It's possible to assemble different ejection devices from 6 mm upwards (standard, other solutions upon request).

是市场上的最为标准的解决方案,可进行两个或最多三个材料的分拣(根据应用程序其输出口最多也为两到三个材料,能够分拣聚合物并可选择颜色)。可装配6毫米以上的不同弹射系统(标准型或其它不同要求的系统)。



Materiali selezionabili:

Riciclaggio rifiuto elettronico RAEE
Plastiche: ABS, PS, PA, PBT, PC, PE, PP, PET, PVC, PMMA, PUR, POM
Plastiche miste (leghe): PC+ABS, PPE+SB, PVC+ABS
Ritardanti di fiamma: ABS+TBBPA, ABS+TBBPAep, PS+TBBPA, PS+TBBPEep
Impurit: Carta, cartone, legno
Circuiti elettronici stampati: Schede elettroniche con resine sature fenol- ed epossidiche
Impurit: Pellicole di silicone (es. da cellulari, tastiere di PC), Resine di melammina-formaldeide (MF) di es. scatole di derivazione speciali, display a cristalli liquidi (LCD)

Riciclaggio carta

Materiale in ingresso: Rifiuto di carta proveniente dalla raccolta domestica o industriale
Carta (Deinchiostroazione): Carta da ufficio, riviste, quotidiani, cataloghi
Carta (no Deinchiostroazione): Cartone, scatole pieghevoli
Optional: Identificazione di brochures accartocciate, riducendo cos la perdita nella deinchiostroazione
Plastiche: PET, PE, PP, PS, PVC

Riciclaggio rifiuti edili

Materiale in ingresso: Macerie
Frazioni identificate: Componenti minerali, plastiche, legno, carta, cartone, gesso
Materiale in ingresso: Macerie e rifiuto minerale frantumato
Frazioni identificate: Gesso, calcestruzzo/calcestruzzo leggero, mattoni di arenaria calcarea, calcestruzzo cellulare, mattoni

Identificazione rapida dell'amianto

- Crocidolite (amianto blu)
- Chrysotile (amianto bianco)
- Amosite (amianto marrone)

Tutti e tre i gruppi di amianto posso essere identificati con i dispositivi NIR nei diversi materiali da costruzione come:

- Amianto contenente calcestruzzo
- Amianto contenente lastre di cemento e amianto
- Tubi da ingegneria strutturale e civile
- Amianto contenente materiali isolanti

选材:

RAEE电子垃圾的回收
塑料:丙烯-丁二烯-苯乙烯 ABS、聚苯乙烯PS、聚酰胺/尼龙 PA、聚碳酸酯PBT、聚乙烯PC、聚丙烯PE、聚对苯二甲酸丁二酯PP、聚氯乙烯PET、聚氨酯PVC、聚甲基丙烯酸甲酯PMMA、硬质聚氨酯泡沫 PUR与聚脲酯树脂 POM
混合塑料(混合物):PC+ABS, 聚苯醚PPE+苯乙烯-丁二烯共聚物SB, PVC+ABS
阻燃剂: ABS + TBBPA四溴双酚、ABS+TBBPEep环氧树脂四溴双酚 A、PS+TBBPA、PS + TBBPEep
杂质:纸张、纸板或木头
印制电子电路饱和苯酚树脂和环氧树脂的电子基板
杂质:硅树脂薄膜(如手机、电脑键盘)、三聚氰氨甲醛树脂(MF), 如接线专用盒、液晶显示器(LCD)

废纸的回收

输入材料家用或工业所回收的废纸
脱墨废纸办公用纸、杂志、报纸、目录册
选项:识别折皱的小册子,从而减少脱墨废纸的遗漏
塑料:聚苯乙烯PET、聚丙烯PE、聚对苯二甲酸丁二酯PP、聚苯乙烯PS、聚氨酯PVC

建筑垃圾的回收

输入材料拆迁废墟
混合物的鉴别矿石、塑料、木材、纸张、纸板以及石膏材料
输入材料废墟以及压碎矿石垃圾
混合物的鉴别石膏、混凝土/轻质混凝土、灰砂砖、多孔混凝土以及砖块

石棉的快速鉴别

- 青石棉(蓝石棉)
- 石棉(白石棉)
- 铁石棉(棕石棉)

所有由不同建筑材料构成的三类石棉都可通过近红外光谱设备得以鉴别,如:

- 含混凝土的石棉
- 含混凝土板与石棉的石棉
- 建筑与土木工程管道
- 含绝缘材料的石棉

SSR2-PM

quality control systems analysis statistics
统计质量控制的分析系统

These can be fixed or portable systems where this technology is used for the recognizing of the materials and the control of the presence of impurities.

For example: in the CDR check on the percentage presence of PVC-PVCD, check on the humidity, check on the calorific value.

In the fields of plastics for the percentage analysis of the presence of various polymers, Portable guns for the identification of various polymers – reinforced, modified, with our without flame retardant.

分为固定式或便携式,该系统的技术用于材料的识别或杂质的控制。

例如:聚氯乙烯pvc-聚偏二氯乙烯pvdc比例的CDR控制、湿度的控制以及热值的控制。

专用于塑料的系统则分析各种聚合物的比例,便携式电子枪可识别是否存在各种的聚合物。



SSR2P-V

optical sorting machine with vertical sorting
垂直分拣式分选机

La selezionatrice a selezione verticale pu selezionare 2 o al massimo 3 materiali (2-3 uscite max a seconda dell'applicazione, possibilit di selezione polimero, optional colore). Possibilit di montare diversi sistemi di espulsione da 6 mm in su (standard, altre soluzioni a richiesta).

垂直分拣式分选机可进行两个或最多三个材料的分拣(根据应用程序其输出口最多也为两到三个材料,可分拣聚合物以及选择颜色)。可装配6毫米以上的不同弹射系统(标准型或其它不同要求的系统)。

Materials dimensions: dimensions from 2 mm to 20 mm (the most adapt for granulates and other fine materials)

选材尺寸: 尺寸为2毫米至20毫米(最适合于颗粒剂和其他细粒材料)

Materiali selezionabili:

Scaglia di PET
Plastiche: PS, PA, PC, PE, PP, PET, PVC, PMMA
Frazioni miste: PET+PVC
Impurit di guarnizioni di silicone

Rifiuto elettronico RAEE

Plastiche: ABS, PS, PA, PBT, PC, PE, PP, PET, PVC, PMMA, PUR, POM
Plastiche miste (Leghe): PC+ABS, PPE+SB, PVC+ABS
Ritardanti di fiamma: ABS+TBBPA, ABS+TBBPAep, PS+TBBPA, PS+TBBPEep
Impurit: Carta, cartone, legno

Circuiti elettronici stampati: Schede elettroniche con resine sature fenol- ed epossidiche
Impurit: Pellicole di silicone (es. da cellulari, tastiere di PC), Resine di melammina-formaldeide (MF) di es. scatole di derivazione speciali, display a cristalli liquidi (LCD)



MDL

selection of ferrous and not-ferrous metals
铁金属和非铁金属的分拣

This type of machine is used to select ferrous and not-ferrous metals present in the material, minimum selection sizes 3 mm. It can be positioned on the systems for the quality control of the material. It ejects inserted parts in aluminium, copper, brass, steel screws, iron, copper wire, etc., eliminating a pertinent and restricted area to the waste material.

此类分选机用于铁金属和非铁金属的分拣,其分拣的最小尺寸为3毫米。可安装于材料质量控制线之上。废弃材料可喷射出铝、铜、黄铜、铜螺丝、铁、铜线等……,同时排出废弃材料的。



选材:

废聚酯碎片
塑料:聚苯乙烯PS、聚酰胺/尼龙 PA、聚乙烯PC、聚丙烯PE、聚对苯二甲酸丁二酯PP、聚氯乙烯PET、聚氨酯PVC、聚甲基丙烯酸甲酯PMMA
混合物:聚氯乙烯PET+聚氨酯PVC
硅胶密封条杂质

RAEE电子垃圾

塑料:丙烯-丁二烯-苯乙烯 ABS、聚苯乙烯PS、聚酰胺/尼龙 PA、聚碳酸酯PBT、聚乙烯PC、聚丙烯PE、聚对苯二甲酸丁二酯PP、聚氯乙烯PET、聚氨酯PVC、聚甲基丙烯酸甲酯PMMA、硬质聚氨酯泡沫 PUR与聚脲酯树脂 POM
混合塑料(混合物) PC+ABS, 聚苯醚PPE+苯乙烯-丁二烯共聚物SB, PVC+ABS
阻燃剂: ABS + TBBPA四溴双酚、ABS+TBBPEep环氧树脂四溴双酚 A、PS+TBBPA、PS + TBBPEep
杂质:纸张、纸板或木头

印制电子电路饱和苯酚树脂和环氧树脂的电子基板
杂质:硅树脂薄膜(如手机、电脑键盘)、三聚氰氨甲醛树脂(MF), 如接线专用盒、液晶显示器(LCD)

